

UNDERGRADUATE CATALOG

▶ 2020-2021



CALIFORNIA UNIVERSITY
OF PENNSYLVANIA

*The online version of the catalog supersedes the printed version.
Please visit calu.edu for the most current version of the catalog.*

July 2020

Undergraduate Catalog

California University of Pennsylvania Undergraduate Catalog

[Download the undergraduate catalog](#) (PDF)

This catalog is edited by the Academic Affairs Office.

California University of Pennsylvania

250 University Avenue
California PA 15419-1394
724-938-4404
www.calu.edu

The core values of California University of Pennsylvania (Cal U) are integrity, civility and responsibility.

Cal U is a member of Pennsylvania's State System of Higher Education.

Pennsylvania's State System of Higher Education

2986 North Second Street
Harrisburg PA 17110
717-720-4000
www.passhe.edu

Table of Contents

Table of Contents	
California University of Pennsylvania Undergraduate Catalog	2
Disclaimer	9
From the President	10
About California University of Pennsylvania	11
Identity and Mission	12
Governance and Administration	14
Academic Departments and Programs	18
Accelerated Bachelor's-to-Master's Programs	20
B.A. in Arabic to M.A. in Arabic	20
B.A. in Jurisprudence to M.S. in Legal Studies	22
B.A. in Mathematics to PSM in Applied Math	24
B.A. in Sociology: Social Deviance to M.Ed. in School Counseling	27
B.A. in Sociology: Social Deviance to M.S. in Clinical Mental Health Counseling	29
B.S. in Business Administration to MBA	30
B.S. in Business Administration: Integrated Business to MBA	34
B.S. in Commercial Music Technology to MBA	37
B.S. in Criminal Justice to M.A. in Applied Criminology	40
B.S. in Exercise Science to M.S. in Exercise Science and Health Promotion	41
B.S. in Professional Studies in Education to M.Ed. in School Counseling	44
B.S. in Professional Studies in Education to M.S. in Clinical Mental Health Counseling	47
B.S. in Psychology to M.A. in Conflict Resolution	50
B.S.B.A. in Accounting to M.Acc.	51
B.S.B.A. in Accounting to MBA	54
B.S.B.A. to MBA	57
B.S.Ed. in Grades PreK-4 Education to M.Ed. in Integrative STEM Education K-12	61
B.S.Ed. in Grades PreK-4 Education to M.Ed. in Reading Specialist	64
B.S.Ed. in Middle Level Grades 4-8 Education: Language Arts/Reading to M.Ed. in Integrative STEM Education K-12	67
B.S.Ed. in Middle Level Grades 4-8 Education: Language Arts/Reading to M.Ed. in Reading Specialist	70
B.S.Ed. in Middle Level Grades 4-8 Education: Math to M.Ed. in Integrative STEM Education K-12	73
B.S.Ed. in Middle Level Grades 4-8 Education: Math to M.Ed. in Integrative STEM Education K-12	77
B.S.Ed. in Middle Level Grades 4-8 Education: Social Studies to M.Ed. in Integrative STEM Education K-12	80
B.S.Ed. in Middle Level Grades 4-8 Education: Social Studies to M.Ed. in Reading Specialist	84
B.S. in General Education	88
B.S. in Science and Technology: Multidisciplinary Studies	91
Department of Biology, Geology and Environmental Sciences	94
A.S. in Veterinary Technology	95
B.A. in Anthropology: Archaeology Concentration	96
B.A. in Anthropology: Forensic Concentration	99
B.S. in Biology	101
B.S. in Biology: Mortuary Science	103
B.S. in Biology: Plant Biology Concentration	105
B.S. in Biology: Pre-Chiropractic Medicine Concentration	108
B.S. in Biology: Pre-Professional Concentrations	110
B.S. in Environmental Studies: Conservation Ecology Concentration	113
B.S. in Environmental Studies: Environmental Science Concentration	115
B.S. in Fisheries and Wildlife Biology	117
B.S. in Geology	120
B.S. in Molecular Biology	122
B.S. in Veterinary Technology	125
Minor in Anthropology	127
Minor in Biology	127
Minor in Environmental Science	128

Table of Contents

Minor in Fisheries and Wildlife.....	128
Minor in Geology.....	129
Minor in Hydrology.....	130
Department of Business, Economics and Enterprise Sciences.....	132
A.S. in Accounting.....	133
B.A. in Geography: Geographic Information Technology.....	135
B.A. in Geography: Tourism, Hospitality and Event Studies Concentration.....	137
B.A. in Parks and Recreation Management.....	139
B.S. in Business Administration: Integrated Business Concentration.....	142
B.S. in Business Administration: Management Information Systems Concentration.....	144
B.S.B.A. in Accounting.....	147
B.S.B.A. in Economics.....	150
B.S.B.A. in Finance.....	153
B.S.B.A. in Human Resource Management.....	155
B.S.B.A. in ISBC: Corporate Communication.....	158
B.S.B.A. in Interdisciplinary Studies in Business and Commerce.....	161
B.S.B.A. in Management.....	164
B.S.B.A. in Marketing.....	167
Certificate in Forensic Accounting.....	170
Certificate in Innovation and Entrepreneurship.....	170
Minor in Arts Administration.....	171
Minor in Business.....	172
Minor in Economics.....	173
Minor in Event Planning and Management.....	173
Minor in Finance.....	174
Minor in Forensic Accounting.....	174
Minor in GIS and Emergency Management.....	175
Minor in Human Resource Management.....	175
Minor in Management.....	176
Minor in Management Information Systems.....	177
Minor in Marketing.....	177
Minor in Parks and Recreation.....	178
Minor in Tourism Studies.....	179
Department of Computer Science, Information Systems and Engineering.....	181
A.A.S. in Electrical Engineering Technology.....	182
A.S. in Computer Engineering Technology.....	183
A.S. in Computer-Aided Design and Drafting.....	185
A.S. in Digital Media Technology.....	186
A.S. in Industrial Technology.....	188
A.S. in Technical Studies.....	189
A.S. in Technical Studies: Robotics Engineering Technology.....	190
A.S. in Technology Studies: UAS Technology.....	191
B.S. in Computer Engineering Technology.....	193
B.S. in Computer Information Systems.....	196
B.S. in Computer Science.....	199
B.S. in Digital Media Technology.....	202
B.S. in Electrical Engineering Technology.....	205
B.S. in Industrial Technology Management.....	207
B.S. in Mechatronics Engineering Technology.....	209
Certificate in Industrial Safety.....	211
Minor in Computer Information Systems.....	211
Minor in Computer Science.....	212
Minor in Digital Media Technology.....	213
Minor in Electrical Engineering Technology.....	214
Minor in Industrial Technology.....	215

Table of Contents

Minor in Robotics Engineering Technology.....	215
Department of Culture, Media, and Performance.....	217
B.A. in Communication Studies.....	218
B.A. in English: Creative Writing Concentration.....	221
B.A. in English: Journalism Concentration.....	224
B.A. in English: Literature Concentration.....	227
B.A. in Theatre.....	230
B.A. in Theatre: Design and Entertainment Technology Concentration.....	232
B.A. in Theatre: Musical Theatre.....	236
B.S. in Commercial Music Technology.....	239
B.S. in Commercial Music Technology: Commercial Music Business Concentration.....	245
B.S. in Graphic Design.....	250
Minor in Acting.....	252
Minor in Art History.....	253
Minor in Communication Studies.....	253
Minor in Creative Writing.....	254
Minor in Dance.....	254
Minor in Design and Entertainment Technology.....	255
Minor in Journalism.....	257
Minor in Literature.....	257
Minor in Music.....	258
Minor in Musical Theatre Performance.....	260
Minor in Philosophy.....	261
Minor in Theatre.....	261
Minor in Theatre History and Literature.....	262
Minor in Writing.....	263
Department of Education.....	265
A.S. in Early Childhood Education.....	266
B.S. in Professional Studies in Education.....	268
B.S.Ed. in Art: Secondary Education.....	270
B.S.Ed. in Biology: Secondary Education.....	273
B.S.Ed. in Biology: Secondary/Special Education 7-12.....	276
B.S.Ed. in Chemistry: Secondary Education.....	279
B.S.Ed. in Communications: Secondary Education.....	281
B.S.Ed. in Earth and Space Science: Secondary Education.....	284
B.S.Ed. in English: Secondary Education.....	287
B.S.Ed. in English: Secondary/Special Education 7-12.....	289
B.S.Ed. in Grades 4-8 and Special Education: Language Arts/Reading.....	292
B.S.Ed. in Grades 4-8 and Special Education: Mathematics.....	295
B.S.Ed. in Grades 4-8 and Special Education: Science.....	298
B.S.Ed. in Grades 4-8 and Special Education: Social Studies.....	301
B.S.Ed. in Grades PreK-4 Education.....	304
B.S.Ed. in Mathematics: Secondary Education.....	308
B.S.Ed. in Mathematics: Secondary/Special Education 7-12.....	310
B.S.Ed. in Middle Level Grades 4-8 Education: Language Arts/Reading.....	313
B.S.Ed. in Middle Level Grades 4-8 Education: Mathematics.....	316
B.S.Ed. in Middle Level Grades 4-8 Education: Science.....	319
B.S.Ed. in Middle Level Grades 4-8 Education: Social Studies.....	323
B.S.Ed. in Physics: Secondary Education.....	326
B.S.Ed. in PreK-4 Education and Special Education.....	329
B.S.Ed. in Social Studies: Secondary Education.....	332
B.S.Ed. in Social Studies: Secondary/Special Education 7-12.....	335
B.S.Ed. in Special Education PreK-12.....	337
B.S.Ed. in Technology Education.....	341
Minor in Education Multidisciplinary.....	343

Table of Contents

Minor in Foundations of Secondary Education.....	344
Post-Baccalaureate Certification Only: Grades 4-8 Education: Language Arts and Reading.....	345
Post-Baccalaureate Certification Only: Grades 4-8 Education: Mathematics.....	347
Post-Baccalaureate Certification Only: Grades 4-8 Education: Science.....	350
Post-Baccalaureate Certification Only: Grades 4-8 Education: Social Studies.....	353
Post-Baccalaureate Certification Only: PreK-4.....	355
Department of Exercise Science and Sport Studies.....	359
B.S. in Exercise Science.....	359
B.S. in Exercise Science: Professional Golf Management Concentration.....	361
B.S. in Sport Management Studies.....	363
B.S. in Sport Management Studies: Professional Golf Management Concentration.....	366
Department of Health and Human Service Professions.....	369
B.S. in Communication Disorders.....	369
BSW in Social Work.....	372
Minor in Social Work.....	375
Minor in Women's Studies.....	376
Department of Humanities.....	380
A.A. in Liberal Studies.....	381
B.A. in Arabic Language and Culture.....	383
B.A. in Art.....	385
B.A. in Global Studies.....	388
B.A. in History.....	391
B.A. in Jurisprudence: Legal Studies Concentration.....	393
B.A. in Liberal Studies.....	396
B.A. in Political Science.....	398
B.A. in Political Science: Pre-Law Concentration.....	400
B.A. in Political Science: Public Affairs Concentration.....	402
B.A. in Social Sciences.....	405
B.A. in Sociology.....	407
B.A. in Sociology: Social Deviance Concentration.....	410
B.F.A. in Art Studio.....	414
Certificate in Arabic Language and Culture.....	418
Certificate in History of War, Service and the American Experience.....	419
Certificate in Spanish for Business.....	420
Certificate in Spanish for Law Enforcement.....	420
Certificate in Studio Art.....	421
Certificate: Violence and Incidence Collaborative Evaluation in Schools.....	424
Minor in African American Studies.....	424
Minor in Arabic.....	425
Minor in French.....	425
Minor in History.....	426
Minor in Political Science.....	427
Minor in Pre-Law.....	427
Minor in Sociology.....	429
Minor in Spanish.....	429
Minor in Studio Art.....	429
Department of Mathematics and Physical Sciences.....	431
B.A. in Mathematics.....	432
B.A. in Physics.....	434
B.S. in Chemistry.....	436
B.S. in Earth Science: Climate Science Concentration.....	439
B.S. in Earth Science: Environmental Geosciences Concentration.....	442
B.S. in Earth Science: Meteorology Concentration.....	444
B.S. in Statistics and Data Science.....	447
Certificate in Data Science.....	449

Table of Contents

Minor in Chemistry.....	449
Minor in Environmental Geosciences.....	450
Minor in Mathematics.....	451
Minor in Meteorology.....	452
Minor in Physics.....	452
Minor in Statistics.....	453
Military Science (ROTC).....	454
The Basic Program.....	454
Department of Nursing and Health Sciences.....	456
A.A.S. in Physical Therapist Assistant.....	457
A.S. in Radiologic Technology/Science.....	458
B.S. in Gerontology.....	460
B.S. in Health Science.....	462
B.S. in Health Science: Pre-Athletic Training Concentration.....	464
BSN in Nursing (RN to BSN).....	466
Certificate: Aging Specialist.....	469
Minor in Gerontology.....	470
Minor in Health Science.....	471
Department of Social Sciences.....	473
A.S. in Technical Studies: Applied Policing and Technology Concentration.....	474
B.S. in Criminal Justice.....	477
B.S. in Criminal Justice: Criminology Concentration.....	479
B.S. in Criminal Justice: Cyber Forensics Concentration.....	482
B.S. in Criminal Justice: Forensic Investigation Concentration.....	484
B.S. in Criminal Justice: Homeland and International Security Concentration.....	487
B.S. in Criminal Justice: Law and Justice Concentration.....	491
B.S. in Psychology.....	494
Certificate in Diversity and Multicultural Competence.....	496
Certificate in Mental Health Technician.....	496
Minor in Criminal Justice.....	497
Minor in Forensic Science.....	497
Minor in Leadership.....	498
Minor in Psychology.....	501
TRIO and Academic Development Services.....	502
Academic Policies and Procedures.....	504
Academic Success.....	505
Academic Advising.....	505
Academic Scheduling and Placement Testing Center.....	505
Academic Support Programs and Services.....	506
Exploratory Studies.....	507
FERPA and Parent/Guest Portal.....	507
First-Year Experience.....	508
Prior Learning Assessment.....	508
Accreditations.....	509
Admissions.....	513
Evaluation of Applicants.....	513
Specific Admission Requirements.....	514
Transfer Student Policies.....	516
Course Descriptions.....	518
Financial Aid.....	723
General Education Courses.....	724
Building a Sense of Community (1 Cr.).....	725
Composition (3-6 Crs.).....	726
Composition Course Menu.....	726

Table of Contents

Ethics and Multicultural Emphasis List (EMEL)	727
Ethics and Multicultural Emphasis List Course Menu.....	727
Fine Arts (3 Crs.)	730
Fine Arts Course Menu.....	730
General Education (9-12 Crs.)	732
Health and Wellness (3 Crs.)	733
Health and Wellness Course Menu.....	733
Humanities (3 Crs.)	734
Humanities Course Menu.....	734
Laboratory Component Courses (one course)	736
Laboratory Component Course Menu.....	736
Mathematics and Quantitative Literacy (3 Crs.)	738
Mathematics and Quantitative Literacy Course Menu.....	738
Natural Sciences (3-4 Crs.)	739
Natural Sciences Course Menu.....	739
Public Speaking (3 Crs.)	740
Public Speaking Course Menu.....	740
Social Sciences (3 Crs.)	741
Social Sciences Course Menu.....	741
Special Experience Component Courses (one course)	743
Special Experience Component Course Menu.....	743
Technological Literacy (3 Crs.)	745
Technological Literacy Course Menu.....	745
Upper-Division Writing Component Courses (two courses)	747
Upper-Division Writing Component Course Menu.....	747
Honors Program.....	750
Louis L. Manderino Library.....	752
Military and Veterans Affairs.....	753
Nondiscrimination Statement.....	754
Human Resources	755
Policies.....	755
State Authorization	757
Global Online Complaint Process.....	757
Student Affairs	758
Vice President's Office / Dean of Students.....	759
Student Handbook.....	759
Accommodations for Students with Disabilities.....	759
Center for Volunteer Programs and Service Learning.....	760
Commuter and Nontraditional Student Services.....	760
Counseling and Psychological Services.....	760
Dining Services.....	761
End Violence Services.....	761
Housing.....	761
Office of Diversity, Equity and Inclusion.....	761
Recreational Services.....	761
Wellness (Health) Center.....	762
Tuition and Fees.....	763
University Police.....	765

Undergraduate Catalog

Disclaimer

This catalog is neither a contract nor an offer of a contract. The information it contains was accurate when it was printed and/or placed on the Internet. Fees, deadlines, academic requirements, courses, degree programs, academic policies and other matters described in this catalog may change without notice. Not all courses are offered each academic year, and faculty assignments may change. This catalog is updated annually.

Undergraduate Catalog

From the President



California University of Pennsylvania has been a place of opportunity for more than 165 years. Since the institution was founded in 1852, students have come to California to build a strong academic foundation, fulfill their personal potential and prepare for successful careers.

Today, Cal U offers a high-quality academic experience, whether students are on campus or online. Undergraduates choose from among more than 100 programs of study, while graduate-level degree, certificate and professional certification programs offer opportunities for advanced study and professional growth.

Cal U faculty members are experts in their fields. Although many professors are involved in research or other scholarly pursuits, their passion is teaching. Working side by side with a team of student support professionals, our faculty members are committed to empowering students to become confident, successful learners.

Many academic programs include hands-on components, and students are encouraged to extend their learning beyond the classroom. Through practical, applied learning activities, Cal U students engage with and serve the community, putting their education to work as they address real-world issues. Both the Career and Professional Development Center and the Internship Center give our students a competitive advantage as they prepare to enter the workplace.

Cal U is a student-centered university, and we understand the importance of a vibrant and inclusive campus environment. University housing is second to none. Students may choose to live in one of the secure, comfortable residence halls on our main campus, or enjoy apartment-style living in Vulcan Village, just over a mile away on our upper campus.

More than 100 student clubs and organizations offer leadership opportunities and a broad range of activities. The Herron Recreation and Fitness Center is open daily for individual workouts, group fitness classes and intramural sports. On the upper campus, Roadman Park and the Student Association's SAI Farm host athletic contests and outdoor recreation, as well as academic projects and fieldwork. Renowned speakers, performers and entertainers visit our campus regularly, creating an atmosphere rich in culture and creativity.

Cal U is proud to be a diverse, caring and scholarly learning community, dedicated to academic excellence. We strive to support each student and to graduate knowledgeable, confident, career-ready professionals. Inspired by our core values of integrity, civility and responsibility, we give our students the tools and teaching they need to rise up and achieve.

As University President and a proud alumna of this great University, I invite you to build your future at Cal U.

Sincerely,

Geraldine M. Jones

Mission

About California University of Pennsylvania

California University of Pennsylvania lies within the borough of California, a community of approximately 6,800 residents located on the banks of the Monongahela River, less than an hour's drive south of Pittsburgh. It is accessible via Interstate 70 Exits 15 (PA 43), 16 (Speers) or 17 (PA 88, Charleroi) or via U.S. 40 (PA 43 or 88). The Mon Valley Fayette Expressway (PA 43) links California to the federal Interstate Highway System. The University is approximately 30 minutes from Exit 8 (New Stanton) of the Pennsylvania Turnpike, and an hour from Pittsburgh International Airport.

The main campus consists of 98 acres, including the Phillipsburg annex. The 98-acre recreation complex, George H. Roadman University Park, is located just over a mile from campus. This complex includes a football stadium, an all-weather track, tennis courts, a baseball diamond, a softball diamond, soccer and rugby fields, a cross country course, areas for intramural sports and picnic facilities.

Adjoining Roadman Park is the 94-acre SAI Farm, purchased in 2010. The parcel includes a cross country course, recreation space and a farmhouse that has been renovated for student meetings. Together, Roadman Park and the SAI Farm comprise the University's upper campus.

In the University's award-winning residence halls, students enjoy the comfort and convenience of on-campus living, usually sharing a bathroom with no more than one other person. All residence halls are air-conditioned and have state-of-the-art sprinkler and security systems.

Roadman Park is the site of an upper-campus University housing complex, Vulcan Village, whose residents live in attractive, furnished garden-style apartments. Most have individual baths, living room, dining area, completely furnished kitchen (including dishwasher and microwave) and full-size washer and dryer. Vulcan Flyer shuttles make it easy for Vulcan Village residents to ride to and from the main campus.

The geographic location of the University gives the resident student opportunities to explore and pursue a wide variety of activities. The University is a short drive from scenic locations for camping, hiking, fishing, hunting, white-water rafting, canoeing and skiing. In addition to varied cultural activities on campus, students have easy access to the Pittsburgh metropolitan area, located only 35 miles north of the campus. This provides an opportunity to enjoy the Pittsburgh Symphony Orchestra; the Pittsburgh Ballet; the Civic Light Opera; the David L. Lawrence Convention Center; the Pittsburgh Steelers, Penguins and Pirates; various museums; and all of the excitement and attractions of a major metropolitan area.

History

The institution that is now California University of Pennsylvania began as an academy in 1852. It has evolved over the years into a comprehensive university, one of the 14 state-owned institutions that comprise Pennsylvania's State System of Higher Education.

1852: A two-story academy, offering education from kindergarten through college, is established in the recently founded community of California, Pa.

1865: The academy obtains a charter as a normal school for its district and becomes a teacher-preparatory institution.

1874: The institution is renamed the South-Western Normal School.

1914: The commonwealth acquires the institution and renames it the California State Normal School. The curriculum becomes exclusively a two-year preparatory course for elementary school teachers.

1928: The institution becomes California State Teachers College, returning to its previous status as a four-year-degree-granting institution, concentrating on industrial arts and special education.

1959: Liberal arts curricula are introduced and the college becomes California State College.

1962: A graduate program is introduced.

Mission

1974: The college develops a special mission in science and technology.

1983: On July 1, 1983, the college becomes part of the Pennsylvania State System of Higher Education and changes its name to California University of Pennsylvania.

1983: The College of Science and Technology becomes fully operational.

1996: The College of Science and Technology is renamed the Eberly College of Science and Technology, honoring the Eberly Foundation for its philanthropic generosity.

1998: The University formally adopts three core values: integrity, civility and responsibility.

2002: The University Council of Trustees formally adopts a list of rights and responsibilities.

2004-2007: The University responds to student needs and completely redesigns the concept of residence life. Six suite-style residence halls are constructed on the main campus, and an apartment complex now known as Vulcan Village is constructed on the upper campus.

2009: After a major renovation and expansion project, Herron Recreation and Fitness Center is re-dedicated.

2010: The Student Association Inc. purchases SAI Farm and begins developing the location as a site for student recreation, learning and meetings.

2011: The Phillipsburg Soccer Facility is dedicated.

2012: Geraldine M. Jones is named acting President of the University; she is named interim President the following year.

2013: In May, the former Residence Hall A is renamed the G. Ralph Smith II Honors Hall in recognition of a former English professor whose bequest to the University is the largest in its modern history. In October, the former Residence Hall C is renamed Ivan '41 and Adelaide Ivill '38 Guesman Hall in honor of the philanthropic alumni couple.

2015: Natali Student Center is re-dedicated after a two-year renovation and expansion project.

2016: Geraldine M. Jones is inaugurated as California's seventh President.

2018: The largest gift in the institution's history establishes the Rutledge Institute for Early Childhood Education, named for donors Karen and Tom '77 Rutledge.

2019: Coover Hall, which houses applied engineering and technology programs, plus courses in art and graphic design, is rededicated, following a two-year renovation.

(Additional information about the University and its history may be found in the book *California University of Pennsylvania: The People's College in the Monongahela Valley*, by Regis J. Serinko, published in 1992.)

Identity and Mission

Identity

California University of Pennsylvania, a comprehensive regional institution of higher education and a member of Pennsylvania's State System of Higher Education, is a diverse, caring and scholarly learning community dedicated to excellence in the liberal arts, science and technology, and professional studies that is devoted to building character and careers, broadly defined. The University is inspired by its core values of **Integrity, Civility** and **Responsibility** and is guided by its Bill of Rights and Responsibilities:

- We have the right to safety and security;
- We have the responsibility to ensure the safety and security of others;
- We have the right to be treated with respect;

Mission

- We have the responsibility to treat others with respect;
- We have the right to expect the best;
- We have the responsibility to give our best;
- We have the right to be treated fairly;
- We have the responsibility to treat others fairly.

Vision

Supporting the vision of Pennsylvania's State System of Higher Education, California University of Pennsylvania will exemplify academic excellence, innovation, service, personal growth and social justice for all.

Mission

The mission of California University of Pennsylvania is to provide a high-quality, student-centered education that prepares an increasingly diverse community of lifelong learners to contribute responsibly and creatively to the regional, national and global society, while serving as a resource to advance the region's cultural, social and economic development. Accordingly, the Cal U Strategic Plan 2015-2020 looks to our mission for inspiration and guidance.

This strategic plan is designed to empower the University to serve as a resource in the region and the Commonwealth. The strategic plan consists of five goals, with 17 objectives (strategies) that are designed to enable the strategic plan to be a "living document" that will lead California University of Pennsylvania into the future.

The strategic plan focuses the University on three key initiatives to assure the success of the University in the coming years. Those initiatives are:

- Enhancing the academic excellence and experience of our students.
- Operating with sound and efficient fiscal and governance practices.
- Achieving optimal enrollment in these challenging times.

Legacy

Founded in 1852, and now in its second 150 years of service, the University is committed above all to academic excellence and intellectual rigor in the context of personal and institutional Integrity, Civility and Responsibility.

Adopted by the Council of Trustees of California University of Pennsylvania on June 4, 2003.

Undergraduate Catalog

Governance and Administration

Pennsylvania State System of Higher Education

Chancellor

Daniel Greenstein

Board of Governors

Cynthia D. Shapira, Chair

David M. Maser, Vice Chair; Chair, Student Success Committee

Samuel H. Smith, Vice Chair; Chair, Audit and Compliance Committee

Aven Bittinger

Rep. Tim Briggs

Audrey F. Bronson

Nicole Dunlop

Alex Fefolt

Donald E. Houser, Jr., Chair, Governance and Leadership Committee

Sen. Scott Martin, Governance and Leadership Committee

Marian D. Moskowitz, Vice Chair, Student Success Committee

Thomas S. Muller, Chair, University Success Committee

Noe Ortega, Designee for Secretary Pedro A. Rivera Secretary of Education Pedro A. Rivera

Rep. Brad Roae

Sen. Judith L. Schwank

Meg Snead, Designee for Gov. Tom Wolfe

Neil R. Weaver, Vice Chair, University Success Committee Governor Tom Wolf

Janet L. Yeomans

California University of Pennsylvania

President

Geraldine M. Jones

Council of Trustees

James T. Davis '73, chair

Anthony H. Amadio '73

Robin M. Betza

Stephen M. DeFrank '92

Maria Dovshek, student trustee

Sandra Guthrie '01

James W. Harris '80

Sean T. Logue

Larry Maggi '79

Barry Niccolai '93

Justin Nwokeji '05

Daniel Greenstein, chancellor, ex-officio

California University of Pennsylvania Office of the President

Kelly Moran, chief of staff to the president

Joy Folmar, administrative assistant II

Kelsey Meyers, administrative assistant I

Academic Affairs

Daniel E. Engstrom, interim provost

Mark Aune, director of honors program

Lanie Bilitski, administrative assistant, academic affairs

Jodie Bonidie, academic events coordinator/Act 48

Leonard Colelli, associate provost/associate vice president of academic affairs

Brenda Fredette, dean, Eberly College of Science and Technology

Kathy Gavazzi, associate registrar/director of summer college/winter session

Undergraduate Catalog

Shayne Gervais, University registrar
Rhonda Gifford, director of career and professional development center
Yugo Ikach, dean, School of Graduate Studies and Research
Douglas Hoover, dean/associate provost/associate vice president for academic affairs/library services and undergraduate research
Daphne Livingstone, executive staff assistant to the provost
Kristen Majocho, dean, College of Education and Liberal Arts
Marta McClintock-Comeaux, director of women's studies
Stephen H. Whitehead, associate provost and associate vice president for academic affairs

Administration and Finance

Robert J. Thorn, vice president for administration and finance
James Ahearn, director of payroll
Paul Allison, associate vice president for information technology
Keith Curran, comptroller
Eric Guiser, director of human resources
Christopher Johnston, director of parking and transportation
Michael Kanalis, director of facilities management
Edward McSheffery, chief of University police
Fawn Petrosky, associate vice president for administration and finance
Jack Rogers, acting director of student accounts
Anna Stewart, executive staff assistant
Thomas Taylor, director of administrative services
Melissa Walker, interim director of purchasing
Ben Wise, fire safety specialist for environmental health and safety

Enrollment Management

T. David Garcia, vice president for enrollment management
Meaghan Clister, director of internship center
Jeffrey DeRubbo, director of financial aid
Daniel E. Engstrom, associate vice president for academic success
Jill Loop, director of academic success initiatives
Jenifer L. Sigado, director of academic success events and support services
Tracey Sheetz, dean of undergraduate admissions
Jacqueline Thorn, CRM manager

Student Affairs

Nancy Pinaridi, vice president for student affairs/dean of students
Debra Anderson, nurse supervisor
Rebecca Barnhart, residence hall director
Dawn Bellotti, RN
Jayna Bonfini, assistant professor counseling services
Sheleta Camarda-Webb, associate director of on-campus living/director of multicultural affairs and diversity education
Terry Carnathan, coordinator of informal recreation and wellness
Tammy Clark, administrative assistant for Student Affairs/CalCard services/recreational services/student center
Debra Custer, management technician for Office for Students with Disabilities
Cathie Czernecki, RN
Cody Deitz, residence hall director
Brenda DePaoli, executive staff assistant for Office of Student Affairs
Melissa Dunn, director of student activities and leadership
Paul Fazio, assistant director of student center
Donna George, PASSHE alcohol and other drug coalition coordinator
Quiana Golphin, assistant professor counseling services
Christa Grillo, RN

Undergraduate Catalog

Diane Hasbrouck, director center for volunteer programs and service learning/commuter and non-traditional student services

Thomas Hasbrouck, assistant director of recreational services

Donna Hoak, secretary, Women's Center/EndV Center/student activities-leadership/volunteer programs/commuter services

Cheryl Lotti, RN

John Massella, director, associate professor for Office for Students with Disabilities

Becky McMillen, executive director, conference services

Rachel Michaels, director of student wellness support services

Gloria Minutello, conference director of facilities presentation

Dawn Moeller, clinical psychologist/professor, Wellness Center

Lindsay Mongell, director of events, conference services

James Pflugh, associate dean for student conduct

Tina Pierce, certified registered nurse practitioner

Micah Reed, residence hall director

Jamison Roth, director of recreational services

Lawrence Sebek, associate vice president for student affairs

Rendie Settles, management technician for conference services

Nancy Skobel, associate dean for student affairs/director, Women's Center/victim advocate

Anthony Steve, student affairs systems administrator

Timothy Susick, associate vice president for student affairs/University judicial officer

Janie Tennant, RN

Diane Tomi, administrative assistant, Wellness Center

Doris Wadsworth, secretary of housing and residence life

Terry Wigle, associate dean for student services/auxiliary services

Student Association Inc./Vulcan Village

Nicole Arthur, administrative assistant, Student Association Inc. (SAI)

Kimberly Cupplo, senior traditional accountant, SAI

Pam DeVerne, director of student media/technology services, SAI

Cheryl Golembiewski, student center coordinator, SAI

Lisa Hartley, accounts payable/payroll supervisor, SAI

Jeff Hesel, director of news, video development and publications, SAI

Joy Hesel, director of fraternity and sorority life/special publications, SAI

Leigh Ann Lincoln, chief financial officer, SAI

Adam Martin, maintenance technician, Vulcan Village

Richard Morris, maintenance technician, Vulcan Village

Justin Schiefelbein, community manager, Vulcan Village

Ron Sealy, athletic facilities foreman, SAI

Jared Shiner, leasing and marketing manager, Vulcan Village

Keith Skirpan, senior housing accountant, SAI

Gary Smith, director of CUTV operations, SAI

Thomas Zeman, maintenance manager, Vulcan Village

Office of Communication and Marketing

Christine Kindl, vice president for communications and marketing

Erin Angotti, SEO coordinator

Laurie Bartolotta, marketing content specialist

Jeff Bender, director of digital communications

Emily Boarts, creative project manager

Zach Frailey, photo manager/editor

Phil Haragos, artist/illustrator

Keli Henderson, director of marketing

Ruth Kinder, clerk typist

Denise King, marketing assistant

Undergraduate Catalog

Wendy Mackall, director of communications and public relations
John Miller, website/CMS coordinator
Greg Sofranko, director of creative services
Tony Sonita, social media specialist
Bruce Wald, information writer

University Development and Alumni Relations

Anthony Mauro, vice president for University Development and Alumni Relations
Ryan Barnhart, director, Alumni Relations
Christian Caldwell, manager, development & alumni resources & support services
Cathy Connelly, senior director of development
Mariah Peoples, development assistant
Marisa Novak, executive staff assistant to vice president for University Development and Alumni Relations
Justin James, development associate
Randi Minerva, manager of annual giving programs
Staci Tedrow, administrative assistant for alumni relations

Academic Departments

Academic Departments and Programs

Academic programs are organized by academic department, which are (in turn) organized by college within the University. Below is a list of academic departments, by college. Information about specific academic programs is found under each department within the catalog.

College of Education and Liberal Arts

Academic departments under the College of Education and Liberal Arts include:

- **Culture, Media, and Performance:** The Department of Culture, Media, and Performance offers programs in art history; communication; English; graphic design; music; philosophy; and theatre.
- **Education:** The Department of Education offers programs in childhood education; secondary education and administrative leadership; and special education.
- **Health and Human Service Professions:** The Department of Health and Human Service Professions offers programs in communication disorders; counselor education; and social work.
- **Humanities:** The Department of Humanities offers programs in art; history; global studies; jurisprudence; languages; political science; and sociology.
- **Social Sciences:** The Department of Social Sciences offers programs in criminal justice and psychology.

(The federally funded **TRIO** program also is housed in this college.)

Eberly College of Science and Technology

Academic departments under Eberly College of Science and Technology include:

- **Biology, Geology and Environmental Sciences:** The Department of Biology, Geology and Environmental Sciences offers programs in anthropology; biology; environmental studies; fisheries and wildlife; geology; molecular biology; and veterinary technology.
- **Business, Economics and Enterprise Sciences:** The Department of Business, Economics and Enterprise Sciences offers programs in accounting; business administration; economics; finance; geography; human resource management; interdisciplinary studies in business and commerce; management; marketing; and parks and recreation.
- **Computer Science, Information Systems and Engineering Technology:** The Department of Computer Science, Information Systems and Engineering Technology offers programs in CADD; computer engineering technology; computer information systems; computer science; cybersecurity; digital media technology; electrical engineering technology; industrial technology; mechatronics engineering technology; robotics engineering technology; and unmanned aerial systems/drone technology.
- **Exercise Sciences and Sport Studies:** The Department of Exercise Science and Sport Studies offers programs in exercise science and sports management.
- **Mathematics and Physical Sciences:** The Department of Mathematics and Physical Sciences offers programs in applied mathematics; chemistry; earth sciences; mathematics; physics; and statistics and data science.
- **Nursing and Health Sciences:** The Department of Nursing and Health Sciences offers programs in athletic training; gerontology; health sciences; physical therapy assistant; radiologic technology; and nursing.

Additional Programming

- General Education Degree

Academic Departments

- Military Science (ROTC)
- Science and Technology: Multidisciplinary Studies Degree

Selecting a Major

Students should select a major by either the end of the third regular semester or upon the completion of 45 credit hours. This does not prohibit students from changing their major later in their careers; however, they will have difficulty completing requirements within eight semesters if they change majors after three semesters. Students who do not wish to pursue either a single discipline or course of study have interdisciplinary program options.

Accelerated Bachelor's-to-Master's Programs

Accelerated Bachelor's-to-Master's Programs

- **Arabic Language**
 - B.A. in Arabic to M.A. in Arabic
- **Business and Economics**
 - B.S. in Business Administration: Integrated Business to MBA
 - B.S. in Business Administration to MBA
 - B.S. in Commercial Music Technology to MBA
 - B.S.B.A. in Accounting to M.Acc.
 - B.S.B.A. in Accounting to MBA
 - B.S.B.A. (Various Concentrations) to MBA (Various Concentrations)
- **Clinical Mental Health Counseling**
 - B.S. in Professional Studies in Education to M.S. in Clinical Mental Health Counseling
 - B.A. in Sociology: Social Deviance to M.S. in Clinical Mental Health Counseling
- **Conflict Resolution**
 - B.A. in Psychology to M.A. in Conflict Resolution Studies
- **Criminal Justice**
 - B.S. in Criminal Justice to M.A. in Criminal Justice: Applied Criminology
- **Education (Elementary)**
 - B.S.Ed. in PreK-4 with Certification to M.Ed. in Reading Specialist
 - B.S.Ed. in PreK-4 with Certification to M.Ed. in Integrative STEM Education K-12
- **Education (Middle Level)**
 - B.S.Ed. Middle Level, Grades 4-8: Language Arts/Reading to M.Ed. Integrative STEM Education K-12
 - B.S.Ed. Middle Level, Grades 4-8: Language Arts/Reading to M.Ed. in Reading Specialist
 - B.S.Ed. Middle Level, Grades 4-8: Mathematics to M.Ed. in Integrative STEM Education K-12
 - B.S.Ed. Middle Level, Grades 4-8: Science to M.Ed. in Integrative STEM Education K-12
 - B.S.Ed. Middle Level, Grades 4-8: Social Studies to M.Ed. in Integrative STEM Education K-12
 - B.S.Ed. Middle Level, Grades 4-8: Social Studies to M.Ed. in Reading Specialist
- **Exercise Science and Health Promotion**
 - B.S. in Exercise Science to M.S. in Exercise Science and Health Promotion
- **Legal Studies**
 - B.A. in Jurisprudence to M.S. in Legal Studies
- **Mathematics**
 - B.A. in Math to PSM in Applied Math
- **School Counseling**
 - B.S. in Professional Studies in Education to M.Ed. in School Counseling
 - B.A. in Sociology: Social Deviance to M.Ed. in School Counseling

Program Requirements

To qualify to begin an approved accelerated bachelor's-to-master's degree program, undergraduate students must meet the program requirements outlined at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

B.A. in Arabic to M.A. in Arabic Program Description

The Bachelor of Arts in Arabic Language and Culture prepares students to read, write and speak Modern Standard Arabic. Qualified undergraduate students in this program may be eligible to participate in an accelerated B.A.-to-M.A. program, which enables them to take graduate courses that apply to both their bachelor's degree in Arabic Language and Culture and (thereafter) a master's degree in Arabic Language and Linguistics.

Accelerated Bachelor's-to-Master's Programs

Cal U's Master of Arts in Arabic Language and Linguistics is designed for students interested in gaining advanced expertise in Arabic language and linguistics.

Program Coordinator

Dr. Razak Surrey

Curriculum

The following curriculum shows the requirements for completing the Arabic Language and Culture bachelor's degree under the accelerated B.A.-to-M.A. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40-41
Free Electives	44
Related Electives (two courses in a foreign language and/or culture other than Arabic)	6
Required Major Courses	18
ARB 101 Elementary Arabic I	3
ARB 102 Elementary Arabic II	3
ARB 203 Intermediate Arabic I	3
ARB 204 Intermediate Arabic II	3
ARB 350 Advanced Arabic I	3
ARB 351 Advanced Arabic II	3
B.A.-to-M.A. Accelerated Option Courses (select from the following)	12
ARB 610 Arabic Linguistics	3
ARB 620 Arabic-English Translation	3
ARB 630 Arabic Literature and Social Culture Aspects	3
ARB 640 Arabic Dialect Acquisition and Variation	3
ARB 810 Special Topics in Arabic	3
Total	120

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

Accelerated Bachelor's-to-Master's Programs

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/arabic-language-and-culture/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/arabic/index.aspx>

B.A. in Jurisprudence to M.S. in Legal Studies

Program Description

The accelerated B.A.-to-M.S. Legal Studies program enables qualified undergraduates to take graduate courses that apply to both their bachelor's and master's degrees. Students gain an advanced understanding of the law and legal principles as they fulfill bachelor's degree requirements and complete select core courses from the graduate-level Legal Studies program. These graduate-level courses lay the foundation for the student to ultimately examine practical legal and policy issues through the lens of a particular concentration in law and public policy, criminal justice or homeland security.

Program Coordinator

Dr. Christina A. Toras

Delivery Mode

Global Online (100% online)

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.A.-to-M.S. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40-41
Free Electives	25-26
Required Major Courses	9
JUR 300 Classical Jurisprudence	3
JUR 310 Medieval Jurisprudence	3
JUR 320 Anglo-American Jurisprudence	3
Required Related Courses	33
LAW 300 The Paralegal Profession	3
LAW 310 Legal Research and Writing	3
LAW 320 Litigation and Trial Evidence	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
LAW 330 Criminal Law for Paralegals	3
LAW 340 Family Law	3
LAW 350 Real Estate Law	3
LAW 360 Law, Business and the Workplace	3
LAW 370 Administrative Law	3
LAW 380 Estates and Trusts	3
LAW 400 Constitutional Law for Paralegals	3
LAW 410 Law and Ethics	3
B.A.-to-M.S. Accelerated Option Electives	12
LAW 600 Law and Public Policy	3
LAW 601 Law and Ethics	3
LAW 602 Law, Civil Liberties and the Constitution	3
LAW 603 Law and Legal Methods	3
Total	120

Recommended Free Electives

LAW electives are recommended below.

- **LAW 390** Bankruptcy
- **LAW 420** Law and Conflict Resolution
- **LAW 430** Elder Law
- **LAW 440** Immigration Law
- **LAW 450** Labor and Employment Law
- **LAW 460** School Law

Program Notes

Upon satisfaction of the following criteria, students enrolled in the B.A. in Jurisprudence: Legal Studies concentration are eligible to take four 3-credit graduate courses (12 credit hours total) during their undergraduate studies and apply those 12 credits to the M.S. in Legal Studies degree, regardless of the degree concentration:

- The undergraduate adviser and the graduate adviser must jointly approve the student's request to enroll in the accelerated degree plan.
- Undergraduate students must have a minimum of junior standing and a minimum GPA of 3.0.
- Applicable graduate-level courses are limited to LAW 600, LAW 601, LAW 602 and LAW 603.
- Graduate-level courses will satisfy undergraduate elective credits only and will not satisfy any undergraduate core courses.
- In addition to the graduate courses defined above, students must take 18 more credits in the master's program to be eligible for the M.S. degree. Consult your adviser about these 18 credits.

Accelerated Bachelor's-to-Master's Programs

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/jurisprudence/legal-studies/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/legal-studies/index.aspx>

B.A. in Mathematics to PSM in Applied Math

Program Description

The Bachelor of Arts in Mathematics degree hones students' analytical and problem-solving skills while building their understanding of mathematical theories and applications. Qualified undergraduate students in the math program may be eligible to participate in the accelerated B.A.-to-PSM program, which enables them to take graduate courses that apply to both their bachelor's degree in Mathematics and (thereafter) a master's degree in Applied Math.

The Professional Science Master's (PSM) in Applied Mathematics is designed to help develop skills in big data analysis and mathematics for a variety of STEM-related occupations for business, government and commercial applications.

Program Coordinator

Dr. Melissa Sovak

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.A.-to-PSM program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	41
CHE 101 General Chemistry I OR PHY 101 College Physics I	4
ENG 101 Composition I	3
Ethics and Multicultural Awareness Course	3
Fine Arts Course	3
Health and Wellness Course	3
MAT 215 Statistics OR MAT 225 Business Statistics	3
MAT 290 Technology for Math (Recommended)	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
MAT 303 Geometry (Recommended)	3
PHI 311 Formal Logic	3
Public Speaking Course	3
Social Science Course	3
Technological Literacy Course	3
UNI 100 First-Year Seminar	1
Any General Education Course	3
Required Major Courses	42
MAT 272 Discrete Mathematics OR MAT 331 Intro to Mathematical Proofs I	3
MAT 281 Calculus I	3
MAT 282 Calculus II	3
MAT 341 Linear Algebra I	3
MAT 351 Abstract Algebra II	3
MAT 381 Calculus III	3
MAT 382 Calculus IV	3
MAT 400 Mathematics Modeling	3
MAT 406 Differential Equations	3
MAT 461 Statistical Analysis	3
<i>Category I (select one)</i>	3
MAT 451 Abstract Algebra II	3
MAT 474 Complex Analysis	3
MAT 481 Real Analysis I	3
<i>Category II (select two)</i>	6
CSC 424 Numerical Analysis	3
MAT 345 Cryptography I	3
MAT 441 Linear Algebra II	3
MAT 462 Statistical Analysis II	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
<i>Category III (select one)</i>	3
CSC 475 Theory of Languages	3
MAT 304 History of Math	3
MAT 419 Math Internship	3
MAT 468 Field Experience in Math	3
MAT 495 Senior Research Project	3
PHY 341 Math Methods of Physics	3
Approved Minor	21
Free Electives	18
Undergraduate Credits	6
Graduate Credits from the PSM in Applied Mathematics Program*	12
Total	120

Program Notes

- MAT 195 can be substituted for MAT 272 if the student is completing a Computer Science minor.
- CSC 475 requires a pre-requisite of CSC 216 and is suggested if the student is completing a Computer Science minor.
- Students who enter the B.A. in Math to PSM in Applied Math must have completed at least 9 credits of calculus, Linear Algebra I and Statistics prior to beginning PSM courses.

* PSA 611, PSM 645 (or PSM elective), PSM 760 and one PSM elective will be applied toward undergraduate credits.

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Accelerated Bachelor's-to-Master's Programs

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/mathematics/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/applied-mathematics/index.aspx>

B.A. in Sociology: Social Deviance to M.Ed. in School Counseling

Program Description

The Social Deviance concentration of Cal U's Bachelor of Arts in Sociology degree integrates concepts from various academic disciplines to examine and tackle the real-world issues of social deviance. Qualified undergraduate students in the Social Deviance concentration may be eligible to participate in the accelerated B.A.-to-M.Ed. program, which enables them to take graduate courses that apply to both their bachelor's degree in Sociology: Social Deviance and (thereafter) a master's degree in School Counseling.

The Master of Education in School Counseling fulfills the degree requirements needed for the National Counselor Examination (NCE), which is needed to become a National Certified Counselor and Licensed Professional Counselor.

Program Coordinator

Dr. Elizabeth Gruber

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.A.-to-M.Ed. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40-41
Free Electives	40-41
Required Major Courses	15
SOC 100 Principles of Sociology	3
SOC 410 Social Theory and Society	3
SOC 415 Social Research Methods	3
SOC 429 Sociology Internship	3
MAT 215 Statistics OR MAT 205 Statistics for the Health and Social Sciences OR PSY 220 Descriptive Statistics	3
Related Electives	24
SOC 300 Sociology of Deviance	3
SOC 311 Sociology of Crime	3
SOC 318 Sociology of Addiction, Excess and Exploitation	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
SOC 324 Child Abuse and Neglect: A Societal Perspective	3
SOC 380 Society of the Sociopath	3
SOC 395 Sociology of Elite Deviance	3
SOC 400 Structural and Institutional Violence	3
SOC 405 Resocializing the Deviant and the Marginalized	3
Qualifying students may opt to take up to four 3-credit graduate-level courses in place of free electives:	
CED 700 Foundations of School Counseling	3
CED 702 Counseling Theory	3
CED 705 Developmental Group Counseling	3
CED 720 Cross-cultural Counseling	3
Total	120

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

Undergraduate

- <https://www.calu.edu/academics/undergraduate/bachelors/sociology/deviance-campus.aspx>
- <https://www.calu.edu/academics/undergraduate/bachelors/sociology/online.aspx>

Graduate

- <https://www.calu.edu/academics/graduate/masters/education-campus/school-counseling/index.aspx>

Accelerated Bachelor's-to-Master's Programs

B.A. in Sociology: Social Deviance to M.S. in Clinical Mental Health Counseling

Program Description

The Social Deviance concentration of Cal U's Bachelor of Arts in Sociology degree integrates concepts from various academic disciplines to examine and tackle the real-world issues of social deviance. Qualified undergraduate students in the Social Deviance concentration may be eligible to participate in the accelerated B.A.-to-M.S. program, which enables them to take graduate courses that apply to both their bachelor's degree in Sociology: Social Deviance and (thereafter) a master's degree in Clinical Mental Health Counseling.

Cal U's Master of Science in Clinical Mental Health Counseling prepares students to work as professional counselors in a variety of behavioral health and social service settings.

Program Coordinator

Dr. Elizabeth Gruber

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.A.-to-M.S. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40-41
Free Electives	40-41
Required Major Courses	15
SOC 100 Principles of Sociology	3
SOC 410 Social Theory and Society	3
SOC 415 Social Research Methods	3
SOC 429 Sociology Internship	3
MAT 215 Statistics OR MAT 205 Statistics for the Health and Social Sciences OR PSY 220 Descriptive Statistics	3
Related Electives	24
SOC 300 Sociology of Deviance	3
SOC 311 Sociology of Crime	3
SOC 318 Sociology of Addiction, Excess and Exploitation	3
SOC 324 Child Abuse and Neglect: A Societal Perspective	3
SOC 380 Society of the Sociopath	3
SOC 395 Sociology of Elite Deviance	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
SOC 400 Structural and Institutional Violence	3
SOC 405 Resocializing the Deviant and the Marginalized	3
Qualifying students may opt to take up to four 3-credit graduate-level courses in place of free electives:	
CED 702 Counseling Theory	3
CED 705 Developmental Group Counseling	3
CED 720 Cross-cultural Counseling	3
CED 789 Introduction to Clinical Mental Health Counseling	3
Total	120

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages Undergraduate

- <https://www.calu.edu/academics/undergraduate/bachelors/sociology/deviance-campus.aspx>
- <https://www.calu.edu/academics/undergraduate/bachelors/sociology/online.aspx>

Graduate

- <https://www.calu.edu/academics/graduate/masters/clinical-mental-health-counseling/index.aspx>

B.S. in Business Administration to MBA

Program Description

Cal U's B.S. in Business Administration degree builds a core understanding of business. Qualified undergraduate students in the Business Administration program may be eligible to participate in the accelerated B.S.-to-MBA program, which enables them to take graduate courses that apply to both their bachelor's degree and (thereafter) a MBA degree with a concentration in Accounting, Applied Economics, Business Analytics, Healthcare Management or Management. (The MBA program at Cal U hones decision-making and leadership abilities while also building specialized knowledge in one of these concentration areas.)

Accelerated Bachelor's-to-Master's Programs

Through the accelerated program, students can complete both degrees at Cal U with a total of 144 credits.

Program Coordinator

Dr. Stephanie Adam

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.-to-MBA program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 to 41
BUS 281 Management Science I	3
CDC 101 Public Speaking	3
ENG 101 Composition I	3
ENG 211 Business Writing I OR ENG 102 Composition II	3
MAT 181 College Algebra	3
MAT 225 Business Statistics	3
MIS 201 Management Info Sys	3
PSY 100 General Psychology	3
UNI 100 First-Year Seminar	1
EMEL Course	3
Fine Arts Course	3
Health and Wellness Course	3
Humanities Course	3
Natural Science Course	3 to 4
Required Major Courses	30
ACC 200 Financial Accounting	3
ACC 321 Managerial Accounting	3
BUS 242 Business Law I	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
MBA 710 Quantitative Analysis and Reasoning	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Concentration Courses	21
CIS 120 Application Programming I	3
CIS 299 Systems Analysis I	3
MIS 321 Accounting Info Systems	3
MIS 375 Information Tech Ethics	3
MIS 385 Health Information Systems	3
MIS 401 Business-Driven MIS	3
MIS 421 Strategic Issues in MIS	3
Required Electives	9
MBA 700 Business Foundations	3
Select two 500-level or above ACC, BUS, ECO, ENP, FIN, HRM, MBA, MGT, MIS or MKT courses*	6
Undergraduate Free Electives	19-20
Total	120

*Required Electives List

Select six credits from the MBA required, concentration and business electives courses listed below:

MBA Required Courses (required for all concentrations)

- **MBA 720** Leading the Enterprise
- **MBA 730** Managerial Decision Making
- **MBA 740** Business, Government and Society
- **MBA 750** MBA Capstone

Concentration Courses

- **MBA: Accounting Concentration Courses**
 - **ACC 710** Financial Accounting
 - **ACC 715** Advanced Federal Income Tax
 - **ACC 720** Advanced Financial Accounting
 - **ACC 730** Advanced Auditing

Accelerated Bachelor's-to-Master's Programs

- **MBA: Applied Economics Concentration Courses**
 - **ECO 710** Advanced Microeconomics
 - **ECO 720** Advanced Macroeconomics
 - **ECO 730** Applied Econometric Analysis
 - **BUS 740** Forecasting and Predictive Modelling
- **MBA: Business Analytics Concentration Courses**
 - **BUS 710** Applied Data Analysis for Business
 - **MIS 720** Business Analytics for Big Data
 - **MIS 730** Decision Support Systems
 - **BUS 740** Forecasting and Predictive Modeling
- **MBA: Healthcare Management Concentration Courses**
 - **ECO 765** Health Economics and Policy
 - **MGT 761** U.S. Health Care Policy
 - **MGT 763** Health Systems Management
 - **MIS 766** Healthcare Informatics
- **MBA: Management Concentration Courses**
 - **MGT 710** Leadership Dynamics
 - **MGT 720** Leveraging Diversity
 - **MGT 730** Organizational Problem Solving
 - **MGT 740** Managing Projects

MBA Business Electives

- ACC, BUS, ECO, ENP, FIN, HRM, MGT, MIS or MKT courses 500-level chosen in consultation with adviser (6 credits)

Program Notes

- Students who complete dual undergraduate degrees, dual undergraduate majors or dual undergraduate business concentrations do not have to complete a minor or certificate. No more than 6 credits of any internship course may be applied to satisfy the major requirements. Additional internship credits may be applied to free electives.
- Students can apply for admission to the Accelerated Program after completing at least 60 credits.
- This curriculum applies to MBA concentrations in Accounting, Applied Economics, Business Analytics, Healthcare Management and Management.

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpage

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/business-administration/management-information-systems.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/mba/index.aspx>

Accelerated Bachelor's-to-Master's Programs

B.S. in Business Administration: Integrated Business to MBA

Program Description

The Integrated Business concentration of the B.S. in Business Administration degree prepares students for the 21st century global business environment.

Qualified undergraduate students in the Business Administration program may be eligible to participate in the accelerated B.S.-to-MBA program, which enables them to take graduate courses that apply to both their bachelor's degree and (thereafter) a MBA degree with a concentration in Accounting, Applied Economics, Healthcare Management or Management. (The MBA program at Cal U hones decision-making and leadership abilities while also building specialized knowledge in one of these concentration areas.)

Through the accelerated program, students can complete both degrees at Cal U with a total of 144 credits.

Program Coordinator

Dr. Stephanie Adam

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.-to-MBA program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 to 41
BUS 281 Management Science I	3
CDC 101 Public Speaking	3
ENG 101 Composition I	3
ENG 211 Business Writing I OR ENG 102 Composition II	3
MAT 181 College Algebra	3
MAT 225 Business Statistics	3
MIS 201 Management Info Sys	3
PSY 100 General Psychology	3
UNI 100 First-Year Seminar	1
EMEL Course	3
Fine Arts Course	3
Health and Wellness Course	3
Humanities Course	3
Natural Science Course	3 to 4
Required Major Courses	30
ACC 200 Financial Accounting	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
ACC 321 Managerial Accounting	3
BUS 242 Business Law I	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MBA 710 Quantitative Analysis and Reasoning	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Concentration Courses	18
BUS 345 Business Ethics	3
ECO 460 Global Economic Perspectives	3
HRM 462 Global Workforce Management and Change	3
MGT 431 International Business Management	3
MGT 461 Integrated Supply Chain Management	3
MKT 401 Marketing Management	3
Required Minor/Certificate	12
Students select one of the following minors: Accounting, Economics or Management and can then work toward the MBA concentrations in Accounting, Applied Economics or Management, respectively. The Management minor can also be combined with the Healthcare Management MBA concentration.*	
Required Electives	9
MBA 700 Business Foundations	3
Select two 500-level or above ACC, BUS, ECO, ENP, FIN, HRM, MBA, MGT, MIS or MKT courses (see below)	6
Undergraduate Free Electives	19-20

Accelerated Bachelor's-to-Master's Programs

Course	Credits
Total	120

*The minors listed are 21 credits; however, 9 of these credits are required in the core requirements of this degree.

Undergraduate Minor/MBA Concentration Options

Option 1: Accounting Minor and MBA Accounting Concentration

- **ACC 202** Accounting 2
- 9 credits of ACC courses 500+

Option 2: Economics Minor and MBA Applied Economics Concentration

- 3 credits ECO course 300-499
- 9 credits of ECO courses 500+

Option 3: Management Minor and MBA Management Concentration

- **MGT 301** Organizational Behavior
- 9 credits of MGT courses 500+

Option 4: Management Minor and MBA Healthcare Management Concentration

- **MGT 301** Organizational Behavior
- **MGT 761** U.S. Health Care Policy
- **MGT 763** Health Systems Management
- 3-credit MGT course 500+

Menu of MBA Concentration Courses

Select 9 credits from concentrations below as part of the B.S.B.A. program required minor:

Option 1: Accounting

- **ACC 710** Financial Accounting
- **ACC 715** Advanced Federal Income Tax
- **ACC 720** Advanced Financial Accounting
- **ACC 730** Advanced Auditing
- Business Electives: ACC, BUS, ECO, ENP, FIN, HRM, MGT, MIS or MKT courses 500-level or above chosen in consultation with adviser (6 credits)

Option 2: Economics Minor and MBA Applied Economics Concentration

- **ECO 710** Advanced Microeconomics
- **ECO 720** Advanced Macroeconomics
- **ECO 730** Applied Econometric Analysis
- **BUS 740** Forecasting and Predictive Modelling
- Business Electives: ACC, BUS, ECO, ENP, FIN, HRM, MGT, MIS or MKT courses 500-level or above chosen in consultation with adviser (6 credits)

Option 3: Management Minor and MBA Management Concentration

- **MGT 710** Leadership Dynamics
- **MGT 720** Leveraging Diversity

Accelerated Bachelor's-to-Master's Programs

- **MGT 730** Organizational Problem Solving
- **MGT 740** Managing Projects
- Business Electives: ACC, BUS, ECO, ENP, FIN, HRM, MGT, MIS or MKT courses 500-level or above chosen in consultation with adviser (6 credits)

Option 4: Management Minor and MBA Healthcare Management Concentration

- **ECO 765** Health Economics and Policy
- **MGT 761** U.S. Health Care Policy
- **MGT 763** Health Systems Management
- **MIS 766** Healthcare Informatics
- Business Electives: ACC, BUS, ECO, ENP, FIN, HRM, MGT, MIS or MKT courses 500-level or above chosen in consultation with adviser (6 credits)

Program Notes

- Students can apply for admission to the Accelerated Program after completing at least 60 credits.

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/integrated-global-business/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/mba/index.aspx>

B.S. in Commercial Music Technology to MBA

Program Description

The Bachelor of Science in Commercial Music Technology (CMT) degree delves into three distinct areas: music, technology and entrepreneurship. Qualified undergraduate students in the Commercial Music Technology program may be eligible to participate in the accelerated B.S.-to-MBA program, which enables them to take graduate courses that apply to both their bachelor's degree in Commercial Music Technology and (thereafter) a MBA. (The MBA program at Cal U hones decision-making and leadership abilities while also building specialized knowledge in a concentration area.)

Program Coordinator

Dr. Stephanie Adam

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.-to-MBA program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40-41

Accelerated Bachelor's-to-Master's Programs

Course	Credits
CDC 101 Public Speaking	3
CMD 221 Speech Science	3
DMT 180 Foundations of Digital Media	3
ECO 100 Elements of Economics OR ECO 201 Principles of Microeconomics	3
ENG 101 Composition	3
ENG 217 Scientific/Tech Writing I	3
MAT 215 Statistics	3
MUS 100 Intro to Music	3
MUS 300 Jazz: HF&A	3
THE 211 Lighting I	3
UNI 100 First-Year Seminar	1
General Education Course (student selected)	3
Health and Wellness Course (student selected)	3
Humanities Course (student selected)	3
Free Electives	15
Required Major Courses	65
ACT 200 Financial Accounting	3
BUS 100 Introduction to Business	3
BUS 242 Business Law I	3
MGT 300 Principles of Marketing	3
MKT 300 Principles of Marketing	3
MUS 211 Keyboard Class	3
MUS 215 Comprehensive Musicianship I	3
MUS 275 Music and Recording Technology II	3
MUS 315 Comprehensive Musicianship II	3
MUS 314 The Music Industry: HF&A	3
MUS 375 Music and Recording Technology II	3
Applied Instruction Electives	8

Accelerated Bachelor's-to-Master's Programs

Course	Credits
Business Ethics Elective	3
Performance Ensemble Electives	6
Special Experience Electives	6
<i>Business Courses (select three)</i>	9
ENP 701 Entrepreneurship	3
ENP 705 Entrepreneurial Finance	3
MBA 700 Business Foundations*	3
MBA 710 Quantitative Reasoning and Analysis	3
MBA 720 Leading the Enterprise	3
MBA 730 Management Decision Making	3
MBA 740 Business, Government and Society	3
Total	120

* Pre-requisite for MBA 720, 730 and 740.

Program Notes

- Completion of this degree does not grant the student a MBA; however, the student will earn 9 credits toward their MBA.

Applied Instruction Electives (8 credits)

- Brass – MUS 109, 209, 309, 409 (1 credit)
- Piano – MUS 119, 219, 319, 419 (1 credit)
- Percussion – MUS 129, 229, 329, 429 (1 credit)
- Woodwind – MUS 149, 249, 349, 449 (1 credit)
- Voice – MUS 159, 259, 359, 459 (1 credit)
- Guitar – MUS 170, 270, 370, 470 (1 credit)
- String – MUS 179, 279, 379, 479 (1 credit)

Business Ethics Electives (3 credits)

- **BUS 342** Business, Society and Government (3 credit)
- **BUS 343** Corporate Social Responsibility (3 credit)
- **BUS 345** Business Ethics (3 credit)

Performance Ensemble Electives (6 credits)

- **MUS 187** Guitar Ensemble (1 credit)
- **MUS 188** String Ensemble (1 credit)
- **MUS 191** Choir (1 credit)
- **MUS 192** California Singers (1 credit)
- **MUS 193** Gospel Choir (1 credit)
- **MUS 196** Jazz Ensemble (1 credit)
- **MUS 197** Pep Band (1 credit)

Accelerated Bachelor's-to-Master's Programs

- **MUS 198** Marching Band (1 credit)
- **MUS 199** Concert Band (1 credit)
- **MUS 307** Special Music Project (1 credit)

Special Experience Electives (6 credits)

- **MUS 485** Music Tech Practicum (1-3 credits)
- **MUS 488** Music Tech Internship (1-12 credits)

Additional Requirements

Refer to the CMT program page of this catalog for additional requirements related to completing the bachelor's degree.

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/commercial-music-technology/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/mba/index.aspx>

B.S. in Criminal Justice to M.A. in Applied Criminology

Program Description

The Bachelor of Science in Criminal Justice degree explores broad concepts related to the field of criminal justice. Concentrations under this degree also allow students to focus study on:

- Criminology
- Cyber Forensics
- Forensic Science
- Homeland and International Security
- Law and Justice

Qualified undergraduate students in the Criminal Justice program and its concentrations may be eligible to participate in the accelerated B.S.-to-M.A. program, which enables them to take graduate courses that apply to both their bachelor's degree in Criminal Justice and (thereafter) a master's degree in Criminal Justice: Applied Criminology.

The Applied Criminology concentration of the Master of Arts in Criminal Justice Studies presents advanced criminological theories and examines behavioral manifestations of violent offenders. It provides students with sophisticated techniques needed to apply an analytical framework to real-world situations.

Program Coordinator

Dr. John Cencich

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.-to-M.A. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Accelerated Bachelor's-to-Master's Programs

Course	Credits
General Education Courses	40-41
Required Major Courses	33
Concentration Courses (if applicable) and Related Electives	9-21
Additional Electives	13-26
Graduate Courses <i>(may be applied toward related or additional electives)</i>	12
CRM 710 Advanced Behavioral Crime Analysis Theory	3
CRM 820 Ethical and Legal Aspects of Criminology	3
CRM 830 Criminal Investigative Analysis	3
CRM 840 Equivocal Death Analysis	3
Total	120

Program Notes

- Graduate courses cannot be applied to any undergraduate core courses but can be applied to all criminal justice electives or additional electives, regardless of concentration.
- Graduate credits may count toward some criminal justice concentration requirements with approval of adviser.

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/criminal-justice/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/applied-criminology/index.aspx>

B.S. in Exercise Science to M.S. in Exercise Science and Health Promotion

Program Description

The Bachelor of Science in Exercise Science degree prepares students for careers in wellness and fitness. Qualified undergraduate students in the Exercise Science program may be eligible to participate in the accelerated B.S.-to-M.S. program, which enables them to take graduate courses that apply to both their

Accelerated Bachelor's-to-Master's Programs

bachelor's degree in Exercise Science and (thereafter) a master's degree in Exercise Science and Health Promotion.

Cal U's Exercise Science and Health Promotion master's program allows students to gain specialized skills and knowledge in a concentration area while also building leadership and entrepreneurship abilities.

Program Coordinator

Dr. Barry McGlumphy

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.-to-M.S. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40-41
ENG 101 Composition I	3
FIT 115 Applied Anatomy and Physiology in Wellness and Fitness	4
HSC 110 Human Anatomy and Physiology I	4
HSC 115 Current Health Issues	3
SPT 305 Ethics in Sport	3
UNI 100 First-Year Seminar	1
Any Fine Arts Course	3
Any Humanities Course	3
Any Mathematics and Quantitative Literacy Course	3
Any Oral Communication Course	3
Any Social Science Course	3
Any Technological Literacy Course	3
General Education Courses	6
Required Major Courses	45
FIT 100 Intro to Fitness	3
FIT 125 Fundamentals of Speed Training	3
FIT 250 Current Topics and Strategies for Youth Fitness	3
FIT 300 Business Aspects of Fitness	3
FIT 305 Motivational Strategies in Wellness and Fitness	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
FIT 325 Integrated Personal Fitness Training	3
FIT 335 Integrated Personal Fitness Program Design	3
FIT 350 Fitness for Special Populations*	3
FIT 380 Wellness and Fitness for the Aging Population	3
FIT 401 Leadership Concepts and Actions in Wellness and Fitness*	3
FIT 405 Wellness Seminar I	3
FIT 410 Wellness Seminar II	3
FIT 420 Contemporary Issues in Fitness*	3
FIT 425 Evaluating Research in Fitness and Wellness	3
FIT 430 Application of Fitness and Wellness Research	3
Required Related Courses	15
SPT 300 Psychology of Sport	3
SPT 400 Legal Aspects of Sport	3
ATE 340 Sports Nutrition OR HSC 250 Nutrition for Wellness	3
HSC 275 Functional Kinesiology	3
HSC 325 Physiology of Exercise	3
Free Electives	19
Total	120

***Internship Option:** FIT 499 (9 credits) in lieu of FIT 350, 401 and 420.

Free Electives

Department of Exercise Science and Sport Studies undergraduate students enrolled in the Bachelor of Science program in Exercise Science at Cal U who meet the following criteria may be eligible to take four 3-credit graduate courses during their undergraduate program, and thereafter apply those 12 credits toward the M.S. in Exercise Science:

- Undergraduate students must have junior standing and a minimum GPA of 3.0.
- Any combination of the following graduate PRF courses apply: PRF 700, 701, 705, 715, 720, 760 and 770.
- These graduate courses cannot substitute for any undergraduate core courses.

Accelerated Bachelor's-to-Master's Programs

- These graduate credits can be applied to all exercise science electives or additional electives regardless of the graduate concentration.
- The undergraduate adviser or department chair must approve the student's request to take the graduate courses and will inform the graduate coordinator accordingly.

Program Notes

- Students must earn a cumulative GPA of 2.0 or higher to participate in an internship and to be eligible for graduation.
- Students may elect FIT 499 for internship within the program, in lieu of three courses in the didactic.
- Students may elect to complete an internship as elective credit (SPT 499) if they wish to complete all courses in the didactic.
- All General Education/Elective credits, all SPT, all HSC, and ATE courses can be completed on campus.
- All FIT and PRF prefix courses are completed online.

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/exercise-science/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/exercise-science/index.aspx>

B.S. in Professional Studies in Education to M.Ed. in School Counseling

Program Description

The Bachelor of Science in Professional Studies in Education (PSE) degree is designed for students who are interested in education but who are not seeking Pennsylvania teaching certification. Qualified undergraduate students in the PSE program may be eligible to participate in the accelerated B.S.-to-M.Ed. program, which enables them to take graduate courses that apply to both their bachelor's degree in PSE and (thereafter) a master's degree in School Counseling.

The Master of Education in School Counseling fulfills the degree requirements needed for the National Counselor Examination (NCE), which is needed to become a National Certified Counselor and Licensed Professional Counselor.

Program Coordinator

Dr. Elizabeth Gruber

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.-to-M.Ed. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Accelerated Bachelor's-to-Master's Programs

Course	Credits
General Education Courses	40-41
BIO 103 Contemporary Issues in Biology OR EAS 100 Intro to Earth Science OR ENS 101 Intro to Environmental Science OR PHS 120 Basic Physical Science w/ Lab (or any approved Natural Science menu course)	3-4
CHD 350 Family and Community Collab. Part.	3
EDU 333 Technology in Teach and Learn (or any approved Tech Lit menu course)	3
EDU 350 Supporting English Language Learners	3
ENG 101 English Composition I	3
ENG ____ (Approved American/British Literature course)	3
ESP 210 Special Education Foundation and Collaboration	3
GEO 102 Geographic Systems AND POS 102 American Government for Elementary Education AND ECO 102 Economics for Elementary Education	3
HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877 (or any approved History menu course)	3
Any approved Health and Wellness menu course	3
MAT 120 Elementary Topics I (or any approved Math & QL menu course)	3
MAT 130 Elementary Topics II (or any approved Math & QL menu course)	3
MUS 372 Creative Arts for PreK-Grade 4 OR Art 372 OR THE 372 (or any approved Fine Arts menu course)	3
UNI 100 First-Year Seminar	1
Required Major Courses	33
CHD 250 Health and PE for PreK-Grade 4	3
CHD 322 Professional Education Internship (x2)	6
CHD 400 Issues, Advocacy and Leadership	3
CHD 412 Field Experience with Diverse Populations	3
ELE 220 Instruction and Assessment in PreK	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
ELE 221 Instruction and Assessment in K-4	3
ELE 300 Emerging Literacy	3
ELE 310 Teaching Math/Science PreK	3
ELE 410 Field Experience PreK-4	3
PSE 200 Intro to Professional Studies in Education	3
Minor	18-24
Free Electives	18-29
CED 700 Foundations of School Counseling	3
CED 702 Counseling Theory	3
CED 705 Developmental Group Counseling	3
CED 732 Current Issues in School Counseling: Evidence-Based Practices and Inclusion	3
ESP 311 Assessments and PBS	3
Additional 300- to 400-level courses	3-14
Total	121

Program Notes

- The following courses need a grade of “C” or higher to pass: MAT 120, MAT 130, ENG 101, Am/ Brit Lit course and all ELE, CHD or ESP courses.
- ALL ELE, CHD, and ESP courses require current clearances and minimum 2.5 GPA to register.
- Prerequisites for ELE 221 and all 300 level ELE courses are ELE 200 or PSE 200 and ELE 220.
- 40% of courses (16 courses) must be 300 to 400 level.
- At least one minor must be selected.
- Internship application, training, and guidelines must be approved & completed a semester in advance of registration.
- Internship: must take at least two (3) credit internships. Can repeat up to 12 credits. Consult your dept. adviser.

Approved British or American Literature Courses

- **ENG 107** Introduction to Fiction
- **ENG 125** The American West
- **ENG 127** Woman as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 160** Introduction to British and American Literature
- **ENG 203** Great Books
- **ENG 301** English Literature I (pre-requisite ENG 101, 102)

Accelerated Bachelor's-to-Master's Programs

- **ENG 302** English Literature II (pre-requisite ENG 101, 102)
- **ENG 337** Survey of American Literature I (pre-requisite ENG 101, 102)
- **ENG 338** Survey of American Literature II (pre-requisite ENG 101, 102)
- **HON 250** Honors Comp II (pre-requisite HON 250)

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpage

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/professional-studies-education/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/education-campus/school-counseling/index.aspx>

B.S. in Professional Studies in Education to M.S. in Clinical Mental Health Counseling

Program Description

The Bachelor of Science in Professional Studies in Education (PSE) degree is designed for students who are interested in education but who are not seeking Pennsylvania teaching certification. Qualified undergraduate students in the PSE program may be eligible to participate in an accelerated B.S.-to-M.S. program, which enables them to take graduate courses that apply to both their bachelor's degree in PSE and (thereafter) a master's degree in Clinical Mental Health Counseling.

The Master of Science in Clinical Mental Health Counseling prepares students to work as professional counselors in a variety of behavioral health and social service settings.

Program Coordinator

Dr. Elizabeth Gruber

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.-to-M.S. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40-41
BIO 103 Contemporary Issues in Biology OR EAS 100 Intro to Earth Science OR ENS 101 Intro to Environmental Science OR PHS 120 Basic Physical Science w/ Lab (or any approved Natural Science menu course)	3-4
CHD 350 Family and Community Collab. Part.	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
EDU 333 Technology in Teach and Learn (or any approved Tech Lit menu course)	3
EDU 350 Supporting English Language Learners	3
ENG 101 English Composition I	3
ENG ____ (Approved American/British Literature course)	3
ESP 210 Special Education Foundation and Collaboration	3
GEO 102 Geographic Systems AND POS 102 American Government for Elementary Education AND ECO 102 Economics for Elementary Education	3
HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877 (or any approved History menu course)	3
Any approved Health and Wellness menu course	3
MAT 120 Elementary Topics I (or any approved Math & QL menu course)	3
MAT 130 Elementary Topics II (or any approved Math & QL menu course)	3
MUS 372 Creative Arts for PreK-Grade 4 OR Art 372 OR THE 372 (or any approved Fine Arts menu course)	3
UNI 100 First-Year Seminar	1
Required Major Courses	33
CHD 250 Health and PE for PreK-Grade 4	3
CHD 322 Professional Education Internship (x2)	6
CHD 400 Issues, Advocacy and Leadership	3
CHD 412 Field Experience with Diverse Populations	3
ELE 220 Instruction and Assessment in PreK	3
ELE 221 Instruction and Assessment in K-4	3
ELE 300 Emerging Literacy	3
ELE 310 Teaching Math/Science PreK	3
ELE 410 Field Experience PreK-4	3
PSE 200 Intro to Professional Studies in Education	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
Minor	18-24
Free Electives	18-29
CED 702 Counseling Theory	3
CED 705 Developmental Group Counseling	3
CED 720 Cross-cultural Counseling	3
CED 789 Intro to Clinical Mental Health Counseling	3
Additional 300- to 400-level courses	6-17
Total	121

Program Notes

- The following courses need a grade of “C” or higher to pass: MAT 120, MAT 130, ENG 101, Am/ Brit Lit course and all ELE, CHD or ESP courses.
- ALL ELE, CHD, and ESP courses require current clearances and minimum 2.5 GPA to register.
- Prerequisites for ELE 221 and all 300 level ELE courses are ELE 200 or PSE 200 and ELE 220.
- 40% of courses (16 courses) must be 300 to 400 level.
- At least one minor must be selected.
- Internship application, training, and guidelines must be approved & completed a semester in advance of registration.
- Internship: must take at least two (3) credit internships. Can repeat up to 12 credits. Consult your dept. adviser.

Approved British or American Literature Courses

- **ENG 107** Introduction to Fiction
- **ENG 125** The American West
- **ENG 127** Woman as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 160** Introduction to British and American Literature
- **ENG 203** Great Books
- **ENG 301** English Literature I (pre-requisite ENG 101, 102)
- **ENG 302** English Literature II (pre-requisite ENG 101, 102)
- **ENG 337** Survey of American Literature I (pre-requisite ENG 101, 102)
- **ENG 338** Survey of American Literature II (pre-requisite ENG 101, 102)
- **HON 250** Honors Comp II (pre-requisite HON 250)

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student’s responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in

Accelerated Bachelor's-to-Master's Programs

additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpage

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/professional-studies-education/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/clinical-mental-health-counseling/index.aspx>

B.S. in Psychology to M.A. in Conflict Resolution

Program Description

Cal U's Bachelor of Science in Psychology degree provides students with a scientific foundation of psychology as well as in a variety of applied areas. Qualified undergraduate students in the Psychology program may be eligible to participate in the accelerated B.S.-to-M.A. program, which enables them to take graduate courses that apply to both their bachelor's degree in Psychology and (thereafter) a master's degree in Conflict Resolution Studies.

The Master of Arts in Conflict Resolution Studies is designed to help develop skills in alternative dispute resolution (ADR), arbitration and mediation.

Program Coordinator

Dr. Beverly Ross

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.-to-M.A. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40-41
Free Electives	37
Required Major Courses	42
PSY 100 General Psychology	3
PSY 220 Descriptive Statistics in Psychology	3
PSY 331 Inferential Statistics in Psychology	3
PSY 340 Psychological Tests and Measures	3
PSY 345 History and Systems in Psychology	3
PSY 365 Research Methods in Psychology	3
PSY 460 Senior Seminar: Special Topics in Psychology	3
Psychology Content Courses	21

Accelerated Bachelor's-to-Master's Programs

Course	Credits
Qualifying students may opt to take any of the following graduate-level courses in place of psychology electives:	
CRS 700 Conflict Resolution Theory and Practice	3
CRS 720 Socio-Cultural Approach to Identify Conflict	3
CRS 730 Nonviolence Theory and Practice	3
CRS 770 International and Intercultural Conflict Resolution	3
Total	120

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

.Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/psychology/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/conflict-resolution/index.aspx>

B.S.B.A. in Accounting to M.Acc.

Program Description

The Bachelor of Science in Business Administration (B.S.B.A.) in Accounting degree prepares students to use modern accounting methods and information systems. Qualified undergraduate students in the Accounting program may be eligible to participate in the accelerated B.S.B.A.-to-M.Acc. program, which enables them to take graduate courses that apply to both their bachelor's degree and (thereafter) a M.Acc.

Cal U's specialized Master of Accountancy (M.Acc.) degree program expands knowledge of accounting principles and practices and is designed for students who plan to become certified public accountants.

Through the accelerated program, students can complete both degrees at Cal U with a total of 144 credits.

Program Coordinator

Dr. Joshua Chicarelli

Curriculum

The following curriculum shows the requirements for completing the Accounting bachelor's degree under the accelerated B.S.B.A.-to-M.Acc. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Accelerated Bachelor's-to-Master's Programs

Course	Credits
General Education Courses	40 to 41
BUS 281 Management Science I	3
CDC 101 Public Speaking	3
ENG 101 Composition I	3
ENG 211 Business Writing I OR ENG 102 Composition II	3
MAT 181 College Algebra	3
MAT 225 Business Statistics	3
MIS 201 Management Info Sys	3
PSY 100 General Psychology	3
UNI 100 First-Year Seminar	1
EMEL Course	3
Fine Arts Course	3
Health and Wellness Course	3
Humanities Course	3
Natural Science Course	3 to 4
Required Major Courses	30
ACC 200 Financial Accounting	3
ACC 331 Cost Accounting	3
BUS 242 Business Law I	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MBA 710 Quantitative Analysis and Reasoning	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Concentration Courses	24
ACC 202 Accounting II	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
ACC 218 Federal Income Tax I	3
ACC 301 Intermediate Accounting I	3
ACC 318 Federal Income Tax II	3
ACC 341 Non-Profit Accounting	3
ACC 441 Auditing	3
ACC 710 Financial Accounting	3
ACC 720 Adv. Financial Accounting	3
Required Electives	3
Any graduate-level elective required for the M.Acc. program	3
Undergraduate Free Electives	10-11
Required Undergraduate Minor/Certificate	12
Students select one of the following: a minor in Economics, Finance, Forensic Accounting, Human Resource Management, Management, Management Information Systems or Marketing; a certificate in Innovation and Entrepreneurship; or a certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser.*	
Total	120

*The minors listed are 21 credits; however, 9 of these credits are required in the core requirements of this degree. Likewise, the Innovation and Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above.

Menu of Related Electives from M.Acc. Program Requirements

Select one course to be taken in place of the "related electives" in the undergraduate program:

M.Acc. Required Courses

- **ACC 715** Advanced Tax
- **ACC 725** Controllership
- **ACC 730** Advanced Auditing
- **ACC 735** Emerging Issues in Accounting
- **BUS 740** Forecasting and Predictive Modeling
- **MBA 730** Managerial Decision Making

Accelerated Bachelor's-to-Master's Programs

M.Acc. Course Options (one from list)

- **MIS 720** Business Analytics for Big Data
- **MIS 730** Decision Support Systems

Program Notes

- Students who complete dual undergraduate degrees, dual undergraduate majors or dual undergraduate business concentrations do not have to complete a minor or certificate. No more than 6 credits of any internship course may be applied to satisfy the major requirements. Additional internship credits may be applied to free electives.
- Students can apply for admission to the Accelerated Program after completing at least 60 credits.

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/accounting-degree/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/macc-degree/index.aspx>

B.S.B.A. in Accounting to MBA

Program Description

The Bachelor of Science in Business Administration (B.S.B.A.) in Accounting degree prepares students to use modern accounting methods and information systems. Qualified undergraduate students in the Accounting program may be eligible to participate in the accelerated B.S.B.A.-to-MBA program, which enables them to take graduate courses that apply to both their bachelor's degree and (thereafter) a MBA degree with a concentration in Accounting, Applied Economics, Business Analytics, Healthcare Management or Management.

The MBA program at Cal U hones decision-making and leadership abilities while also building specialized knowledge in a concentration area.

Through the accelerated program, students can complete both degrees at Cal U with a total of 144 credits.

Program Coordinator

Dr. Stephanie Adam

Curriculum

The following curriculum shows the requirements for completing the Accounting bachelor's degree under the accelerated B.S.B.A.-to-MBA program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 to 41
BUS 281 Management Science I	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
CDC 101 Public Speaking	3
ENG 101 Composition I	3
ENG 211 Business Writing I OR ENG 102 Composition II	3
MAT 181 College Algebra	3
MAT 225 Business Statistics	3
MIS 201 Management Info Sys	3
PSY 100 General Psychology	3
UNI 100 First-Year Seminar	1
EMEL Course	3
Fine Arts Course	3
Health and Wellness Course	3
Humanities Course	3
Natural Science Course	3 to 4
Required Major Courses	30
ACC 200 Financial Accounting	3
ACC 331 Cost Accounting	3
BUS 242 Business Law I	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MBA 710 Quantitative Analysis and Reasoning	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Concentration Courses	24
ACC 202 Accounting II	3
ACC 218 Federal Income Tax I	3
ACC 301 Intermediate Accounting I	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
ACC 318 Federal Income Tax II	3
ACC 341 Non-Profit Accounting	3
ACC 441 Auditing	3
ACC 710 Financial Accounting (replaces ACC 302)	3
ACC 720 Adv. Financial Accounting (replaces ACC 401)	3
Required Electives	3
MBA 700 Business Foundations	3
Undergraduate Free Electives	10-11
Required Undergraduate Minor/Certificate	12
Students select one of the following: a minor in Economics, Finance, Forensic Accounting, Human Resource Management, Management, Management Information Systems or Marketing; a certificate in Innovation and Entrepreneurship; or a certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser.*	
Total	120

*The minors listed are 21 credits; however, 9 of these credits are required in the core requirements of this degree. Likewise, the Innovation and Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above.

Program Notes

- Students who complete dual undergraduate degrees, dual undergraduate majors or dual undergraduate business concentrations do not have to complete a minor or certificate. No more than 6 credits of any internship course may be applied to satisfy the major requirements. Additional internship credits may be applied to free electives.
- Students can apply for admission to the Accelerated Program after completing at least 60 credits.

Remaining MBA Program Requirements not Fulfilled by the Above Bachelor's Curriculum MBA Required Courses (required for all MBA concentrations)

- **MBA 720** Leading the Enterprise
- **MBA 730** Managerial Decision Making
- **MBA 740** Business, Government and Society
- **MBA 750** MBA Capstone

Concentration Courses

Accelerated Bachelor's-to-Master's Programs

- **MBA: Accounting Concentration Courses**
 - **ACC 715** Advanced Federal Income Tax
 - **ACC 730** Advanced Auditing
 - Business Electives: ACC, BUS, ECO, ENP, FIN, HRM, MGT, MIS or MKT courses
500-level chosen in consultation with adviser (6 credits)
- **MBA: Applied Economics Concentration Courses**
 - **ECO 710** Advanced Microeconomics
 - **ECO 720** Advanced Macroeconomics
 - **ECO 730** Applied Econometric Analysis
 - **BUS 740** Forecasting and Predictive Modelling
- **MBA: Business Analytics Concentration Courses**
 - **BUS 710** Applied Data Analysis for Business
 - **MIS 720** Business Analytics for Big Data
 - **MIS 730** Decision Support Systems
 - **BUS 740** Forecasting and Predictive Modeling
- **MBA: Healthcare Management Concentration Courses**
 - **ECO 765** Health Economics and Policy
 - **MGT 761** U.S. Health Care Policy
 - **MGT 763** Health Systems Management
 - **MIS 766** Healthcare Informatics
- **MBA: Management Concentration Courses**
 - **MGT 710** Leadership Dynamics
 - **MGT 720** Leveraging Diversity
 - **MGT 730** Organizational Problem Solving
 - **MGT 740** Managing Projects

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpage

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/accounting-degree/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/mba/index.aspx>

B.S.B.A. to MBA

Program Description

Cal U's B.S.B.A. degrees build specialized knowledge in a variety of areas of business. Qualified undergraduate students majoring in the following at Cal U may be eligible to participate in the accelerated B.S.B.A.-to-MBA program outlined on this catalog page:

- Economics
- Finance
- Interdisciplinary Studies in Business and Commerce (ISBC)
- Human Resource Management
- Management
- Marketing

Accelerated Bachelor's-to-Master's Programs

(Accounting majors should refer to a separate catalog page in this section for information about an accelerated B.S.B.A.-to-MBA option specific to their needs. The accelerated option is not available to students in the ISBC: Corporate Communication concentration.)

The accelerated B.S.B.A.-to-MBA program enables qualified undergraduate students to take graduate courses that apply to both their bachelor's degree and (thereafter) a MBA with a concentration in Accounting, Applied Economics, Business Analytics, Healthcare Management or Management. The MBA program at Cal U hones decision-making and leadership abilities while also building specialized knowledge in one of these concentration areas.

Through the accelerated program, students can complete both degrees at Cal U with a total of 144 credits.

Program Coordinator

Dr. Stephanie Adam

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.B.A.-to-MBA program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 to 41
BUS 281 Management Science I	3
CDC 101 Public Speaking	3
ENG 101 Composition I	3
ENG 211 Business Writing I OR ENG 102 Composition II	3
MAT 181 College Algebra	3
MAT 225 Business Statistics	3
MIS 201 Management Info Sys	3
PSY 100 General Psychology	3
UNI 100 First-Year Seminar	1
EMEL Course	3
Fine Arts Course	3
Health and Wellness Course	3
Humanities Course	3
Natural Science Course	3 to 4
Required Major Courses	30
ACC 200 Financial Accounting	3
ACC 321 Managerial Accounting	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
BUS 242 Business Law I	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MBA 710 Quantitative Analysis and Reasoning	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Major Courses	18
Six ACC, BUS, ECO, FIN, HRM, MGT, MIS or MKT courses 300-level or above not already included in the Required Major Courses above or ACC 491, BUS 492, ECO 492, FIN 491, MGT 492, MIS 492 or MKT 492	18
Required Electives	9
MBA 700 Business Foundations	3
Two ACC, BUS, ECO, ENP, FIN, HRM, MBA, MGT, MIS or MKT courses 500-level or above	6
Undergraduate Free Electives	10-11
Required Undergraduate Minor/Certificate	12
Students select one of the following: a minor in Economics, Finance, Forensic Accounting, Human Resource Management, Management, Management Information Systems or Marketing; a certificate in Innovation and Entrepreneurship; or a certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser.*	
Total	120

*The minors listed are 21 credits; however, 9 of these credits are required in the core requirements of this degree. Likewise, the Innovation and Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above.

Accelerated Bachelor's-to-Master's Programs

Undergraduate Major Options

Students may replace "Major Courses" with the following options:

- Option 1: Economics Major or Economics GO Major
- Option 2: Finance Major
- Option 3: Human Resource Management Major
- Option 4: Interdisciplinary Studies in Business and Commerce Major
- Option 5: Management Major
- Option 6: Marketing Major

Menu of Required Electives from MBA Program Requirements

Select six credits from below to fulfill B.S.B.A. program Related Electives:

MBA Required Courses (required for all concentrations)

- **MBA 720** Leading the Enterprise
- **MBA 730** Managerial Decision Making
- **MBA 740** Business, Government and Society
- **MBA 750** MBA Capstone

Concentration Courses

- **MBA: Accounting Concentration Courses**
 - **ACC 710** Financial Accounting
 - **ACC 715** Advanced Federal Income Tax
 - **ACC 720** Advanced Financial Accounting
 - **ACC 730** Advanced Auditing
- **MBA: Applied Economics Concentration Courses**
 - **ECO 710** Advanced Microeconomics
 - **ECO 720** Advanced Macroeconomics
 - **ECO 730** Applied Econometric Analysis
 - **BUS 740** Forecasting and Predictive Modelling
- **MBA: Business Analytics Concentration Courses**
 - **BUS 710** Applied Data Analysis for Business
 - **MIS 720** Business Analytics for Big Data
 - **MIS 730** Decision Support Systems
 - **BUS 740** Forecasting and Predictive Modeling
- **MBA: Healthcare Management Concentration Courses**
 - **ECO 765** Health Economics and Policy
 - **MGT 761** U.S. Health Care Policy
 - **MGT 763** Health Systems Management
 - **MIS 766** Healthcare Informatics
- **MBA: Management Concentration Courses**
 - **MGT 710** Leadership Dynamics
 - **MGT 720** Leveraging Diversity
 - **MGT 730** Organizational Problem Solving
 - **MGT 740** Managing Projects

MBA Business Electives

- ACC, BUS, ECO, ENP, FIN, HRM, MGT, MIS or MKT courses 500-level chosen in consultation with adviser (6 credits)

Program Notes

- Students who complete dual undergraduate degrees, dual undergraduate majors or dual undergraduate business concentrations do not have to complete a minor or certificate. No more

Accelerated Bachelor's-to-Master's Programs

than 6 credits of any internship course may be applied to satisfy the major requirements. Additional internship credits may be applied to free electives.

- Students can apply for admission to the Accelerated Program after completing at least 60 credits.
- This curriculum applies to undergraduate B.S.B.A. majors in Economics, Finance, Interdisciplinary Studies in Business and Commerce, Human Resource Management, Management and Marketing.
- This applies to students planning to pursue MBA concentrations in Accounting, Applied Economics, Business Analytics, Healthcare Management and Management.
- Accelerated B.S.B.A.-to-MBA is not available for students in B.S.B.A. in ISBC: Corporate Communication Concentration.

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpage

<https://www.calu.edu/academics/business/index.aspx>

B.S.Ed. in Grades PreK-4 Education to M.Ed. in Integrative STEM Education K-12

Program Description

The Bachelor of Science in Education in Grades PreK-4 Education degree prepares students to teach children at the pre-kindergarten to grade 4 levels. Pennsylvania certification in pre-K to grade 4 education is awarded upon graduation and completion of state certification requirements.

Qualified undergraduate students in the Grades PreK-4 Education program may be eligible to participate in the accelerated B.S.Ed.-to-M.Ed. program, which enables them to take graduate courses that apply to both their bachelor's degree and (thereafter) a master's degree in Integrative STEM Education K-12.

The Master of Education in Teacher Education: Integrative STEM Education K-12 focuses on best practices for developing rigorous, relevant, innovative and engaging integrative practices for incorporating STEM principles across disciplines.

Through the accelerated program, students can complete both degrees at Cal U with a total of 139 credits.

Program Coordinator

Dr. Diane Fine

Accreditation

These programs are approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.Ed.-to-M.Ed. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Accelerated Bachelor's-to-Master's Programs

Course	Credits
General Education Courses	40-41
CHD 250 Health and PE Methods for PreK-4	3
CHD 350 Family and Community Collaborations	3
ECO 102 Econ for El. Ed.	1
EDU 333 Technology for Teaching and Learning	3
EDU 350 Supporting Eng. Lang. Learners	3
ESP 210 Special Education Foundations and Collaborations	3
ENG 101 Composition I	3
GEO 102 Geographic Sys. for El. Ed.	1
HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877	3
MAT 120 Elementary Topics I	3
MAT 130 Elementary Topics II	3
MUS/ART/THE 732 Creative Arts for PreK-4	3
POS 102 American Gov. for El. Ed.	1
UNI 100 First-Year Seminar	1
Approved Natural Science Course with Lab	3
British/American Lit Course (from approved list)	3
Required Major Courses	60
CHD 200 Intro to PreK-Grade 8 Education	3
CHD 312 Leadership and Advocacy in Childhood Ed	3
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
EDE 750 Foundations of Integ. STEM Ed K-12	3
ELE 220 Instruction and Assessment in PreK	3
ELE 221 Inst. and Assessment in K-4	3
ELE 300 Emergent Literacy	3
ELE 301 Literacy Foundations I: Lang Arts*	3
ELE 302 Literacy Foundations II: Reading*	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
ELE 310 Teaching Math/Science PreK	3
ELE 311 Teaching Math K-4*	3
ELE 321 Teaching Science K-4*	3
ELE 331 Teaching Social Studies K-4*	
ELE 410 PreK-4 Field Experience	3
ELE 411 K-4 Field Experience*	3
ELE 461 Student Teaching PreK-Grade 4*	12
Required Related Courses	12
ESP 311 Assess Positive Behavior Interv.	3
ESP 412 Evidence-Based Practices*	3
PSY 205 Child Psychology	3
PSY 208 Educational Psy. (PSY 100 waived)	3
Free Electives	9
EDE 701 Stand. Aligned Curr., Inst. and Asmt.	3
EDE 753 Int. STEM Ped. and Inst. Design	3
EDE 754 Creat. Inv. Meas. Lrn. STEM Com.	3
Total	120

Program Notes:

- All courses required for certification with a grade of C- or lower must be repeated.
- CHD 200 and ELE 220 require current clearances and minimum 2.0 GPA to register for courses.
- All other EDU, ELE, CHD and ESP courses require current clearances and minimum 2.5 GPA to register.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Courses marked with an asterisk (*) are restricted to candidates Admitted to Teacher Education.
- Pre-requisites for ELE 221 and all 300-level ELE and CHD courses are ELE or CHD 200 and ELE 220.
- State licensure exams must be passed before student teaching.
- Undergraduate students must achieve at least junior standing to take graduate-level coursework.

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Accelerated Bachelor's-to-Master's Programs

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/grades-prek-4-education/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/stem/index.aspx>

B.S.Ed. in Grades PreK-4 Education to M.Ed. in Reading Specialist

Program Description

The Bachelor of Science in Education in Grades PreK-4 Education degree prepares students to teach children at the pre-kindergarten to grade 4 levels. Pennsylvania certification in pre-K to grade 4 education is awarded upon graduation and completion of state certification requirements.

Qualified undergraduate students in the Grades PreK-4 Education program may be eligible to participate in the accelerated B.S.Ed.-to-M.Ed. program, which enables them to take graduate courses that apply to both their bachelor's degree and (thereafter) a Reading Specialist master's degree.

The Reading Specialist Master of Education program at Cal U is designed for students who want to earn a Master of Education degree and reading specialist certification on their Pennsylvania teaching certificate.

Through the accelerated program, students can complete both degrees at Cal U with a total of 142 credits.

Program Coordinator

Dr. Diane Fine

Accreditation

These programs are approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP). The reading specialist program is also nationally recognized by the International Literacy Association (ILA).

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.Ed.-to-M.Ed. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40-41
CHD 250 Health and PE Methods for PreK-4	3
CHD 350 Family and Community Collaborations	3
ECO 102 Econ for El. Ed.	1

Accelerated Bachelor's-to-Master's Programs

Course	Credits
EDU 333 Technology for Teaching and Learning	3
EDU 350 Supporting Eng. Lang. Learners	3
ESP 210 Special Education Foundations and Collaborations	3
ENG 101 Composition I	3
GEO 102 Geographic Sys. for El. Ed.	1
HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877	3
MAT 120 Elementary Topics I	3
MAT 130 Elementary Topics II	3
MUS/ART/THE 732 Creative Arts for PreK-4	3
POS 102 American Gov. for El. Ed.	1
UNI 100 First-Year Seminar	1
Approved Natural Science Course with Lab	3
British/American Lit Course (from approved list)	3
Required Major Courses	60
CHD 200 Intro to PreK-Grade 8 Education	3
CHD 312 Leadership and Advocacy in Childhood Ed	3
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
EDU 375 Intro to Integrated STEM Education	3
ELE 220 Instruction and Assessment in PreK	3
ELE 221 Inst. and Assessment in K-4	3
ELE 300 Emergent Literacy	3
ELE 301 Literacy Foundations I: Lang Arts*	3
ELE 302 Literacy Foundations II: Reading*	3
ELE 310 Teaching Math/Science PreK	3
ELE 311 Teaching Math K-4*	3
ELE 321 Teaching Science K-4*	3
ELE 331 Teaching Social Studies K-4*	

Accelerated Bachelor's-to-Master's Programs

Course	Credits
ELE 410 PreK-4 Field Experience	3
ELE 411 K-4 Field Experience*	3
ELE 461 Student Teaching PreK-Grade 4*	12
Required Related Courses	12
ESP 311 Assess Positive Behavior Interv.	3
ESP 412 Evidence-Based Practices*	3
PSY 205 Child Psychology	3
PSY 208 Educational Psy. (PSY 100 waived)	3
Free Electives	9
RSP 700 Fundamentals of Literacy	3
RSP 707 Creating and Fostering Literate Env.	3
RSP 708 Literacy Dev. for ELL	3
Total	120

Program Notes:

- All courses required for certification with a grade of C- or lower must be repeated.
- CHD 200 and ELE 220 require current clearances and minimum 2.0 GPA to register for courses.
- All other EDU, ELE, CHD and ESP courses require current clearances and minimum 2.5 GPA to register.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Courses marked with an asterisk (*) are restricted to candidates Admitted to Teacher Education.
- Pre-requisites for ELE 221 and all 300-level ELE and CHD courses are ELE or CHD 200 and ELE 220.
- State licensure exams must be passed before student teaching.
- Undergraduate students must achieve at least junior standing to take graduate-level coursework.

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in

Accelerated Bachelor's-to-Master's Programs

additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpage

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/grades-prek-4-education/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/education-campus/reading-specialist/index.aspx>

B.S.Ed. in Middle Level Grades 4-8 Education: Language Arts/Reading to M.Ed. in Integrative STEM Education K-12

Program Description

The Language Arts/Reading concentration of the Bachelor of Science in Education in Middle Level Education degree prepares students to teach English language and reading to children in grades 4 through 8. Upon successful completion of this program, students will earn a bachelor's degree and be eligible for Pennsylvania teaching certification.

Qualified undergraduate students in this concentration may be eligible to participate in the accelerated B.S.Ed.-to-M.Ed. program, which enables them to take graduate courses that apply to both their bachelor's degree in Middle Level Education: Language Arts/Reading and (thereafter) a master's in Integrative STEM Education K-12.

The Master of Education in Teacher Education: Integrative STEM Education K-12 focuses on best practices for developing rigorous, relevant, innovative and engaging integrative practices for incorporating STEM principles across disciplines.

Through the accelerated program, students can complete both degrees at Cal U with a total of 142 credits.

Program Coordinator

Dr. Diane Fine

Accreditation

These programs are approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.Ed.-to-M.Ed. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40-41
CHD 250 Health and PE Methods for PreK-4	3
CHD 350 Family and Community Collaborations	3
ECO 102 Econ for El. Ed.	1
EDU 333 Technology for Teaching and Learning	3
EDU 350 Supporting Eng. Lang. Learners	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
ESP 210 Special Education Foundations and Collaborations	3
ENG 101 Composition I	3
GEO 102 Geographic Sys. for El. Ed.	1
HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877	3
MAT 120 Elementary Topics I	3
MAT 130 Elementary Topics II	3
POS 102 American Gov. for El. Ed.	1
UNI 100 First-Year Seminar	1
British/American Lit Course (from approved list)	3
Fine Arts Elective	
Natural Science Course with Lab	3
Required Major Courses	45
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
EDE 375 Foundations of Integ. STEM Ed. K-12	3
ELM 200 Intro to Middle Level Ed.	3
ELM 220 Inst. and Assess in 4-8 Class.	3
ELM 301 Read Methods Assess.*	3
ELM 302 Lang Arts Methods Assess.*	3
ELM 311 Math Methods Assess.*	3
ELM 321 Science Methods Assess.*	3
ELM 331 Soc St Methods Assess.*	3
ELM 415 Middle Level Education Field Experience*	3
ELM 461 Student Teaching and School Law	12
Concentration Courses	18
ENG 102 English Composition II	3
ENG 337 Survey of American Lit I	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
ENG 338 Survey of American Lit II	3
RES 800 Methods of Research	3
<i>Select two of the following:</i>	6
ENG 315 Survey of American Women Writers	3
ENG 345 English Grammar and Usage	3
ENG 347 Intro to Linguistics	3
ENG 425 Shakespeare	3
Required Related Courses	15
ESP 311 Assess Positive Behavior Interv.	3
ESP 412 Evidence-Based Practices*	3
MAT 181 College Algebra	3
PSY 206 Adolescent Psychology	3
PSY 208 Educational Psy. (PSY 100 waived)	3
Free Elective	3
EDE 753 Int. STEM Ped. and Inst. Design	3
Total	121

Program Notes:

- All courses required for certification with a grade of C- or lower must be repeated.
- All ELM, CHD and ESP courses require current clearances and minimum 2.5 GPA to register, except ELM 200 and ELM 220, which require 2.0 GPA.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Courses marked with an asterisk (*) are restricted to candidates Admitted to Teacher Education.
- Pre-requisite for ELM 220 and all 300 level ELM and CHD courses is ELM 200.
- State licensure exams must be passed before student teaching.
- Undergraduate students must achieve at least junior standing to take graduate-level coursework.

Approved American/British Lit. Courses

- **ENG 107** Intro to Fiction
- **ENG 125** The American West
- **ENG 127** Women as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature

Accelerated Bachelor's-to-Master's Programs

- **ENG 160** Intro to British and American Literature
- **ENG 203** Great Books
- **ENG 301** English Lit I (pre-req ENG 101 and 102)
- **ENG 302** English Lit II (pre-req ENG 101 and 102)
- **ENG 337** Survey of Am. Lit. I (pre-req ENG 101 and 102)
- **ENG 338** Survey of Am. Lit. II (pre-req ENG 101 and 102)
- **HON 250** Honors Composition II (pre-req Hon 150)

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/middle-level-education/english.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/stem/index.aspx>

B.S.Ed. in Middle Level Grades 4-8 Education: Language Arts/Reading to M.Ed. in Reading Specialist Program Description

The Language Arts/Reading concentration of the Bachelor of Science in Education in Middle Level Education degree prepares students to teach English language and reading to children in grades 4 through 8. Upon successful completion of this program, students will earn a bachelor's degree and be eligible for Pennsylvania teaching certification.

Qualified undergraduate students in this concentration may be eligible to participate in the accelerated B.S.Ed.-to-M.Ed. program, which enables them to take graduate courses that apply to both their bachelor's degree in Middle Level Education: Language Arts/Reading and (thereafter) a Reading Specialist master's degree.

The Reading Specialist Master of Education program at Cal U is designed for students who want to earn a Master of Education degree and reading specialist certification on their Pennsylvania teaching certificate.

Through the accelerated program, students can complete both degrees at Cal U with a total of 145 credits.

Program Coordinator

Dr. Diane Fine

Accreditation

These programs are approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP). The reading specialist program is also nationally recognized by the International Literacy Association (ILA).

Accelerated Bachelor's-to-Master's Programs

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.Ed.-to-M.Ed. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40-41
CHD 250 Health and PE Methods for PreK-4	3
CHD 350 Family and Community Collaborations	3
ECO 102 Econ for El. Ed.	1
EDU 333 Technology for Teaching and Learning	3
EDU 350 Supporting Eng. Lang. Learners	3
ESP 210 Special Education Foundations and Collaborations	3
ENG 101 Composition I	3
GEO 102 Geographic Sys. for El. Ed.	1
HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877	3
MAT 120 Elementary Topics I	3
MAT 130 Elementary Topics II	3
POS 102 American Gov. for El. Ed.	1
UNI 100 First-Year Seminar	1
British/American Lit Course (from approved list)	3
Fine Arts Elective	
Natural Science Course with Lab	3
Required Major Courses	45
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
EDU 375 Intro to Integrated STEM Education	3
ELM 200 Intro to Middle Level Ed.	3
ELM 220 Inst. and Assess in 4-8 Class.	3
ELM 301 Read Methods Assess.*	3
ELM 302 Lang Arts Methods Assess.*	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
ELM 311 Math Methods Assess.*	3
ELM 321 Science Methods Assess.*	3
ELM 331 Soc St Methods Assess.*	3
ELM 415 Middle Level Education Field Experience*	3
ELM 461 Student Teaching and School Law	12
Concentration Courses	18
ENG 102 English Composition II	3
ENG 337 Survey of American Lit I	3
ENG 338 Survey of American Lit II	3
RES 800 Methods of Research	3
<i>Select two of the following:</i>	6
ENG 315 Survey of American Women Writers	3
ENG 345 English Grammar and Usage	3
ENG 347 Intro to Linguistics	3
ENG 425 Shakespeare	3
Required Related Courses	15
ESP 311 Assess Positive Behavior Interv.	3
ESP 412 Evidence-Based Practices*	3
MAT 181 College Algebra	3
PSY 206 Adolescent Psychology	3
PSY 208 Educational Psy. (PSY 100 waived)	3
Free Elective	3
RSP 700 Fundamentals of Literacy	3
Total	121

Program Notes:

- All courses required for certification with a grade of C- or lower must be repeated.

Accelerated Bachelor's-to-Master's Programs

- All ELM, CHD and ESP courses require current clearances and minimum 2.5 GPA to register, except ELM 200 and ELM 220, which require 2.0 GPA.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Courses marked with an asterisk (*) are restricted to candidates Admitted to Teacher Education.
- Pre-requisite for ELM 220 and all 300 level ELM and CHD courses is ELM 200.
- State licensure exams must be passed before student teaching.
- Undergraduate students must achieve at least junior standing to take graduate-level coursework.

Approved American/British Lit. Courses

- **ENG 107** Intro to Fiction
- **ENG 125** The American West
- **ENG 127** Women as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 160** Intro to British and American Literature
- **ENG 203** Great Books
- **ENG 301** English Lit I (pre-req ENG 101 and 102)
- **ENG 302** English Lit II (pre-req ENG 101 and 102)
- **ENG 337** Survey of Am. Lit. I (pre-req ENG 101 and 102)
- **ENG 338** Survey of Am. Lit. II (pre-req ENG 101 and 102)
- **HON 250** Honors Composition II (pre-req Hon 150)

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/middle-level-education/english.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/education-campus/reading-specialist/index.aspx>

B.S.Ed. in Middle Level Grades 4-8 Education: Math to M.Ed. in Integrative STEM Education K-12

The Math concentration of the Bachelor of Science in Education in Middle Level Education degree prepares students to teach mathematics to children in grades 4 through 8. Upon successful completion of this program, students will earn a bachelor's degree and be eligible for Pennsylvania teaching certification.

Qualified undergraduate students in this concentration may be eligible to participate in the accelerated B.S.Ed.-to-M.Ed. program, which enables them to take graduate courses that apply to both their bachelor's degree in Middle Level Education: Math and (thereafter) a master's in Integrative STEM Education K-12.

Accelerated Bachelor's-to-Master's Programs

The Master of Education in Teacher Education: Integrative STEM Education K-12 focuses on best practices for developing rigorous, relevant, innovative and engaging integrative practices for incorporating STEM principles across disciplines.

Through the accelerated program, students can complete both degrees at Cal U with a total of 142 credits.

Program Coordinator

Dr. Diane Fine

Accreditation

These programs are approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.Ed.-to-M.Ed. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40-41
CHD 250 Health and PE Methods for PreK-4	3
CHD 350 Family and Community Collaborations	3
ECO 102 Econ for El. Ed.	1
EDU 333 Technology for Teaching and Learning	3
EDU 350 Supporting Eng. Lang. Learners	3
ESP 210 Special Education Foundations and Collaborations	3
ENG 101 Composition I	3
GEO 102 Geographic Sys. for El. Ed.	1
HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877	3
MAT 180 College Algebra	3
MAT 215 Statistics	3
POS 102 American Gov. for El. Ed.	1
UNI 100 First-Year Seminar	1
Any Natural Science Course with Lab	3
British/American Lit Course (from approved list)	3
Fine Arts Elective	3
Required Major Courses	45

Accelerated Bachelor's-to-Master's Programs

Course	Credits
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
EDE 375 Foundations of Integrative STEM Ed. K-12	3
ELM 200 Intro to Middle Level Ed.	3
ELM 220 Inst. and Assess in 4-8 Class.	3
ELM 301 Read Methods Assess.*	3
ELM 302 Lang Arts Methods Assess.*	3
ELM 311 Math Methods Assess.*	3
ELM 321 Science Methods Assess.*	3
ELM 331 Soc St Methods Assess.*	3
ELM 415 Middle Level Education Field Experience*	3
ELM 461 Student Teaching and School Law	12
Concentration Courses	18
MAT 191 College Trigonometry	3
MAT 272 Discrete Math	3
MAT 281 Calculus	3
MAT 303 Geometry	3
MAT 341 Linear Algebra	3
MAT 400 Mathematical Modeling	3
Required Related Courses	12
ESP 311 Assess Positive Behavior Interv.	3
ESP 412 Evidence-Based Practices*	3
PSY 206 Adolescent Psychology	3
PSY 208 Educational Psy. (PSY 100 waived)	3
Free Electives	6
EDE 701 Stand. Aligned Curr., Inst. and Asmt.	3
EDE 752 Mathematics as Problem Solving	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
Total	121

Program Notes:

- ALL ELM, CHD and ESP courses require current clearances and minimum 2.5 GPA to register for course, except ELM 200 and 220 which require 2.0 GPA to register.
- All courses required for certification with a grade of C- or lower must be repeated.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Courses marked with asterisk are restricted to candidates Admitted to Teacher Education.
- Pre-requisites for ELM 220 and all 300-level ELM and CHD courses is ELM 200.
- State licensure for exams must be passed before student teaching.
- Undergraduate students must achieve at least junior standing to take graduate-level coursework.

Approved American/British Lit. Courses

- **ENG 107** Intro to Fiction
- **ENG 125** The American West
- **ENG 127** Women as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 160** Intro to British and American Literature
- **ENG 203** Great Books
- **ENG 301** English Lit I (pre-req ENG 101 and 102)
- **ENG 302** English Lit II (pre-req ENG 101 and 102)
- **ENG 337** Survey of Am. Lit. I (pre-req ENG 101 and 102)
- **ENG 338** Survey of Am. Lit. II (pre-req ENG 101 and 102)
- **HON 250** Honors Composition II (pre-req Hon 150)

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/middle-level-education/mathematics.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/stem/index.aspx>

Accelerated Bachelor's-to-Master's Programs

B.S.Ed. in Middle Level Grades 4-8 Education: Math to M.Ed. in Integrative STEM Education K-12 **Program Description**

The Science concentration of the Bachelor of Science in Education in Middle Level Education degree prepares students to teach science to children in grades 4 through 8. Upon successful completion of this program, students will earn a bachelor's degree and be eligible for Pennsylvania teaching certification.

Qualified undergraduate students in this concentration may be eligible to participate in the accelerated B.S.Ed.-to-M.Ed. program, which enables them to take graduate courses that apply to both their bachelor's degree in Middle Level Education: Science and (thereafter) a master's in Integrative STEM Education K-12.

The Master of Education in Teacher Education: Integrative STEM Education K-12 focuses on best practices for developing rigorous, relevant, innovative and engaging integrative practices for incorporating STEM principles across disciplines.

Through the accelerated program, students can complete both degrees at Cal U with a total of 142 credits.

Program Coordinator

Dr. Diane Fine

Accreditation

These programs are approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.Ed.-to-M.Ed. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40-41
CHD 250 Health and PE Methods for PreK-4	3
CHD 350 Family and Community Collaborations	3
ECO 102 Econ for El. Ed.	1
EDU 333 Technology for Teaching and Learning	3
EDU 350 Supporting Eng. Lang. Learners	3
ESP 210 Special Education Foundations and Collaborations	3
ENG 101 Composition I	3
GEO 102 Geographic Sys. for El. Ed.	1
HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877	3
MAT 130 Elementary Topics II	3
MAT 181 College Algebra	3
PHS 120 Basic Physical Science with Lab	3-4

Accelerated Bachelor's-to-Master's Programs

Course	Credits
POS 102 American Gov. for El. Ed.	1
UNI 100 First-Year Seminar	1
British/American Lit Course (from approved list)	3
Fine Arts Elective	3
Required Major Courses	45
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
EDE 751 Bld. Sci. Lit and Undr. through Inq.	3
ELM 200 Intro to Middle Level Ed.	3
ELM 220 Inst. and Assess in 4-8 Class.	3
ELM 301 Read Methods Assess.*	3
ELM 302 Lang Arts Methods Assess.*	3
ELM 311 Math Methods Assess.*	3
ELM 321 Science Methods Assess.*	3
ELM 331 Soc St Methods Assess.*	3
ELM 415 Middle Level Education Field Experience*	3
ELM 461 Student Teaching and School Law	12
Concentration Courses	18
EDE 750 Found. of Integrative STEM Ed. K-12	3
<i>In coordination with academic adviser:</i>	
Select one Earth Science course from approved list	4
Select one Physical Science course from approved list	4
BIO 120 General Zoology OR BIO 125 General Botany	4
Select one Science Concentration course from approved list	3
Required Related Courses	15
ESP 311 Assess Positive Behavior Interv.	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
ESP 412 Evidence-Based Practices*	3
MAT 215 Statistics	3
PSY 206 Adolescent Psychology	3
PSY 208 Educational Psy. (PSY 100 waived)	3
Free Electives	3
EDE 701 Stand. Aligned Curr., Inst. and Asmt.	3
Total	121

Program Notes:

- All courses required for certification with a grade of C- or lower must be repeated.
- All ELM, CHD and ESP courses require current clearances and minimum 2.5 GPA to register, except ELM 200 and ELM 220, which require 2.0 GPA.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Courses marked with asterisk are restricted to candidates Admitted to Teacher Education.
- Prerequisite for ELM 220 and all 300-level ELM and CHD courses is ELM 200.
- State licensure exams must be passed before student teaching.
- Undergraduate students must achieve at least junior standing to take graduate-level coursework.

Approved American/British Lit. Courses

- **ENG 107** Intro to Fiction
- **ENG 125** The American West
- **ENG 127** Women as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 160** Intro to British and American Literature
- **ENG 203** Great Books
- **ENG 301** English Lit I (pre-req ENG 101 and 102)
- **ENG 302** English Lit II (pre-req ENG 101 and 102)
- **ENG 337** Survey of Am. Lit. I (pre-req ENG 101 and 102)
- **ENG 338** Survey of Am. Lit. II (pre-req ENG 101 and 102)
- **HON 250** Honors Composition II (pre-req Hon 150)

Science Electives

Please consult with the science education advisor before selecting from the following Physical, Earth, and Science concentration courses:

- **EAS 104** Intro. to Meteorology
- **EAS 105** Extreme Weather
- **EAS 142** Climatology
- **EAS 150** Intro. to Geology
- **EAS 163** Intro. to Oceans
- **EAS 210** Soils
- **ENS 101** Intro. to Environmental Science

Accelerated Bachelor's-to-Master's Programs

- **PHS 145** Astronomy
- **CHE 101** General Chemistry I
- **CHE 103** Chemistry for Every Day World
- **PHS 137** Intro. to Environmental Chemistry
- **PHY 121** General Physics I
- **PHY 122** General Physics I

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/middle-level-education/science.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/stem/index.aspx>

B.S.Ed. in Middle Level Grades 4-8 Education: Social Studies to M.Ed. in Integrative STEM Education K-12

Program Description

The Social Studies concentration of the Bachelor of Science in Education in Middle Level Education degree prepares students to teach social studies to children in grades 4 through 8. Upon successful completion of this program, students will earn a bachelor's degree and be eligible for Pennsylvania teaching certification.

Qualified undergraduate students in this concentration may be eligible to participate in the accelerated B.S.Ed.-to-M.Ed. program, which enables them to take graduate courses that apply to both their bachelor's degree in Middle Level Education: Social Studies and (thereafter) a master's degree in Integrative STEM Education K-12.

The Master of Education in Teacher Education: Integrative STEM Education K-12 focuses on best practices for developing rigorous, relevant, innovative and engaging integrative practices for incorporating STEM principles across disciplines.

Through the accelerated program, students can complete both degrees at Cal U with a total of 145 credits.

Program Coordinator

Dr. Diane Fine

Accreditation

These programs are approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Accelerated Bachelor's-to-Master's Programs

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.Ed.-to-M.Ed. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40-41
CHD 250 Health and PE Methods for PreK-4	3
CHD 350 Family and Community Collaborations	3
EDU 333 Technology for Teaching and Learning	3
EDU 350 Supporting Eng. Lang. Learners	3
ESP 210 Special Education Foundations and Collaborations	3
ENG 101 Composition I	3
GEO 100 Intro to Geography	3
HIS 101 U.S. History to 1877	3
MAT 120 Elementary Topics I	3
MAT 130 Elementary Topics II	3
UNI 100 First-Year Seminar	1
British/American Lit Course (from approved list)	3
Fine Arts Elective	
Natural Science Course with Lab	3
Required Major Courses	45
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
EDE 750 Foundations of Integ. STEM Ed. K-12	3
ELM 200 Intro to Middle Level Ed.	3
ELM 220 Inst. and Assess in 4-8 Class.	3
ELM 301 Read Methods Assess.*	3
ELM 302 Lang Arts Methods Assess.*	3
ELM 311 Math Methods Assess.*	3
ELM 321 Science Methods Assess.*	3
ELM 331 Soc St Methods Assess.*	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
ELM 415 Middle Level Education Field Experience*	3
ELM 461 Student Teaching and School Law	12
Concentration Courses	18
ECO 100 Elements of Economics	3
HIS 102 History of the U.S. since 1877	3
HIS 112 World History since 1500	3
HIS 200 History of Pennsylvania	3
POS 105 American Politics	3
<i>Select one of the following:</i>	3
ECO 200 Current Economics Issues	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
GEO 105 Human Geography	3
GEO 217 Demographic Analysis	3
GEO 220 Geography of N. America and PA	3
POS 101 Contemporary Policy and Politics	3
POS 306 The Congress	3
POS 310 The Presidency	3
Required Related Courses	15
ESP 311 Assess Positive Behavior Interv.	3
ESP 412 Evidence-Based Practices*	3
MAT 181 College Algebra	3
PSY 206 Adolescent Psychology	3
PSY 208 Educational Psy. (PSY 100 waived)	3
Free Elective	3
EDE 753 Int. STEM Ped. and Inst. Design	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
Total	121

Program Notes:

- All courses required for certification with a grade of C- or lower must be repeated.
- All ELM, CHD and ESP courses require current clearances and minimum 2.5 GPA to register, except ELM 200 and ELM 220, which require 2.0 GPA.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Courses marked with an asterisk are restricted to candidates Admitted to Teacher Education.
- Pre-requisite for ELM 220 and all 300-level ELM and CHD courses is ELM 200.
- State licensure exams must be passed before student teaching.
- Undergraduate students must achieve at least junior standing to take graduate-level coursework.

Approved American/British Lit. Courses

- **ENG 107** Intro to Fiction
- **ENG 125** The American West
- **ENG 127** Women as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 160** Intro to British and American Literature
- **ENG 203** Great Books
- **ENG 301** English Lit I (pre-req ENG 101 and 102)
- **ENG 302** English Lit II (pre-req ENG 101 and 102)
- **ENG 337** Survey of Am. Lit. I (pre-req ENG 101 and 102)
- **ENG 338** Survey of Am. Lit. II (pre-req ENG 101 and 102)
- **HON 250** Honors Composition II (pre-req Hon 150)

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/middle-level-education/social-studies.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/stem/index.aspx>

Accelerated Bachelor's-to-Master's Programs

B.S.Ed. in Middle Level Grades 4-8 Education: Social Studies to M.Ed. in Reading Specialist Program Description

The Social Studies concentration of the Bachelor of Science in Education in Middle Level Education degree prepares students to teach social studies to children in grades 4 through 8. Upon successful completion of this program, students will earn a bachelor's degree and be eligible for Pennsylvania teaching certification.

Qualified undergraduate students in this concentration may be eligible to participate in the accelerated B.S.Ed.-to-M.Ed. program, which enables them to take graduate courses that apply to both their bachelor's degree in Middle Level Education: Social Studies and (thereafter) a Reading Specialist master's degree.

The Reading Specialist Master of Education program at Cal U is designed for students who want to earn a Master of Education degree and reading specialist certification on their Pennsylvania teaching certificate.

Through the accelerated program, students can complete both degrees at Cal U with a total of 148 credits.

Program Coordinator

Dr. Diane Fine

Accreditation

These programs are approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP). The reading specialist program is also nationally recognized by the International Literacy Association (ILA).

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.Ed.-to-M.Ed. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40-41
CHD 250 Health and PE Methods for PreK-4	3
CHD 350 Family and Community Collaborations	3
EDU 333 Technology for Teaching and Learning	3
EDU 350 Supporting Eng. Lang. Learners	3
ESP 210 Special Education Foundations and Collaborations	3
ENG 101 Composition I	3
GEO 100 Intro to Geography	3
HIS 101 U.S. History to 1877	3
MAT 120 Elementary Topics I	3
MAT 130 Elementary Topics II	3
UNI 100 First-Year Seminar	1
British/American Lit Course (from approved list)	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
Fine Arts Elective	
Natural Science Course with Lab	3
Required Major Courses	45
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
EDU 375 Intro to Integrated STEM Education	3
ELM 200 Intro to Middle Level Ed.	3
ELM 220 Inst. and Assess in 4-8 Class.	3
ELM 301 Read Methods Assess.*	3
ELM 302 Lang Arts Methods Assess.*	3
ELM 311 Math Methods Assess.*	3
ELM 321 Science Methods Assess.*	3
ELM 331 Soc St Methods Assess.*	3
ELM 415 Middle Level Education Field Experience*	3
ELM 461 Student Teaching and School Law	12
Concentration Courses	18
ECO 100 Elements of Economics	3
HIS 102 History of the U.S. since 1877	3
HIS 112 World History since 1500	3
HIS 200 History of Pennsylvania	3
POS 105 American Politics	3
<i>Select one of the following:</i>	3
ECO 200 Current Economics Issues	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
GEO 105 Human Geography	3
GEO 217 Demographic Analysis	3

Accelerated Bachelor's-to-Master's Programs

Course	Credits
GEO 220 Geography of N. America and PA	3
POS 101 Contemporary Policy and Politics	3
POS 306 The Congress	3
POS 310 The Presidency	3
Required Related Courses	15
ESP 311 Assess Positive Behavior Interv.	3
ESP 412 Evidence-Based Practices*	3
MAT 181 College Algebra	3
PSY 206 Adolescent Psychology	3
PSY 208 Educational Psy. (PSY 100 waived)	3
Free Elective	3
RSP 700 Fundamentals of Literacy	3
Total	121

Program Notes

- All courses required for certification with a grade of C- or lower must be repeated.
- All ELM, CHD and ESP courses require current clearances and minimum 2.5 GPA to register, except ELM 200 and ELM 220, which require 2.0 GPA.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Courses marked with an asterisk are restricted to candidates Admitted to Teacher Education.
- Pre-requisite for ELM 220 and all 300-level ELM and CHD courses is ELM 200
- State licensure exams must be passed before student teaching.
- Undergraduate students must achieve at least junior standing to take graduate-level coursework

Approved American/British Lit. Courses

- **ENG 107** Intro to Fiction
- **ENG 125** The American West
- **ENG 127** Women as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 160** Intro to British and American Literature
- **ENG 203** Great Books
- **ENG 301** English Lit I (pre-req ENG 101 and 102)
- **ENG 302** English Lit II (pre-req ENG 101 and 102)
- **ENG 337** Survey of Am. Lit. I (pre-req ENG 101 and 102)
- **ENG 338** Survey of Am. Lit. II (pre-req ENG 101 and 102)
- **HON 250** Honors Composition II (pre-req Hon 150)

Accelerated Bachelor's-to-Master's Programs

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/middle-level-education/social-studies.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/education-campus/reading-specialist/index.aspx>

B.S. in General Education

B.S. in General Education

Program Description

The Bachelor of Science in General Education degree provides a flexible program of study. It equips students with essential skills and knowledge that can be used in multiple workforce areas.

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First-Semester	16
ENG 101 English Composition I	3
Health and Wellness Course	3
Math and Quantitative Literacy Course	3
Public Speaking Course	3
Technology Literacy Course	3
UNI 100 First-Year Seminar	1
Second Semester	15
Ethics and Multicultural Course	3
Fine Arts Course	3
Humanities Course	3
Natural Science Course	3
Social Sciences Course	3
Sophomore Year	
Third Semester	15
Required Major Course	3
Required Related Courses	9
General Education Course	3
Fourth Semester	15
Required Major Course	3
Required Related Courses	9

B.S. in General Education

Course	Credits
Free Elective	3
Junior Year	
Fifth Semester	15
Required Major Course	3
Required Related Courses	9
Upper-Division Writing Course	3
Sixth Semester	15
Required Major Course	3
Required Related Courses	9
Upper-Division Writing Courses	3
Senior Year	
Seventh Semester	15
Free Elective	3
General Education Course	3
Laboratory Course	3
Required Related Courses	6
Eighth Semester	15
Free Elective	3
General Education Course	3
Special Experience Course	3
Required Related Courses	6
Total	120

Program Notes

- In order to be admitted into the General Education Degree Program, the student must have completed at least 48 credits in a declared major.
- At least 42 credits must be at the 300-400 level.
- At least 21 credits must be upper division courses to qualify for graduation.

B.S. in General Education

Program Requirements

Required Major Courses (12 credits)

12 credits in major in the following options:

- Option 1: EDE, EDU, ELE, ESP, TED, SEC
- Option 2: ATE, GTY
- Option 3: FIT, HSC, SPT
- Option 4: CMD
- Option 5: SOW

Required Related Electives (48 credits)

- Option 1: EDE, EDU, ELE, ESP, TED, SEC
- Option 2: ATE, GTY
- Option 3: FIT, HSC, SPT
- Option 4: CMD
- Option 5: SOW

Free Electives (9 credits)

- 9 credits of Free Electives not related to major

B.S. in Science and Technology: Multidisciplinary Studies

B.S. in Science and Technology: Multidisciplinary Studies

Program Description

The Bachelor of Science in Science and Technology: Multidisciplinary Studies degree offers students a means to design a program of study that reflects current business, industry, government, education/training development and technology needs. Through the flexibility of this program, students are able to build a unique skill set that focuses on two or more distinct disciplines integrated around a unifying theme that cannot be subsumed by a single area of study.

Delivery Modes

- Traditional (on campus)
- Global Online (100% online)

Curriculum

Course	Credits
General Education	40 or 41
ENG 101 Composition I	3
MAT 181 College Algebra	3
UNI 100 First Year Seminar	1
Ethics and Multicultural Awareness Course	3
Fine Arts Course	3
General Education Courses	9
Health and Wellness Course	3
Humanities Course	3
Natural Sciences Course	3 or 4
Public Speaking Course	3
Technological Literacy Course	3
Social Sciences Course	3
Program Requirements	60
Capstone Area	3
Discipline Program Areas	33
STEM Area	24
Electives	19 or 20
Free Electives*	19 or 20
Total	120

B.S. in Science and Technology: Multidisciplinary Studies

Additional Requirements

(not counted toward the General Education requirements)

- **Special Experience Course (one course required):** Any approved Special Experience course from the Eberly College of Science and Technology program disciplines.
- **Upper-Division Writing Component Courses (two courses required):** Any approved Upper-Division Writing courses from the Eberly College of Science and Technology program disciplines.
- **Laboratory Course (one course required):** Any approved Laboratory course from the Eberly College of Science and Technology program disciplines.

Program Notes

1. Provides a highly flexible and agile platform for the "Just-In-Time" development of technicians, STEM, technology-level degree concentrations and careers that can be tailor-made to workforce needs of specific businesses, industries, government agencies, educational institutions and other related sectors.
2. Provides services to enroll, retain and graduate non-traditional students.
3. Provides a service for returning students to complete a degree.
4. Articulates up to 90 transfer semester hours from accredited institutions of the 120 hours required for graduation. Thirty (30) of the last 45 credits have to be taken at California University of Pennsylvania (Cal U). In addition, students must complete at least 50% of the major coursework within their department from Cal U, with the exception of intra-system transfer students.
5. Permits up to 30 earned credits of prior learning assessment (PLA) work and other applicable nontraditional learning experiences. All credit awarded for work and other non-traditional experience is called "college equivalent" credit and is on the transcript as "P" credits. Portfolios describing these experiences and their relationship to the learning objectives of course(s) being challenged are required. Additional fees may apply.
6. Provides a sound educational foundation (identical general education requirements of the University) without rigid specialization requirements.
7. Provides advanced knowledge and higher-level skills for career advancement to management and professional careers in the workforce.
8. Requires students to develop an approved academic plan of study. The Professional Core is derived from "two or more" distinct programs and that is integrated around a unifying theme or topic that cannot be subsumed under a single discipline or occupational field, for degree completion with a faculty adviser and/or department chair from the student's selected professional program core.
 - Professional program core discipline codes: BIO, CAD, CET, CHE, CIS, CSC, EAS, EET, ENS, GCM, GEO, GET, GIS, IST, ITE, MAT, MTR, NMT, PHY, REC, RET and WFD.
 - The professional core will have a minimum of 6 credits of science, 6 credits of technology, 6 credits of engineering, 6 credits of mathematics (STEM) and a 3-credit capstone experience course.
 - General Education requirements that specifically pertain to the minimum professional core STEM and capstone courses can count toward that requirement.
 - Students will still need to meet the 120-credit graduation requirement.
 - Students must complete a minimum 15-credit-hour special area of interest (300- or 400-level classes from one of the following disciplines: BIO, CET, CAD, CHE, CIS, CSC, EAS, EET, ENS, GCM, GEO, GET, GIS, IST, ITE, MAT, MTR, NMT, PHY, REC, RET and WFD) — applies to the professional program core and advanced standing course requirements.
9. * Free Electives are to be used to build the Bachelor of Science in Science and Technology: Multidisciplinary Studies degree.
10. Students are required to meet every semester with their adviser to tailor their program of study to their own personal/professional interests, needs or occupational employment demands/projections.
11. Requires students to have at least 42 credits of their overall coursework be advance-standing courses. There is a 120-credit graduation requirement. Students must have a minimum 2.0 grade point average to qualify for graduation.

B.S. in Science and Technology: Multidisciplinary Studies

Program Webpages

<https://www.calu.edu/academics/undergraduate/bachelors/science-technology/index.aspx>

<https://www.calu.edu/academics/undergraduate/bachelors/science-technology/online.aspx>

Biology, Geology and Environmental Sciences

Department of Biology, Geology and Environmental Sciences

Faculty

Dr. David G. Argent | Dr. Summer Arrigo-Nelson | Dr. Carol Bocetti | Dr. Paula Caffrey | Dr. Jesse Eiben | Dr. Kyle C. Fredrick | Dr. Chadwick Hanna | Dr. Daniel Harris | Dr. Cassandra L. Kuba | Dr. Sarah Meiss | Dr. Louise Nicholson | Dr. Brian Paulson | Dr. Nancy Pugh | Dr. Mark Tebbitt | Dr. Robert S. Whyte

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Programs

Cal U's Department of Biology, Geology and Environmental Sciences includes undergraduate programs in anthropology, biology, environmental studies, fisheries and wildlife, geology, molecular biology and veterinary technology.

Associate and Bachelor's Degree Programs

- A.S. in Veterinary Technology
- B.A. in Anthropology: Archaeology
- B.A. in Anthropology: Forensic Anthropology
- B.S. in Biology
- B.S. in Biology: Mortuary Science
- B.S. in Biology: Plant Biology
- B.S. in Biology: Pre-Chiropractic Medicine
- B.S. in Biology, with pre-professional concentrations in:
 - Pre-Dentistry
 - Pre-Medicine
 - Pre-Optometry
 - Pre-Osteopathic Medicine
 - Pre-Pharmacy
 - Pre-Podiatric Medicine
 - Pre-Veterinary Medicine
- B.S. in Environmental Studies: Conservation Ecology
- B.S. in Environmental Studies: Environmental Science
- B.S. in Fisheries and Wildlife Biology
- B.S. in Geology
- B.S. in Molecular Biology
- B.S. in Veterinary Technology

Note: Cal U also offers a B.S.Ed. in Biology: Secondary Education through its Department of Education.

Minors

Minors offered through this department include:

- Anthropology
- Biology
- Environmental Science
- Fisheries and Wildlife
- Geology
- Hydrology

Facilities

The department is housed in a four-story building equipped with an array of scientific instruments. Specialized areas include the animal room, greenhouse, herbarium and vertebrate teaching museum. Facilities also include:

- Earth Materials Laboratory
- Geosciences Laboratory
- Peter J. Daley Geotechnology Institute
- Watershed Analysis Laboratory

Biology, Geology and Environmental Sciences

The SAI Farm serves as a 94-acre outdoor lab, providing students with hands-on experiences.

Honor Societies

Anthropology majors are eligible for membership in the **Gamma Chapter of Lambda Alpha**, the national anthropology honor society.

The national earth science honor society, **Sigma Gamma Epsilon**, has a chapter (Zeta Alpha) on campus. Students recognized for their academic and professional achievements are elected to it.

Academic Societies and Department Clubs

Beta Beta Beta is the national honor society for biological sciences. Students can earn membership if they maintain a GPA of 3.25 in the biological sciences and 3.00 overall after completing 45 credit-hours and are extended an invitation to join.

Cal U has a student chapter of the **Wildlife Society**, which was chartered in 1996. The mission of the Wildlife Society is to represent and serve the professional community of scientists, managers, educators, technicians, planners and others who work actively to study, manage and conserve wildlife and their habitats worldwide.

Biology Club is open to all interested students. Members explore careers in biology through guest speakers and behind-the-scenes tours of research facilities, the zoo, botanical gardens and museums. Other activities include camping and whitewater rafting; fundraising events, such as races and bake sales to benefit cancer research and other charities; and judging science competitions of local K-12 students.

Medical Interest Club offers guidance to undergraduates on the many requirements for application to medical graduate schools. This club enables members pursuing health care careers to explore career choices through speakers and touring medical education programs.

The Cal U Chapter of the **American Fisheries Society (AFS)** is open to all environmental studies and fisheries and wildlife biology majors. The AFS promotes issues dealing with the management of North American game and non-game fish resources and their associated habitats. The professional society offers opportunities for public outreach and professional development. Members can elect to participate in various activities ranging from workshops to conferencing to hands-on field work.

A.S. in Veterinary Technology

Program Description

The Associate of Science in Veterinary Technology degree prepares students to become veterinary technicians. This on-campus program includes classroom theory, hands-on training and clinical experience. Students work with live animals (including dogs, cats, rats and rabbits) in state-of-the-art facilities.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
First Semester	14
BIO 230 Anatomy and Physiology I	4
ENG 101 English Composition I	3
MAT 181 College Algebra	3
VET 101 Introduction to Veterinary Technology	3
UNI 100 First-Year Seminar	1

Biology, Geology and Environmental Sciences

Course	Credits
Second Semester	15
BIO 260 Anatomy and Physiology II	4
BIO 226 Basic Microbiology	4
CHE 101 General Chemistry	4
VET 160 Care and Management of Exotic and Laboratory Animals	3
Third Semester	15
VET 202 Small Animal Management and Clinical Procedures	4
VET 210 Veterinary Clinical Technology and Laboratory Procedures	4
VET 220 Large Animal Management and Clinical Procedures	4
VET 240 Veterinary Pharmacy and Pharmacology	3
Fourth Semester	16
VET 230 Digital Diagnostic Imaging	3
VET 250 Surgical Nursing, Anesthesia and Pain Management	4
VET 292 Clinical Experience	3
General Education	6
Total	60

Program Webpage

<https://www.calu.edu/academics/undergraduate/associate/veterinary-technology/index.aspx>

B.A. in Anthropology: Archaeology Concentration

Program Description

The Archaeology concentration of the Bachelor of Arts in Anthropology degree deepens students' understanding of people and cultures. Students gain experience through archaeological digs, laboratory research, forensic casework and other opportunities.

Delivery Mode

Traditional (on campus)

Biology, Geology and Environmental Sciences

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ANT 100 Introduction to Anthropology	3
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
Free Elective	3
General Education OR Minor Courses	6
Second Semester	15
ANT 290 Archaeology	3
Free Electives	6
General Education OR Minor Courses	6
Sophomore Year	
Third Semester	15
ANT 355 Prehistoric American Indians	3
MAT 215 Statistics OR PSY 220 Descriptive Statistics	3
Free Elective	3
General Education OR Minor Courses	6
Fourth Semester	15
ANT 341 Research Lab in Archaeology	3
ANT 360 Historic Sites Archaeology	3
Free Electives	3
General Education OR Minor Courses	6
Junior Year	
Fifth Semester	15

Biology, Geology and Environmental Sciences

Course	Credits
ANT 400 Fundamentals of Archaeological Theory	3
ANT 421 Anthropological Thought	3
Free Elective	3
General Education OR Minor Courses	6
Sixth Semester	15
ANT 445 Advanced Methods in Archaeology	3
Related Elective*	3
Free Electives	6
General Education OR Minor Course	3
Senior Year	
Seventh Semester	15
ANT 499 Senior Seminar in Anthropology	3
Free Electives	9
General Education OR Minor Course	3
Eighth Semester	15
ANT 498 Seminar in Archaeology	3
Free Electives	9
General Education or Minor Course	3
Total	120

* Related Electives

- **ANT 101** Archaeology Field School (extra)
- **ANT 200** Old World Prehistory
- **ANT 220** Aztecs, Mayas and Incas
- **ANT 231** Medical Anthropology
- **ANT/BIO 232** Biological Anthropology
- **ANT 255** World Ethnology
- **ANT 280** Indians of North America
- **ANT 300** Cultural Views of Women
- **ANT 345** Cultural Politics of Food and Eating
- **ANT 370** Forensic Archaeology
- **ANT 379** Special Problems in Anthropology
- **ANT 385** Primate Social Behavior

Biology, Geology and Environmental Sciences

- **ANT 390** Human Origins
- ANT (3 credits)

Note: ANT 101 Archaeology Field School (extra) is required of all anthropology majors and is typically offered every other summer.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/archaeology/index.aspx>

B.A. in Anthropology: Forensic Concentration

Program Description

The Forensic concentration of the Bachelor of Arts in Anthropology degree prepares students to employ archaeological search and recovery techniques as well as laboratory (skeletal analysis) skills. Students have opportunities for hands-on research, working with artifacts and skeletons.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ANT 100 Introduction to Anthropology	3
ANT 254 Introduction to Forensic Anthropology	3
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
Free Elective	3
General Education OR Minor Courses	3
Second Semester	15
ANT 290 Archaeology	3
Free Electives	6
General Education OR Minor Courses	6
Sophomore Year	
Third Semester	15
ANT 245 Human Osteology	3

Biology, Geology and Environmental Sciences

Course	Credits
MAT 215 Statistics OR PSY 220 Descriptive Statistics	3
Free Elective	3
General Education OR Minor Courses	6
Fourth Semester	15
ANT 340 Research Lab in Physical Anthropology	3
Free Electives	6
General Education OR Minor Course	6
Junior Year	
Fifth Semester	15
ANT 370 Forensic Archaeology	3
ANT 421 Anthropological Thought	3
Free Elective	3
General Education OR Minor Courses	6
Sixth Semester	15
ANT 446 Advanced Forensic Anthropology	3
Related Elective*	3
Free Electives	6
General Education OR Minor Course	3
Senior Year	
Seventh Semester	15
ANT 499 Senior Seminar in Anthropology	3
Free Electives	9
General Education OR Minor Course	3
Eighth Semester	15
ANT 497 Seminar in Physical Anthropology	3

Biology, Geology and Environmental Sciences

Course	Credits
Free Electives	9
General Education or Minor Course	3
Total	120

* Related Electives

- **ANT 101** Archaeology Field School (extra)
- **ANT 200** Old World Prehistory
- **ANT 220** Aztecs, Mayas and Incas
- **ANT 231** Medical Anthropology
- **ANT 255** World Ethnology
- **ANT 280** Indians of North America
- **ANT 300** Cultural Views of Women
- **ANT 345** Cultural Politics of Food and Eating
- **ANT 379** Special Problems in Anthropology
- **ANT 385** Primate Social Behavior
- **ANT 390** Human Origins
- **ANT/BIO 232** Biological Anthropology
- ANT (3 credits)

Note: ANT 101 Archaeology Field School (extra) is required of all anthropology majors and is typically offered every other summer.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/forensic-anthropology/>

B.S. in Biology

Program Description

The Bachelor of Science in Biology degree builds foundational knowledge in biology as well as chemistry, physics and math through core required courses. Students then select additional biology electives that explore concepts related to their individual area of interest.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	15
BIO 120 General Zoology	4
CHE 101 General Chemistry I	4
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1

Biology, Geology and Environmental Sciences

Course	Credits
General Education Course	3
Second Semester	17
BIO 125 General Botany	4
CHE 102 General Chemistry II	4
ENG 102 English Composition II	3
MAT 273 Applied Calculus OR MAT 281 Calculus I	3
General Education Course	3
Sophomore Year	
Third Semester	14
BIO 215 Introduction to Cellular and Molecular Biology	4
PHY 121 General Physics I	4
Free Elective	3
General Education Course	3
Fourth Semester	15
BIO 248 General Ecology	4
CHE 331 Organic Chemistry I	4
PHY 122 General Physics II	4
General Education Course	3
Junior Year	
Fifth Semester	15
BIO 300/400 level Anatomy and Physiology Course	4
BIO 218 Genetics	4
Free Electives	4
General Education Course	3
Sixth Semester	17

Biology, Geology and Environmental Sciences

Course	Credits
BIO 300/400 level Anatomy and Physiology Course	4
MAT 215 Statistics	3
Related Electives	7
General Education Course	3
Senior Year	
Seventh Semester	14 or 15
BIO 478 Evolution	3
ENS 495 Design and Analysis	4
Related Elective	3 or 4
Free Electives	4
Eighth Semester	12 or 13
Related Elective	3
Free Elective	3 or 4
General Education Course	3
General Education EMA	3
Total	120

Related BIO/Professional Electives (13 credits)

- BIO, ENS, CHE or related College of Science and Technology 300- or 400-level course (with approval of your advisor)

Program Note

A chemistry minor (20 credits) is recommended for those students intending to pursue graduate or professional school (must declare minor with Chemistry Chair).

Program Website

<https://www.calu.edu/academics/undergraduate/bachelors/biology/index.aspx>

B.S. in Biology: Mortuary Science

Program Description

The Mortuary Science concentration of the Bachelor of Science in Biology, through affiliation with the Pittsburgh Institute of Mortuary Science, is accredited through the American Board of Funeral Service Education, National Association of Colleges of Mortuary Science, National Conference of Funeral Service Examining Boards of the United States Inc. This program is designed for three years of approved study on campus and one year of study at the Pittsburgh Institute of Mortuary Science. The curriculum requires 120 credits: 94 credits in required and elective Cal U courses and 26 credits for the institute year. Upon completion of the program, the student is granted a Bachelor of Science degree from Cal U and an associate degree in Specialized Technology from the

Biology, Geology and Environmental Sciences

Pittsburgh institute. Upon completion of a one-year resident intern period, the candidate applies for the state board examinations and licensure as a funeral director and embalmer.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	14
BIO 120 General Zoology	4
ENG 101 English Composition I	3
MAT 181 College Algebra	3
UNI 100 First-Year Seminar	1
General Education Course	3
Second Semester	15
BIO 125 General Botany	4
ENG 102 English Composition II	3
General Education Courses	8
Sophomore Year	
Third Semester	17
BIO 215 Introduction to Cellular and Molecular Biology	4
CHE 101 General Chemistry	4
COM 101 Oral Communication OR COM 230 Argumentation and Debate	3
General Education Courses	6
Fourth Semester	15
BIO 3XX Upper-level BIO Elective	4
CHE 102 General Chemistry II	4
General Education Course	3

Biology, Geology and Environmental Sciences

Course	Credits
Free Electives	4
Junior Year	
Fifth Semester	16
BIO 306 Human Anatomy	4
BIO 326 General Microbiology	4
General Education Course	4
Free Electives	4
Sixth Semester	17
BIO 328 Human Physiology	4
Free Electives	13
Senior Year	
Seventh Semester	13
Pittsburgh Institute of Mortuary Science	13
Eighth Semester	13
Pittsburgh Institute of Mortuary Science	13
Total	120

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/biology/pre-professional/mortuary-science/index.aspx>

B.S. in Biology: Plant Biology Concentration

Program Description

The Plant Biology concentration of the Bachelor of Science in Biology degree deepens student knowledge of plant sciences. Students may choose to focus on plant ecology or biology in their upper-level courses.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Biology, Geology and Environmental Sciences

Course	Credits
Freshman Year	
First Semester	15
BIO 120 General Zoology	4
CHE 101 General Chemistry I	4
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
General Education Course	3
Second Semester	17
BIO 125 General Botany	4
CHE 102 General Chemistry II	4
ENG 102 English Composition II	3
MAT 273 Applied Calculus OR MAT 281 Calculus I	3
General Education Course	3
Sophomore Year	
Third Semester	14 or 15
BIO 215 Introduction to Cellular and Molecular Biology	4
PHY 121 General Physics I	4
Free Elective	3 or 4
General Education Course	3
Fourth Semester	15
BIO 218 Genetics	4
BIO 248 General Ecology	4
CHE 331 Organic Chemistry I	4
General Education Course	3
Junior Year	
Fifth Semester	15

Biology, Geology and Environmental Sciences

Course	Credits
BIO 300/400 level Plant Ecology or Biology Option Course	4
BIO 335 Plant Physiology	4
Free Electives	4
General Education Course	3
Sixth Semester	17
BIO 336 Plant Taxonomy OR BIO 307 Plant Anatomy	4
BIO 300/400 level Plant Ecology or Biology Option Course	4
MAT 215 Statistics	3
Free Elective	3
General Education Course	3
Senior Year	
Seventh Semester	16 or 17
BIO 478 Evolution	3
BIO 300/400 level Plant Ecology or Biology Option Course	4
Free Electives	6
General Education Course	3 or 4
Eighth Semester	14 or 15
BIO 336 Plant Taxonomy OR BIO 307 Plant Anatomy	4
Free Electives	6
General Education Course	4 or 5
Total	120

Select either the Biology or Ecology option:

Ecology Option (12 credits)

Biology, Geology and Environmental Sciences

- Select at least two of the following:
 - **BIO 407** Mycology (4 credits)
 - **BIO 414** Plant Ecology (4 credits)
 - **BIO 442** Forest Ecology and Dendrology (4 credits)
 - **ENS 475** Wetlands Ecology (4 credits)
- Select any 300- or 400-level BIO or ENS course not used to fill another requirement (with adviser's approval)

Biology Option (12 credits)

- Select at least two of the following:
 - **BIO 326** General Microbiology (4 credits)
 - **BIO 480** Cell Biology (4 credits)
 - **CHE 415** Biochemistry (3 credits)
- Select any 300- or 400-level BIO or ENS course(s) not used to fill another requirement (with adviser's approval)

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/plant-biology/index.aspx>

B.S. in Biology: Pre-Chiropractic Medicine Concentration

Program Description

The Pre-Chiropractic Medicine concentration of the Bachelor of Science in Biology prepares students for the advanced training offered by professional chiropractic schools. Students are advised to tailor their curriculum to those courses that will best prepare them for professional schools. Almost all courses include a laboratory component where students gain experience using various scientific instruments, study the practical application of scientific theories and apply course content.

Delivery Mode

Traditional

Articulated Agreements

Our department has articulated agreements with chiropractic colleges (e.g., Logan University College of Chiropractic, New York Chiropractic, Palmer Chiropractic) to facilitate students' transition post-graduation.

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	15
BIO 120 General Zoology	4
CHE 101 General Chemistry I	4
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
General Education Course	3

Biology, Geology and Environmental Sciences

Course	Credits
Second Semester	17
BIO 125 General Botany	4
CHE 102 General Chemistry II	4
ENG 102 English Composition II	3
MAT 273 Applied Calculus OR MAT 281 Calculus I	3
General Education Course	3
Sophomore Year	
Third Semester	14
BIO 215 Introduction to Cellular and Molecular Biology	4
PHY 121 General Physics I	4
Free Elective	3
General Education EMA	3
Fourth Semester	15
BIO 318 Genetics	4
CHE 331 Organic Chemistry I	4
PHY 122 General Physics II	4
General Education Course	3
Junior Year	
Fifth Semester	15
BIO 306 Human Anatomy	4
BIO 326 General Microbiology	4
CHE 341 Organic Chemistry II (lecture)	3
CHE 342 Organic Chemistry II (lab)	1
General Education Course	3
Sixth Semester	15
BIO 328 Human Physiology	4

Biology, Geology and Environmental Sciences

Course	Credits
BIO 480 Cell Biology	4
Related Elective	4
General Education Course	3
Senior Year	
Seventh Semester	15
Related Electives	8
CHE 415 Biochemistry	4
General Education Course	3
Eighth Semester	14
Free Elective	4
General Education Courses	6
Free Elective	4
Total	120

Related Electives (16 credits)

- BIO or ENS 300- or 400-level courses and CHE 415

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/biology/pre-professional/>

B.S. in Biology: Pre-Professional Concentrations

Program Description

The pre-professional concentrations of the Bachelor of Science in Biology include:

- Pre-Dentistry
- Pre-Medicine
- Pre-Optometry
- Pre-Osteopathic Medicine
- Pre-Pharmacy
- Pre-Podiatric Medicine
- Pre-Veterinary Medicine

These programs are designed to prepare students for further study at the graduate level.

Delivery Mode

Traditional (on campus)

Biology, Geology and Environmental Sciences

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing the pre-professional programs of study in four years.

Course	Credits
Freshman Year	
First Semester	15
BIO 120 General Zoology	4
CHE 101 General Chemistry I	4
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
General Education Course	3
Second Semester	17
BIO 125 General Botany	4
CHE 102 General Chemistry II	4
ENG 102 English Composition II	3
MAT 273 Applied Calculus OR MAT 281 Calculus I	3
General Education Course	3
Sophomore Year	
Third Semester	14
BIO 215 Introduction to Cellular and Molecular Biology	4
PHY 121 General Physics I	4
Free Elective	3
General Education Course	3
Fourth Semester	15
BIO 218 Genetics	4
CHE 331 Organic Chemistry I	4
PHY 122 General Physics II	4
General Education EMA	3

Biology, Geology and Environmental Sciences

Course	Credits
Junior Year	
Fifth Semester	15
BIO 306 Human Anatomy OR BIO 305 Comp. Vert. Anatomy	4
BIO 326 General Microbiology	4
CHE 341 Organic Chemistry II (lecture)	3
CHE 342 Organic Chemistry II (lab)	1
General Education Course	3
Sixth Semester	15
BIO 328 Human Physiology OR BIO 486 Comp. Animal Phys.	4
BIO 480 Cell Biology	4
MAT 215 Statistics	3
Related Elective	4
Senior Year	
Seventh Semester	16
Related Electives	8
Free Elective	4
General Education Course	4
Eighth Semester	14
Related Electives	8
General Education Courses	6
Total	120

Program Note

A chemistry minor (20 credits) is recommended for those students intending to pursue graduate or professional school (must declare minor with Chemistry Chair).

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/biology/pre-professional/index.aspx>

Biology, Geology and Environmental Sciences

B.S. in Environmental Studies: Conservation Ecology Concentration

Program Description

The Conservation Ecology concentration of the Bachelor of Science in Environmental Studies degree program explores fields of ecology and evolutionary biology with a focus on the presentation and management of natural resources and biodiversity. Students learn about the impact of humans on biodiversity as well as aspects of international law and policy as they affect our resources. The program builds skills and knowledge needed to effectively handle problems in the area of conservation and sustainable development. Students are able to add additional courses in botany or zoology that are content-specific, and they can opt to participate in a field experience or an internship to help strengthen their program of study.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	14
BIO 120 General Zoology	4
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
General Education Courses	6
Second Semester	17
BIO 125 General Botany	4
ENG 102 English Composition II	3
MAT 181 College Algebra OR MAT 273 Applied Calculus OR MAT 281 Calculus I	3
General Education Courses	6 or 7
Sophomore Year	
Third Semester	16
BIO 215 Cellular and Molecular Biology	4
CHE 101 General Chemistry I	4
PHY 121 General Physics I	4
Free Elective	4

Biology, Geology and Environmental Sciences

Course	Credits
Fourth Semester	15
BIO 218 Genetics	4
BIO 248 General Ecology	4
CHE 102 General Chemistry II	4
MAT 215 Statistics	3
Junior Year	
Fifth Semester	14
BIO 478 Evolution	3
ENS 475 OR BIO 442 OR Related Elective	4
ENS 495 Design and Analysis	4
General Education Course	3
Sixth Semester	14
BIO 414 AND/OR BIO/ENS Related Elective	3 or 4
ENS 399 Conservation Biology	3
Free Elective	3 or 4
General Education Course	3
Senior Year	
Seventh Semester	15
BIO 305/ENS 492/BIO 441	4
BIO/ENS Related Elective	3 or 4
Free Elective	3 or 4
General Education Course	3
Eighth Semester	15
BIO 305/ENS 492/BIO 441	4
ENS 435 Nat. Res. Law and Policy	3
Free Electives	7 or 8

Biology, Geology and Environmental Sciences

Course	Credits
Total	120

Program Requirements

Required Major Courses (60 credits)

- **BIO 120** General Zoology (4 credits)
- **BIO 125** General Botany (4 credits)
- **BIO 215** Introduction to Cellular and Molecular Biology (4 credits)
- **BIO 218** Genetics (4 credits)
- **BIO 248** General Ecology (4 credits)
- **BIO 478** Evolution (3 credits)
- **ENS 399** Conservation Biology (3 credits)
- **ENS 435** Natural Res. Law and Policy (3 credits)
- **ENS 495** Design and Analysis (4 credits)
- **PHY 121** General Physics I (4 credits)
- *Pick two of the following:*
 - **BIO 414** Plant Ecology (4 credits)
 - **BIO 442** Forest Ecology and Dendrology (4 credits)
 - **ENS 475** Wetlands Ecology (4 credits)

Related Electives

- Pick two of the following: BIO 305, ENS 492, BIO 441 (8 credits)
- Choose from any 300- or 400-level BIO/ENS with approval of major adviser or department chair (7 credits)

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/environmental-studies/conservation-ecology.aspx>

B.S. in Environmental Studies: Environmental Science Concentration

Program Description

The Environmental Science concentration of the Bachelor of Science in Environmental Studies degree is an interdisciplinary program that combines the biological and physical sciences with chemistry to provide solutions to today's environmental problems. Students gain a broad background in environmental pollution (including air, water and waste); environmental policy; and the technical skills required of today's professional environmental scientist.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	15
BIO 120 General Zoology	4
CHE 101 General Chemistry I	4

Biology, Geology and Environmental Sciences

Course	Credits
COM 101 Oral Communication	3
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
Second Semester	14 or 15
BIO 125 General Botany	4
CHE 102 General Chemistry II	4
ENG 102 English Composition II	3
EAS 100 Introduction to Earth Science OR EAS 150 Introduction to Geology	3 or 4
Sophomore Year	
Third Semester	14
BIO 215 Introduction to Cellular and Molecular Biology	4
MAT 273 Applied Calculus OR MAT 281 Calculus I	3
PHY 121 General Physics I	4
General Education EMA	3
Fourth Semester	17
BIO 248 General Ecology	4
CHE 331 Organic Chemistry I	4
MAT 215 Statistics	3
General Education Courses	6
Junior Year	
Fifth Semester	13
ENS 435 Law Planning and Policy	3
ENS 495 Design and Analysis	3
GIS 311 Geographic Information Systems	3
Free Elective	4

Biology, Geology and Environmental Sciences

Course	Credits
Sixth Semester	15
BIO 488 Water Pollution Biology	4
CHE 381 Environmental Chemistry	4
EAS 303 Hydrology	3
Free Elective	4
Senior Year	
Seventh Semester	15
ENS 475 Wetlands Ecology	4
Biology-related Elective	4
General Education Course	3
Free Elective	4
Eighth Semester	16 or 17
ENS 440 Environmental Pollution Control	4
Biology-related Elective	3
General Education Course	3
Free Electives	6 or 7
Total	120

Related Electives (7 credits)

- Any 300- or 400-level BIO/ENS courses

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/environmental-studies/environmental-science.aspx>

B.S. in Fisheries and Wildlife Biology

Program Description

The Bachelor of Science in Fisheries and Wildlife Biology degree explores various techniques and philosophies of fisheries and wildlife management. The program emphasizes the management of North American species, with a focus on those found within Pennsylvania. Students learn about natural resources, conservation and current issues in the discipline.

The curriculum includes those courses identified by the Wildlife Society and the American Fisheries Society as critical for the graduate. Students have a chance to become certified by either society upon graduation. This

Biology, Geology and Environmental Sciences

program also incorporates many unique experiences that help students network with future employers and develop professional contacts.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	14
BIO 120 General Zoology	4
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
General Education Courses	6
Second Semester	16 or 17
BIO 125 General Botany	4
ENG 102 English Composition II	3
MAT 181 College Algebra OR MAT 273 Applied Calculus OR MAT 281 Calculus I	3
General Education Courses	6 or 7
Sophomore Year	
Third Semester	17
BIO 215 Introduction to Cellular and Molecular Biology	4
CHE 101 General Chemistry I	4
Free Elective	3
General Education Course	3
General Education EMA	3
Fourth Semester	15
BIO 218 Genetics	4
BIO 248 General Ecology	4

Biology, Geology and Environmental Sciences

Course	Credits
CHE 102 General Chemistry II	4
MAT 215 Statistics	3
Junior Year	
Fifth Semester	14
ENS 399 Conservation Biology OR ENS 420 Principles of Wildlife Biology OR ENS 425 Principles of Aquaculture	3
ENS 495 Design and Analysis	4
GIS 311 Geographic Information Systems	3
Advanced Botany Course	4
Sixth Semester	15
ENS 399 Conservation Biology OR ENS 420 Principles of Wildlife Biology OR ENS 425 Principles of Aquaculture	3
Biology-related Elective	4
Free Electives	8
Senior Year	
Seventh Semester	14
ENS 423 Wildlife Management Techniques OR ENS 424 Fisheries Management	4
Biology-related Elective	4
Law/Planning/Policy Elective	3
Free Elective	3
Eighth Semester	14 or 15
ENS 492 Animal Population Dynamics	4
General Education Courses	3
Free Elective	7 or 8
Total	120

Biology, Geology and Environmental Sciences

Related Electives

- Pick two of the following (8 credits): BIO 337, BIO 400, BIO 407, BIO 433, BIO 435, BIO 441, BIO 445, BIO 446, BIO 488
- Pick one of the following (6 credits): ENS 435, GIS 413, REC 362, REC 365

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/environmental-studies/fisheries-wildlife.aspx>

B.S. in Geology

Program Description

The Bachelor of Science in Geology degree prepares students to use common geological tools and lab and field techniques; analyze data; and develop as scientists. Students in this program have opportunities to study in the field as they explore geological concepts relevant to environmental protection, energy resource exploration and development, and land infrastructure engineering.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	14
EAS 150 Introduction to Geology	4
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
General Education Courses	6
Second Semester	16
EAS 200 Historical Geology	4
EAS Elective	3
ENG 102 English Composition II	3
General Education Courses	6
Sophomore Year	
Third Semester	16
CHE 101 Chemistry I	4

Biology, Geology and Environmental Sciences

Course	Credits
EAS 230 Earth Resources	3
GIS 311 Geographic Information Systems	3
MAT 281 Calculus I	3
General Education Course	3
Fourth Semester	16
CHE 102 Chemistry II	4
EAS 303 Hydrology	3
EAS 343 Geomorphology	3
MAT 282 Calculus II	3
General Education Course	3
Junior Year	
Fifth Semester	15
EAS 301 Professional Development for Geologists	1
EAS 331 Mineralogy	4
EAS Elective	3
MAT 215 Statistics	3
PHY 121 General Physics I OR PHY 101 College Physics I	4
Sixth Semester	14
EAS 332 Petrology	4
EAS Related Elective	3
PHY 122 General Physics II OR PHY 102 College Physics II	4
General Education Course	3
Senior Year	
Seventh Semester	16
EAS 423 Sedimentology/Stratigraphy	4

Biology, Geology and Environmental Sciences

Course	Credits
EAS 437 Field Methods in Geology	3
EAS Elective	3
General Education Course	6
Eighth Semester	13
EAS 425 Structural Geology	4
EAS Electives	6
General Education Course	3
Total	120

Recommended Free Electives (24 to 25 credits)

- **EAS 210** Intro to Soils (3 credits)
- **EAS 250** Volcanology (3 credits)
- **EAS 290** Planetary Geology (3 credits)
- **EAS 333** Geochemistry (3 credits)
- **EAS 355** Geophysics (3 credits)
- **EAS 402** Groundwater Hydrology (3 credits)
- **EAS 427** Tectonics (3 credits)
- **EAS 429** Petroleum Geology (3 credits)
- **EAS 438** Computer Apps. in EAS (3 credits)
- **EAS 441** Advanced Env Geology (3 credits)
- **EAS 448** Watershed Evaluation (3 credits)
- **GIS 350** Remote Sensing of Env (3 credits)
- **GIS 413** Env Applications in GIS (3 credits)
- **GEO 479** Internship (variable)
- Other Adviser-approved courses

Additional Requirements

(Not counted toward the General Education requirements.)

- **Special Experience Course (select one):** EAS 391, EAS 392, EAS 393, EAS 492 or GEO 479
- **Upper-Division Writing Component Course (select two):** EAS 427, EAS 438, EAS 441 or EAS 448
- **Laboratory Course (select one):** EAS 150

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/geology/index.aspx>

B.S. in Molecular Biology

Program Description

The Bachelor of Science in Molecular Biology degree builds lab experience and skills as well as knowledge related to the structure and function of biological molecules.

Delivery Mode

Traditional (on campus)

Biology, Geology and Environmental Sciences

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	15
BIO 125 General Botany	4
CHE 101 General Chemistry I	4
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
General Education Course	3
Second Semester	17
BIO 120 General Zoology	4
CHE 102 General Chemistry II	4
ENG 102 English Composition II	3
MAT 273 Applied Calculus OR MAT 281 Calculus I	3
General Education Course	3
Sophomore Year	
Third Semester	14
BIO 215 Introduction to Cellular and Molecular Biology	4
PHY 121 General Physics I	4
Free Elective	3
General Education Course	3
Fourth Semester	15
BIO 218 Genetics	4
BIO 266 Cell Culture	4
CHE 331 Organic Chemistry	4
General Education Course	3

Biology, Geology and Environmental Sciences

Course	Credits
Junior Year	
Fifth Semester	15
BIO 320 Molecular Biology	4
BIO 326 General Microbiology	4
Free Elective	4
General Education Course	3
Sixth Semester	14
BIO 300/400 Level Required Course*	4
BIO 480 Cell Biology	4
Free Elective	3
General Education Course	3
Senior Year	
Seventh Semester	15
BIO 300/400 Level Required Course*	4
Free Elective	4
Related Elective	4
General Education Course	3
Eighth Semester	15
BIO 300/400 Level Required Course*	4
Free Elective	4
Related Elective	4
General Education Course	3
Total	120

* Pick three of the following:

- **BIO 322** Methods of DNA Analysis
- **BIO 426** Clinical Microbiology
- **BIO 427** Cell. Microbial Physiology
- **BIO 450** Biology of Cancer

Biology, Geology and Environmental Sciences

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/molecular-biology/index.aspx>

B.S. in Veterinary Technology

Program Description

The Bachelor of Science in Veterinary Technology includes classroom theory, hands-on training and clinical experience. The curriculum lays a foundation of core knowledge of topics related to animal care and builds on it, preparing students to fill positions in education and industries that require a bachelor's degree (including leadership roles). Students work with live animals (including dogs, cats, rats and rabbits) in state-of-the-art facilities.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	14
BIO 230 Anatomy and Physiology	4
ENG 101 English Composition I	3
MAT 181 College Algebra	3
VET 101 Introduction to Veterinary Technology	3
UNI 100 First-Year Seminar	1
Second Semester	15
BIO 226 Basic Microbiology	4
BIO 260 Anatomy and Physiology II	4
CHE 101 General Chemistry I	4
VET 160 Care and Management of Exotic and Laboratory Animals	3
Sophomore Year	
Third Semester	15
VET 202 Small Animal Management and Clinical Procedures	4
VET 210 Veterinary Clinical Technology and Laboratory Procedures	4

Biology, Geology and Environmental Sciences

Course	Credits
VET 220 Large Animal Management and Clinical Procedures	4
VET 240 Veterinary Pharmacy and Pharmacology	3
Fourth Semester	16
VET 230 Digital Diagnostic Imaging	3
VET 250 Surgical Nursing, Anesthesia and Pain Management	4
VET 292 Clinical Experience	3
General Education Courses	6
Junior Year	
Fifth Semester	15
BIO 120 General Zoology	4
ENG 102 English Composition II	3
VET 301 Contemporary Issues in Veterinary Medicine	2
Free Electives	3
General Education Course	3
Sixth Semester	15
BIO/ENV/VET Elective	3
MAT 215 Statistics	3
Free Electives	6
General Education Course	3
Senior Year	
Seventh Semester	15
BIO/ENV/VET Elective	3
VET 450 Case Studies in Veterinary Medicine OR VET 492 Specialty Clinical Experience	3
Free Electives	6
General Education Course	3

Biology, Geology and Environmental Sciences

Course	Credits
Eighth Semester	15
BIO/ENV/VET Electives	6
VET 450 Case Studies in Veterinary Medicine OR VET 492 Specialty Clinical Experience	3
Free Elective	3
General Education Course	3
Total	120

Program Notes

BIO 450 Immunology (3 credits) OR **BIO 460** Pathophysiology (3 credits) are recommended courses for fulfilling related electives.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/veterinary-technology/index.aspx>

Minor in Anthropology

Curriculum

Course	Credits
Required Courses	6
ANT 100 Introduction to Anthropology	3
ANT 290 Archaeology	3
Anthropology Electives	15
Select five additional ANT courses, with a minimum of three at the 300+ level	15
Total	21

Minor in Biology

Curriculum

Course	Credits
Required Courses	12
BIO 120 General Zoology OR BIO 125 General Botany	4
BIO 215 Introduction to Cellular and Molecular Biology	4
BIO 218 Genetics	4

Biology, Geology and Environmental Sciences

Course	Credits
Elective Courses	9
Select any 300- or 400-level BIO or ENS course, with permission of minor adviser. Upper-level courses chosen to meet minor requirements <i>cannot</i> be required by (or duplicate) the student's major course of study.	9
Total	21

Minor in Environmental Science Curriculum

Course	Credits
Required Courses	12
BIO 120 General Zoology OR BIO 125 General Botany	4
BIO 215 Introduction to Cellular and Molecular Biology	4
BIO 248 General Ecology	4
Elective Courses*	8
Select one animal-related BIO or ENS course at the 300- or 400-level (with permission of minor adviser)	4
Select one plant-related BIO or ENS course at the 300- or 400-level (with permission of minor adviser)	4
Total	20

Note: Upper-level courses chosen to meet minor requirements *cannot* be required by (or duplicate) a student's major course of study.

Minor in Fisheries and Wildlife Curriculum

Course	Credits
Required Courses	12
BIO 120 General Zoology	4
BIO 125 General Botany	4
BIO 248 General Ecology	4

Biology, Geology and Environmental Sciences

Course	Credits
Electives	12
<i>Select one of the following:</i>	
ENS 423 Wildlife Management Techniques	4
ENS 424 Fisheries Management	4
<i>Select one of the following:</i>	
BIO 337 Ornithology	4
BIO 400 Mammology	4
BIO 433 Herpetology	4
BIO 435 Ichthyology	4
BIO 445 Entomology	4
BIO 446 Freshwater Invertebrate Zoology	4
<i>Select one of the following:</i>	
BIO 442 Forest Ecology and Dendrology	4
ENS 475 Wetlands Ecology	4
Total	24

Minor in Geology Curriculum

Course	Credits
Required Courses	11
EAS 150 Introduction to Geology	4
EAS 200 Historical Geology	4
<i>Select only one of the following:</i>	
EAS 210 Introduction to Soils	3
EAS 230 Earth Resources	3
EAS 303 Hydrology	3
Electives	12

Biology, Geology and Environmental Sciences

Course	Credits
<i>Select two or three from the following:</i>	
EAS 331 Mineralogy	3
EAS 332 Petrology	3
EAS 333 Geochemistry	3
EAS 343 Geomorphology	3
EAS 423 Sedimentology/Stratigraphy	3
EAS 425 Structural Geology	3
EAS 427 Tectonics	3
<i>Select at one or two from the following:</i>	
EAS 402 Groundwater Hydrology	3
EAS 437 Geological Field Methods	3
ENS 438 Computer Applications in EAS	3
ENS 441 Adv. Environmental Geology	3
ENS 448 Watershed Evaluation	3
Any Geological Field Course from: EAS 391, 392, 393, 492 or 496	3
Total	23

Minor in Hydrology Curriculum

Course	Credits
Required Courses	10
EAS 150 Introduction to Geology	4
EAS 303 Hydrology	3
EAS 402 Groundwater Hydrology	3
Electives	12
<i>Select at least two from the following:</i>	
EAS 210 Introduction to Soils	3
EAS 245 Weather Analysis and Forecasting	3

Biology, Geology and Environmental Sciences

Course	Credits
EAS 343 Geomorphology	3
EAS 448 Watershed Evaluation	3
<i>Select at least two from the following:</i>	
EAS 333 Geochemistry	3
EAS 441 Advanced Environmental Geology	3
ENS 424 Fisheries Management	4
ENS 475 Wetlands Ecology	4
ENS 488 Water Pollution Biology	4
CHE 331 Organic Chemistry I	4
CHE 381 Environmental Chemistry	4
Total	22

Program Notes

- At least 4 credits must be taken outside of the student's declared major program.
- At least 9 credits must be advanced courses (300 level or higher).
- Students must complete at least 12 credits at California University of Pennsylvania.

Business, Economics and Enterprise Sciences

Department of Business, Economics and Enterprise Sciences

Faculty

Dr. Stephanie Adam | Dr. Ahmet Akgun | Dr. Jacob Bethem | Dr. Adnan Chawdhry | Dr. Joshua Chicarelli | Dr. John Confer | Dr. Paul Hettler | Dr. Elizabeth Jones | Dr. Sarah Judge | Dr. Richard LaRosa | Dr. Mark Lennon | Dr. Nan Li | Dr. Edmund Matecki | Dr. Thomas R. Mueller | Dr. James Ola | Dr. Candice Riley | Dr. Susan Ryan | Dr. Joseph J. Schwerha | Dr. Thomas D. Wickham

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Programs

Cal U's Department of Business, Economics and Enterprise Sciences includes undergraduate programs in accounting, business administration, economics, finance, geography, human resource management, management, marketing and parks and recreation management.

Associate and Bachelor's Degree Programs

- A.S. in Accounting
- B.A. in Geography: Geographic Information Technology
- B.A. in Geography: Tourism, Hospitality and Event Studies
- B.A. in Parks and Recreation Management
- B.S. in Business Administration: Integrated Business
- B.S. in Business Administration: Management Information Systems
- B.S.B.A. in Accounting
- B.S.B.A. in Economics
- B.S.B.A. in Finance
- B.S.B.A. in Human Resource Management
- B.S.B.A. in Interdisciplinary Studies in Business and Commerce
- B.S.B.A. in Interdisciplinary Studies in Business and Commerce: Corporate Communication
- B.S.B.A. in Management
- B.S.B.A. in Marketing

Certificates

The department also offers sub-baccalaureate certificate programs in:

- Forensic Accounting
- Innovation and Entrepreneurship

Minors

Minors available through this department include:

- Accounting
- Arts Administration
- Business
- Economics
- Event Planning and Management
- Finance
- Forensic Accounting
- GIS and Emergency Management
- Human Resource Management
- Management
- Management Information Systems
- Marketing
- Parks and Recreation
- Tourism Studies

Business, Economics and Enterprise Sciences

Accelerated Bachelor's-to-Master's Program

Accelerated bachelor's-to-master's degree programs related to business are also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Honor Societies

Honor students in geography are eligible for induction into Gamma Theta Upsilon.

Membership is also available to students of high scholastic attainment in California University's Kappa chapter of Rho Phi Lambda, the national honorary recreation, park and leisure services fraternity, chartered in 1985.

Memberships and Awards

Achievement is recognized in several ways. Membership is open to qualified successful business students in:

- Omicron Delta Epsilon, the International Honor Society for Economics
- Phi Beta Lambda - Future Business Leaders
- Sigma Beta Delta, the International Honor Society for Business, Management and Administration
- Student Accounting Association
- Economics Club
- Finance Club
- Student Marketing Association

These awards are presented to graduating seniors yearly:

- Alfred Zeffiro Award for Excellence in the Study of Management
- Wall Street Journal Award for Excellence in the Study of Finance
- Pennsylvania Institute of Certified Public Accountants Award for Highest Achievement in the Study of Accounting
- Amy Lyne Marunyak Memorial Award for Excellence in the Study of Marketing

Accreditation

The bachelor's and master's programs in business and economics are accredited by the Accreditation Council for Business Schools and Programs (ACBSP).

ACBSP is a leading specialized accreditation body for business education supporting, celebrating and rewarding teaching excellence. The association embraces the virtues of teaching excellence and emphasizes to students that it is essential to learn.

A.S. in Accounting

Program Description

The Associate of Science in Accounting degree covers fundamental skills and knowledge needed by those seeking entry-level positions in the field of accounting.

Delivery Mode

- Traditional (on campus)
- Global Online (100% online delivery)

Curriculum

Course	Credits
First Semester	16
ACC 200 Financial Accounting	3
ECO 201 Principles of Microeconomics	3

Business, Economics and Enterprise Sciences

Course	Credits
ENG 101 English Composition I	3
MAT 181 College Algebra	3
UNI 100 First-Year Seminar	1
General Education Elective	3
Second Semester	15
ACC 202 Accounting II	3
COM 101 Oral Communication	3
ECO 202 Principles of Macroeconomics	3
PSY 100 General Psychology	3
General Education Elective	3
Third Semester	15
ACC 331 Cost Accounting	3
FIN 301 Financial Management	3
MIS 201 Mgt Info Systems	3
Business Elective	3
General Education Elective	3
Fourth Semester	15
MAT 225 Business Statistics	3
Accounting Elective	3
Accounting Elective	3
Business Elective	3
Business Elective	3
Total	61

Program Requirements

Required Major Courses (18 credits)

- **ACC 200** Financial Accounting
- **ACC 202** Accounting II
- **ACC 331** Cost Accounting
- **ECO 201** Principles of Microeconomics

Business, Economics and Enterprise Sciences

- **ECO 202** Principles of Macroeconomics
- **FIN 301** Financial Management

Required Related Courses (6 credits)

- Accounting electives (select 6 credits with adviser's approval)

Related Electives (9 credits)

- Select courses from ACC, BUS, ECO, FIN, MGT, MIS or MKT, with adviser's approval

B.A. in Geography: Geographic Information Technology

Program Description

The Geographic Information Technology concentration of the Bachelor of Arts in Geography degree allows students to explore geospatial concepts, techniques and technologies. Students have opportunities to gain hands-on experience applying geographic and technological knowledge.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
GEO 100 Introduction to Geography	3
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
Fine Arts General Education Course	3
Math General Education Course	3
Humanities General Education Course	3
Second Semester	15
General Education Option	3
Health and Wellness General Education Course	3
Natural Sciences General Education Course	3
Public Speaking General Education Course	3
Social Sciences General Education Course	3
Sophomore Year	

Business, Economics and Enterprise Sciences

Course	Credits
Third Semester	15
GEO 217 Demographic Analysis	3
GEO 222 Geo-Business	3
Ethics and Multiculturalism Course	3
General Education Options	6
Fourth Semester	15
GIS 303 Crime Mapping and Spatial Analysis	3
Laboratory Course	3
Free Electives	9
Junior Year	
Fifth Semester	15
EAS 300 Natural Hazards	3
GEO 360 Emergency Management	3
GIS 311 Geographic Information Systems	3
REC 362 Site Design and Management	3
Required Related Elective	3
Sixth Semester	15
GIS 350 Remote Sensing of the Environment	3
Required Related Elective	3
Free Electives	9
Senior Year	
Seventh Semester	15
GEO 426 Impacts and Sustainability of Tourism	3
GEO 474 Developing the Master Plan	3
Required Elective	3
Free Electives	6

Business, Economics and Enterprise Sciences

Course	Credits
Eighth Semester	15
GIS 314 Spatial Land Data in the Oil and Gas Industry	3
GEO 479 Internship	3
Free Electives	9
Total	120

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/gis-emergency-managment/index.aspx>

B.A. in Geography: Tourism, Hospitality and Event Studies Concentration

Program Description

The Tourism, Hospitality and Event Studies concentration of the Bachelor of Arts in Geography degree builds skills and knowledge relevant to careers in the tourism, hospitality and event planning industries.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
GEO 150 Introduction to Tourism Studies	3
UNI 100 First-Year Seminar	1
General Education Courses	9
Second Semester	15
GEO 100 Introduction to Geography	3
GEO 155 Hospitality Industry Operations	3
General Education Courses	9
Sophomore Year	
Third Semester	15

Business, Economics and Enterprise Sciences

Course	Credits
GEO 217 Demographic Analysis	3
GIS 311 Geographic Information Systems	3
Professional Competencies, General Education AND/ OR Electives	9
Fourth Semester	15
GEO 330 Meetings Expositions Events and Convention Operations	3
Professional Competencies, General Education AND/ OR Electives	12
Junior Year	
Fifth Semester	15
GEO 358 Comprehensive Tourism Planning	3
Professional Competencies, General Education AND/ OR Electives	12
Sixth Semester	15
GEO 352 Hotels, Resorts, Lodging	3
Professional Competencies, General Education AND/ OR Electives	12
Senior Year	
Seventh Semester	15
GEO 474 Developing the Master Plan	3
Professional Competencies, General Education AND/ OR Electives	12
Eighth Semester	15
GEO 351 Research Methods for Tourism Studies	3
GEO 426 Impacts of Tourism	3
Professional Competencies, General Education AND/ OR Electives	9

Business, Economics and Enterprise Sciences

Course	Credits
Total	120

Tourism Professional Competencies (9 credits)

- **GEO 205** World Cities Geography of Tourism
- **GEO 220** Geography of North America and Pennsylvania
- **GEO 277** Casinos and Gaming Entertainment
- **GEO 383** Dark Tourism and Extreme Topics
- **REC 165** Introduction to Recreation and Leisure
- **REC 374** Commercial Recreation Management

Program Notes

42 credits of advanced coursework at 300 or 400 level required.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/tourism-studies/index.aspx>

B.A. in Parks and Recreation Management

Program Description

The Bachelor of Arts in Parks and Recreation degree builds knowledge and leadership skills relevant to careers in parks and recreation management and leisure services. Students learn how to design, plan, implement and evaluate visitor experiences and administer parks and recreation systems.

Delivery Mode

Traditional (on campus)

Accreditation

This program is accredited by the Council on Accreditation of Parks, Recreation, Tourism and Related Professions (COAPRT).

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
REC 165 Introduction to Recreation and Leisure	3
UNI 100 First-Year Seminar**	1
Free Elective	3
General Education Courses	6
Second Semester	15

Business, Economics and Enterprise Sciences

Course	Credits
ENG 102 English Composition II OR ENG 211 Business Writing OR ENG 217 Science and Tech Writing	3
General Education Courses	6
Related Elective	3
Related REC Course	3
Sophomore Year	
Third Semester	15
REC 361 Parks and Recreation for Diverse Populations	3
General Education Courses	6
Related Elective	3
Required Related Course	3
Fourth Semester	15
REC 362 Recreation Site Design and Management	3
General Education Courses	6
Related Electives	6
Junior Year	
Fifth Semester	15
REC 365 Recreation Resource Management	3
REC 374 Commercial Recreation Management	3
General Education Course	3
Related Elective	3
Required Related Course	3
Sixth Semester	15
REC 378 Recreation Management and Leadership	3
REC 412 Program Planning and Evaluation	3
General Education Courses	6

Business, Economics and Enterprise Sciences

Course	Credits
Related Elective	3
Senior Year	
Seventh Semester	15
GEO 474 Developing the Master Plan	3
REC 415 Challenges and Trends in Parks and Recreation	3
REC 478 Professional Development in Recreation	3
Related Electives	6
Eighth Semester	15
GEO 479 Internship	12
Related Elective	3
Total	120

Required Related Courses (6 credits)

- **REC 195** Leisure and Wellness Recreation
- **REC 220** Youth Competitive Recreation Activities
- **REC 225** Recreation and Youth Development
- **REC 230** Youth Camp Counseling and Administration
- **REC 235** Special Event Management in Recreation Settings
- **REC 240** Human Ecology
- **REC 246** Scenic Areas of U.S.
- **REC 250** Non-Profit and Community Recreation
- **REC 255** Water-Based Rec Management
- **REC 270** Interpretative Methods in Parks and Recreation
- **REC 275** Sustainable Recreation and Green Parks
- **REC 280** Adventure and Outdoor Recreation Outfitting

Free Electives (36 credits)

Suggested program-related classes:

- **REC 195** Leisure and Wellness Recreation
- **REC 220** Youth Competitive Recreation Activities
- **REC 225** Recreation and Youth Development
- **REC 230** Youth Camp Counseling and Administration
- **REC 235** Special Event Management in Recreation Settings
- **REC 240** Sustainable Communities and Ecosystems
- **REC 246** Scenic Areas of U.S.
- **REC 250** Non-Profit and Community Recreation
- **REC 285** Water-Based Rec Management
- **REC 270** Interpretative Methods in Parks and Recreation
- **REC 275** Sustainable Recreation and Green Parks
- **REC 280** Adventure and Outdoor Recreation Outfitting

Business, Economics and Enterprise Sciences

- **GEO 150** Survey of Travel and Tourism
- **GEO 217** Demographic Analysis
- **GEO 420** Disaster Vulnerability Assessment
- **GEO 426** Impacts and Sustainability of Tourism
- **GIS 311** Geographic Information Systems
- **EAS 150** Intro to Geology
- **EAS 230** Earth Resources
- **EAS 300** Natural Hazards (4 credits)
- **ELM 360** Environment Ecology and Nature-study Education
- **ENS 399** Conservation Biology
- Other Advisor Approved Courses

Program Notes

- A minimum of 42 credits must be upper-division courses (300-400 level) for graduation.
- Graduation Requirements: minimum GPA of 2.0; minimum of 120 credits; all required major and gen ed courses completed.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/parks-recreation-management/index.aspx>

B.S. in Business Administration: Integrated Business Concentration

Program Description

The Integrated Business concentration of the Bachelor of Science in Business Administration degree prepares students for the 21st century global business environment.

Delivery Mode

Global Online (100% online)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ACC 200 Financial Accounting	3
BUS 242 Business Law I	3
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
General Education Courses/Electives	6
Second Semester	15
ACC 321 Managerial Accounting	3
ECO 201 Principles of Microeconomics	3
ENG 211 Business Writing I	3

Business, Economics and Enterprise Sciences

Course	Credits
MAT 181 College Algebra	3
PSY 100 General Psychology	3
Sophomore Year	
Third Semester	15
BUS 281 Management Science I	3
CDC 101 Public Speaking	3
ECO 202 Principles of Macroeconomics	3
General Education Courses/Electives	6
Fourth Semester	15
FIN 301 Financial Management	3
MAT 225 Business Statistics	3
MKT 300 Principles of Marketing	3
General Education Courses/Electives	6
Junior Year	
Fifth Semester	15
BUS 381 Management Science II	3
MGT 300 Principles of Management	3
MKT 401 Marketing Management	3
General Education Course/Electives	6
Sixth Semester	15
BUS 345 Business Ethics	3
ECO 460 Global Economic Perspectives	3
MIS 301 Management Information Systems	3
General Education Course/Electives	6
Senior Year	

Business, Economics and Enterprise Sciences

Course	Credits
Seventh Semester	15
BUS 499 Integrated Strat. Capstone	3
HRM 462 Global Workforce Management and Change	3
MGT 461 Integrated Supply Chain Management	3
General Education Courses/Electives	6
Eighth Semester	15
MGT 431 International Business Management	3
General Education Courses/Electives	12
Total	120

Required Minor/Certificate (12 credits*)

- Students select one of the following minors or certificates: Accounting, Economics, Finance, Forensic Accounting or Management or the Certificate in Innovation & Entrepreneurship or Certificate in Spanish for Business.

* These minors are 21 credits; however, 9 of these credits are required in the “Business Core Courses” above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above.

Note: All students must complete a special experience course, a laboratory course and two writing-intensive courses.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/integrated-global-business/index.aspx>

B.S. in Business Administration: Management Information Systems Concentration

Program Description

The Management Information Systems concentration of the Bachelor of Science in Business Administration degree allows students to build a core understanding of business while also developing in-depth knowledge of management information systems.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16

Business, Economics and Enterprise Sciences

Course	Credits
ECO 201 Principles of Microeconomics	3
ENG 101 English Composition I	3
MAT 181 College Algebra	3
UNI 100 First-Year Seminar	1
General Education Courses/Electives	6
Second Semester	15
BUS 281 Management Science I	3
ECO 202 Principles of Macroeconomics	3
ENG 211 Business Writing I	3
PSY 100 General Psychology	3
General Education Course/Elective	3
Sophomore Year	
Third Semester	15
ACC 200 Financial Accounting	3
BUS 242 Business Law I	3
CDC 101 Public Speaking	3
MAT 225 Business Statistics	3
General Education Course/Elective	3
Fourth Semester	15
ACC 321 Managerial Accounting	3
BUS 381 Management Science II	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
General Education Course/Elective	3
Junior Year	
Fifth Semester	15

Business, Economics and Enterprise Sciences

Course	Credits
FIN 301 Financial Management	3
MIS 201 Management Info Systems	3
Concentration/Business Electives	6
General Education Course/Elective	3
Sixth Semester	15
Concentration/Business Electives	9
General Education Course/Electives	6
Senior Year	
Seventh Semester	15
BUS 499 Integrated Strat. Capstone	3
Concentration/Business Electives	9
General Education Course/Elective	3
Eighth Semester	15
Concentration/Business Electives	9
General Education Course/Elective	6
Total	120

Program Requirements

Required Major Courses (30 credits)

- **ACC 200** Financial Accounting
- **ACC 321** Managerial Accounting
- **BUS 242** Business Law I
- **BUS 381** Management Science II
- **BUS 499** Integrated Strategic Capstone
- **ECO 201** Principles of Microeconomics
- **ECO 202** Principles of Macroeconomics
- **FIN 301** Financial Management
- **MGT 300** Principles of Management
- **MKT 300** Principles of Marketing

Concentration Courses (21 credits)

- **CIS 120** Application Programming I
- **CIS 299** Systems Analysis I
- **MIS 321** Accounting Info Systems
- **MIS 375** Information Tech Ethics

Business, Economics and Enterprise Sciences

- **MIS 385** Health Information Systems
- **MIS 401** Business Driven MIS
- **MIS 421** Strategic Issues in MIS

Related Electives (9 credits)

- ACC, BUS, ECO, FIN, HRM, MGT, MIS, or MKT courses, 300-level or above not already included in the Required Major Courses or Concentration Courses above. No more than 6 credits can be **MIS 492**.

Note: All students must complete a special experience course, a laboratory course and two writing-intensive courses.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/business-administration/management-information-systems.aspx>

B.S.B.A. in Accounting

Program Description

The Bachelor of Science in Business Administration (B.S.B.A.) in Accounting degree prepares students to use modern accounting methods and information systems.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ECO 201 Principles of Microeconomics	3
ENG 101 English Composition I	3
MAT 181 College Algebra	3
UNI 100 First-Year Seminar	1
General Education Courses/Electives	6
Second Semester	15
BUS 281 Management Science I	3
ECO 202 Principles of Macroeconomics	3
ENG 211 Business Writing I	3
PSY 100 General Psychology	3
General Education Course/Elective	3

Business, Economics and Enterprise Sciences

Course	Credits
Sophomore Year	
Third Semester	15
ACC 200 Financial Accounting	3
BUS 242 Business Law I	3
CDC 101 Public Speaking	3
MAT 225 Business Statistics	3
General Education Course/Elective	3
Fourth Semester	
ACC 331 Cost Accounting	3
BUS 381 Management Science II	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
General Education Course/Elective	3
Junior Year	
Fifth Semester	15
FIN 301 Financial Management	3
MIS 201 Management Info Sys	3
Concentration/Business Electives	6
General Education Course/Elective	3
Sixth Semester	
Concentration/Business Electives	9
General Education Courses/Electives	6
Senior Year	
Seventh Semester	15
BUS 499 Integrated Strat. Capstone	3

Business, Economics and Enterprise Sciences

Course	Credits
Concentration/Business Electives	9
General Education Course/Elective	3
Eighth Semester	15
Concentration/Business Electives	9
General Education Course/Elective	6
Total	120

Program Requirements

Required Major Courses (30 credits)

- **ACC 200** Financial Accounting
- **ACC 331** Cost Accounting
- **BUS 242** Business Law I
- **BUS 381** Management Science II
- **BUS 499** Integrated Strategic Capstone
- **ECO 201** Principles of Microeconomics
- **ECO 202** Principles of Macroeconomics
- **FIN 301** Financial Management
- **MGT 300** Principles of Management
- **MKT 300** Principles of Marketing

Concentration Courses (24 credits)

- **ACC 202** Accounting II
- **ACC 218** Federal Income Tax I
- **ACC 301** Intermediate Acc. I
- **ACC 302** Intermediate Acc. II
- **ACC 318** Federal Income Tax II
- **ACC 341** Non-Profit Accounting
- **ACC 401** Advanced Financial Acc.
- **ACC 441** Auditing

Related Electives (3 credits)

- **ACC 491** Accounting Internship
- **BUS 345** Business Ethics
- ACC, BUS, ECO, FIN, HRM, MGT, MIS or MKT courses, 300-level or above not already included in the Business Core or Required Major Courses above

Required Minor/Certificate (12 credits*)

- Students select one of the following minors or certificates: Economics, Finance, Forensic Accounting, Human Resource Management, Management, Management Information Systems, or Marketing or the Certificate in Innovation & Entrepreneurship or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser.

Business, Economics and Enterprise Sciences

*These minors are 21 credits; however, 9 of these credits are required in the “Business Core Courses” above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above.

Note: All students must complete a special experience course, a laboratory course and two writing-intensive courses.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/accounting-degree/index.aspx>

B.S.B.A. in Economics

Program Description

The Bachelor of Science in Business Administration (B.S.B.A.) in Economics degree prepares students to apply economic theory and related concepts to real-world problems in business and other sectors.

Delivery Mode

- Traditional (on campus)
- Global Online (100% online)

Curriculum

The following eight-semester schedules of courses provide a recommended framework for completing this program of study in four years, on campus or online.

Course	Credits
Freshman Year	
First Semester	16
ECO 201 Principles of Microeconomics	3
ENG 101 English Composition I	3
MAT 181 College Algebra	3
UNI 100 First-Year Seminar	1
General Education Courses/Electives	6
Second Semester	15
BUS 281 Management Science I	3
ECO 202 Principles of Macroeconomics	3
ENG 211 Business Writing I	3
PSY 100 General Psychology	3
General Education Course/Elective	3
Sophomore Year	
Third Semester	15

Business, Economics and Enterprise Sciences

Course	Credits
ACC 200 Financial Accounting	3
BUS 242 Business Law I	3
CDC 101 Public Speaking	3
MAT 225 Business Statistics	3
General Education Course/Elective	3
Fourth Semester	15
ACC 321 Managerial Accounting	3
BUS 381 Management Science II	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
General Education Course/Elective	3
Junior Year	
Fifth Semester	15
FIN 301 Financial Management	3
MIS 201 Management Info Systems	3
Concentration/Business Electives	6
General Education Course/Elective	3
Sixth Semester	15
Concentration/Business Electives	9
General Education Course/Electives	6
Senior Year	
Seventh Semester	15
BUS 499 Integrated Strat. Capstone	3
Concentration/Business Electives	9
General Education Course/Elective	3

Business, Economics and Enterprise Sciences

Course	Credits
Eighth Semester	15
Concentration/Business Electives	9
General Education Course/Elective	6
Total	120

Program Requirements

Business Core Courses (30 credits)

- **ACC 200** Financial Accounting
- **ACC 321** Managerial Accounting
- **BUS 242** Business Law I
- **BUS 381** Management Science II
- **BUS 499** Integrated Strategic Capstone
- **ECO 201** Principles of Microeconomics
- **ECO 202** Principles of Macroeconomics
- **FIN 301** Financial Management
- **MGT 300** Principles of Management
- **MKT 300** Principles of Marketing

Required Major Courses (18 credits)

- **ECO 301** Intermediate Micro
- **ECO 302** Intermediate Macro
- **ECO 421** Applied Econometrics
- Any ECO courses 300-level, excluding **ECO 492**

Related Electives (9 credits)

- **ECO 492** Economics Internship
- ACC, BUS, ECO, FIN, HRM, MGT, MIS or MKT courses, 300-level or above not already required or included in the Business Core or Required Major Courses above

Required Minor/Certificate (12 credits*)

- Students select one of the following minors or certificates: Accounting, Finance, Forensic Accounting, Human Resource Management, Management, Management Information Systems or Marketing or the Certificate in Innovation & Entrepreneurship or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser, in which case the 9 credits of Related Electives may be fulfilled with courses required for the minor.

* These minors are 21 credits; however, 9 of these credits are required in the “Business Core Courses” above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above.

Note: All students must complete a special experience course, a laboratory course and two writing-intensive courses.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/economics/index.aspx>

Business, Economics and Enterprise Sciences

B.S.B.A. in Finance

Program Description

The Bachelor of Science in Business Administration (B.S.B.A.) in Finance degree builds financial management skills.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ECO 201 Principles of Microeconomics	3
ENG 101 English Composition I	3
MAT 181 College Algebra	3
UNI 100 First-Year Seminar	1
General Education Courses/Electives	6
Second Semester	15
BUS 281 Management Science I	3
ECO 202 Principles of Macroeconomics	3
ENG 211 Business Writing I	3
PSY 100 General Psychology	3
General Education Course/Elective	3
Sophomore Year	
Third Semester	15
ACC 200 Financial Accounting	3
BUS 242 Business Law I	3
CDC 101 Public Speaking	3
MAT 225 Business Statistics	3
General Education Course/Elective	3
Fourth Semester	15

Business, Economics and Enterprise Sciences

Course	Credits
ACC 321 Managerial Accounting	3
BUS 381 Management Science II	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
General Education Course/Elective	3
Junior Year	
Fifth Semester	15
FIN 301 Financial Management	3
MIS 201 Management Info Sys	3
Concentration/Business Electives	6
General Education Course/Elective	3
Sixth Semester	15
Concentration/Business Electives	9
General Education Course/Electives	6
Senior Year	
Seventh Semester	15
BUS 499 Integrated Strat. Capstone	3
Concentration/Business Electives	9
General Education Course/Elective	3
Eighth Semester	15
Concentration/Business Electives	9
General Education Course/Elective	6
Total	120

Program Requirements

Business Core Courses (30 credits)

- **ACC 200** Financial Accounting
- **ACC 321** Managerial Accounting

Business, Economics and Enterprise Sciences

- **BUS 242** Business Law I
- **BUS 381** Management Science II
- **BUS 499** Integrated Strategic Capstone
- **ECO 201** Principles of Microeconomics
- **ECO 202** Principles of Macroeconomics
- **FIN 301** Financial Management
- **MGT 300** Principles of Management
- **MKT 300** Principles of Marketing

Required Major Courses (18 credits)

- **FIN 302** Adv. Financial Management
- **FIN 304** Personal Money Management
- **FIN 305** Investment Management
- **FIN 311** Financial Markets and Institutions
- **FIN 331** International Finance
- **FIN 335** Risk Management

Related Electives (9 credits)

- **ECO 421** Applied Econometrics
- **FIN 492** Finance Internship
- ACC, BUS, ECO, FIN, HRM, MGT, MIS or MKT courses, 300-level or above not already required or included in the Business Core or Required Major Courses above

Required Minor/Certificate (12 credits*)

- Students select one of the following minors or certificates: Accounting, Economics, Forensic Accounting, Human Resource Management, Management, Management Information Systems or Marketing or the Certificate in Innovation & Entrepreneurship or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser, in which case the 9 credits of Related Electives may be fulfilled with courses required for the minor.

* These minors are 21 credits; however, 9 of these credits are required in the “Business Core Courses” above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above.

Note: All students must complete a special experience course, a laboratory course and two writing-intensive courses.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/finance-degree/index.aspx>

B.S.B.A. in Human Resource Management

Program Description

The Bachelor of Science in Business Administration (B.S.B.A.) in Human Resource Management degree builds skills and knowledge related to organizational behavior, labor relations and compensation management.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Business, Economics and Enterprise Sciences

Course	Credits
Freshman Year	
First Semester	16
ECO 201 Principles of Microeconomics	3
ENG 101 English Composition I	3
MAT 181 College Algebra	3
UNI 100 First-Year Seminar	1
General Education Courses/Electives	6
Second Semester	15
BUS 281 Management Science I	3
ECO 202 Principles of Macroeconomics	3
ENG 211 Business Writing I	3
PSY 100 General Psychology	3
General Education Course/Elective	3
Sophomore Year	
Third Semester	15
ACC 200 Financial Accounting	3
BUS 242 Business Law I	3
CDC 101 Public Speaking	3
MAT 225 Business Statistics	3
General Education Course/Elective	3
Fourth Semester	15
ACC 321 Managerial Accounting	3
BUS 381 Management Science II	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
General Education Course/Elective	3

Business, Economics and Enterprise Sciences

Course	Credits
Junior Year	
Fifth Semester	15
FIN 301 Financial Management	3
MIS 201 Management Info Systems	3
Concentration/Business Electives	6
General Education Course/Elective	3
Sixth Semester	15
Concentration/Business Electives	9
General Education Course/Electives	6
Senior Year	
Seventh Semester	15
BUS 499 Integrated Strat. Capstone	3
Concentration/Business Electives	9
General Education Course/Elective	3
Eighth Semester	15
Concentration/Business Electives	9
General Education Course/Elective	6
Total	120

Program Requirements

Business Core Courses (30 credits)

- **ACC 200** Financial Accounting
- **ACC 321** Managerial Accounting
- **BUS 242** Business Law I
- **BUS 381** Management Science II
- **BUS 499** Integrated Strategic Capstone
- **ECO 201** Principles of Microeconomics
- **ECO 202** Principles of Macroeconomics
- **FIN 301** Financial Management
- **MGT 300** Principles of Management
- **MKT 300** Principles of Marketing

Required Major Courses (18 credits)

Business, Economics and Enterprise Sciences

- **BUS 342** Business, Society and Government OR **BUS 345** Business Ethics
- **HRM 300** Principles of Human Resource Management
- **HRM 310** Compensation Management
- **HRM 330** Labor Relations
- **MIS/HRM 322** Human Resource Information Systems
- **HRM 400** Human Resource Strat. and Plan.

Related Electives (9 credits)

- **HRM 492** HRM Internship
- ACC, BUS, ECO, FIN, HRM, MGT, MIS or MKT courses, 300-level or above not already required or included in the Business Core or Required Major Courses above

Required Minor/Certificate (12 credits*)

- Students select one of the following minors or certificates: Accounting, Economics, Finance, Forensic Accounting, Management, Management Information Systems or Marketing or the Certificate in Innovation & Entrepreneurship or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser, in which case the 9 credits of Related Electives may be fulfilled with courses required for the minor.

* These minors are 21 credits; however, 9 of these credits are required in the “Business Core Courses” above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above.

Note: All students must complete a special experience course, a laboratory course and two writing-intensive courses.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/human-resource-management/index.aspx>

B.S.B.A. in ISBC: Corporate Communication

Program Description

The Corporate Communication concentration of the Bachelor of Science in Business Administration (B.S.B.A.) in Interdisciplinary Studies in Business and Commerce is designed for students interested in public relations and corporate communication. The degree provides a solid foundation of business knowledge while also building communication skills.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ACC 200 Financial Accounting	3
ENG 101 English Composition I	3
MAT 181 College Algebra	3

Business, Economics and Enterprise Sciences

Course	Credits
UNI 100 First-Year Seminar	1
General Education Courses/Electives	6
Second Semester	15
BUS 242 Business Law I	3
BUS 281 Management Science I	3
CDC 100 Communication Perspectives	3
ENG 211 Business Writing I	3
PSY 100 General Psychology	3
Sophomore Year	
Third Semester	15
ACC 321 Managerial Accounting	3
CDC 101 Public Speaking	3
CDC 201 Argument. and Debate	3
ECO 201 Principles of Microeconomics	3
MIS 201 Management Info Sys	3
Fourth Semester	15
ECO 202 Principles of Macroeconomics	3
MAT 225 Business Statistics	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
General Education Course/Elective	3
Junior Year	
Fifth Semester	15
FIN 301 Financial Management	3
BUS 381 Management Science II	3
CDC 302 Persuasion	3

Business, Economics and Enterprise Sciences

Course	Credits
General Education Courses/Electives	6
Sixth Semester	15
BUS 345 Business Ethics	3
CDC 303 Organizational Comm	3
General Education Course/Elective	3
Minor/Bus. Electives	6
Senior Year	
Seventh Semester	15
BUS 499 Integrated Strat. Capstone	3
CDC 330 Intro to PR	3
General Education Courses/Electives	6
Minor/Bus. Elective	3
Eighth Semester	15
CDC 331 Public Relations Appl	3
CDC 450 Media, Society, Cult	3
General Education Courses/Electives	6
Minor/Bus. Elective	3
Total	120

Program Requirements

Business Core Courses (30 credits)

- **ACC 200** Financial Accounting
- **ACC 321** Managerial Accounting
- **BUS 242** Business Law I
- **BUS 381** Management Science II
- **BUS 499** Integrated Strategic Capstone
- **ECO 201** Principles of Microeconomics
- **ECO 202** Principles of Macroeconomics
- **FIN 301** Financial Management
- **MGT 300** Principles of Management
- **MKT 300** Principles of Marketing

Required Major Courses (27 credits)

Business, Economics and Enterprise Sciences

- **BUS 345** Business Ethics
- **CDC 100** Communication Perspectives
- **CDC 201** Argumentation and Advocacy
- **CDC 230** Strategic Professional Communication
- **CDC 302** Persuasion
- **CDC 303** Organizational Communication
- **CDC 330** Intro to Public Relations
- **CDC 331** Public Relations Applications
- **CDC 450** Media, Society and Culture

Required Minor/Certificate (12 credits*)

- Students select one of the following minors or certificates: Accounting, Economics, Finance, Forensic Accounting, Human Resource Management, Management, Management Information Systems or Marketing or the Certificate in Innovation and Entrepreneurship or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser.

* These minors are 21 credits; however, 9 of these credits are required in the “Business Core Courses” above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above.

Note: Students who complete dual degrees or dual majors do not have to complete a minor or certificate.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/corporate-communications/index.aspx>

B.S.B.A. in Interdisciplinary Studies in Business and Commerce

Program Description

The Bachelor of Science in Business Administration (B.S.B.A.) in Interdisciplinary Studies in Business and Commerce degree is a flexible program of study that allows students to select upper-level business courses that align with their career goals and interests.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ECO 201 Principles of Microeconomics	3
ENG 101 English Composition I	3
MAT 181 College Algebra	3
UNI 100 First-Year Seminar	1
General Education Courses/Electives	6

Business, Economics and Enterprise Sciences

Course	Credits
Second Semester	15
BUS 281 Management Science I	3
ECO 202 Principles of Macroeconomics	3
ENG 211 Business Writing I	3
PSY 100 General Psychology	3
General Education Course/Elective	3
Sophomore Year	
Third Semester	15
ACC 200 Financial Accounting	3
BUS 242 Business Law I	3
CDC 101 Public Speaking	3
MAT 225 Business Statistics	3
General Education Course/Elective	3
Fourth Semester	15
ACC 321 Managerial Accounting	3
BUS 381 Management Science II	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
General Education Course/Elective	3
Junior Year	
Fifth Semester	15
FIN 301 Financial Management	3
MIS 201 Management Info Systems	3
Concentration/Business Electives	6
General Education Course/Elective	3

Business, Economics and Enterprise Sciences

Course	Credits
Sixth Semester	15
Concentration/Business Electives	9
General Education Course/Electives	6
Senior Year	
Seventh Semester	15
BUS 499 Integrated Strat. Capstone	3
Concentration/Business Electives	9
General Education Course/Elective	3
Eighth Semester	15
Concentration/Business Electives	9
General Education Course/Elective	6
Total	120

Program Requirements

Business Core Courses (30 credits)

- **ACC 200** Financial Accounting
- **ACC 321** Managerial Accounting
- **BUS 242** Business Law I
- **BUS 381** Management Science II
- **BUS 499** Integrated Strategic Capstone
- **ECO 201** Principles of Microeconomics
- **ECO 202** Principles of Macroeconomics
- **FIN 301** Financial Management
- **MGT 300** Principles of Management
- **MKT 300** Principles of Marketing

Required Major Courses (18 credits)

- With approval of their adviser, student choose ACC, BUS, ECO, FIN, HRM, MGT, MIS or MKT courses, 300- level or above not already included in the Required Major Courses above or ACC 491, BUS 492, ECO 492, FIN 491, HRM 492, MGT 492, MIS 492 or MKT 492

Related Electives (9 credits)

- **BUS 492** Internship
- ACC, BUS, ECO, FIN, HRM, MGT, MIS or MKT courses, 300-level or above not already required or included in the Business Core or Required Major Courses above

Required Minor/Certificate (12 credits*)

Business, Economics and Enterprise Sciences

- Students select one of the following minors or certificates: Accounting, Economics, Finance, Forensic Accounting, Human Resource Management, Management, Management Information Systems or Marketing or the Certificate in Innovation & Entrepreneurship or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser, in which case the 9 credits of Related Electives may be fulfilled with courses required for the minor.

* These minors are 21 credits; however, 9 of these credits are required in the “Business Core Courses” above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above.

Note: All students must complete a special experience course, a laboratory course and two writing-intensive courses.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/business-administration/index.aspx>

B.S.B.A. in Management

Program Description

The Bachelor of Science in Business Administration (B.S.B.A.) in Management degree is designed for students interested in taking on management roles in the business world.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ECO 201 Principles of Microeconomics	3
ENG 101 English Composition I	3
MAT 181 College Algebra	3
UNI 100 First-Year Seminar	1
General Education Courses/Electives	6
Second Semester	15
BUS 281 Management Science I	3
ECO 202 Principles of Macroeconomics	3
ENG 211 Business Writing I	3
PSY 100 General Psychology	3
General Education Course/Elective	3

Business, Economics and Enterprise Sciences

Course	Credits
Sophomore Year	
Third Semester	15
ACC 200 Financial Accounting	3
BUS 242 Business Law I	3
CDC 101 Public Speaking	3
MAT 225 Business Statistics	3
General Education Course/Elective	3
Fourth Semester	
ACC 321 Managerial Accounting	3
BUS 381 Management Science II	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
General Education Course/Elective	3
Junior Year	
Fifth Semester	15
FIN 301 Financial Management	3
MIS 201 Management Info Systems	3
Concentration/Business Electives	6
General Education Course/Elective	3
Sixth Semester	
Concentration/Business Electives	9
General Education Course/Electives	6
Senior Year	
Seventh Semester	15
BUS 499 Integrated Strat. Capstone	3

Business, Economics and Enterprise Sciences

Course	Credits
Concentration/Business Electives	9
General Education Course/Elective	3
Eighth Semester	15
Concentration/Business Electives	9
General Education Course/Elective	6
Total	120

Program Requirements

Business Core Courses (30 credits)

- **ACC 200** Financial Accounting
- **ACC 321** Managerial Accounting
- **BUS 242** Business Law I
- **BUS 381** Management Science II
- **BUS 499** Integrated Strategic Capstone
- **ECO 201** Principles of Microeconomics
- **ECO 202** Principles of Macroeconomics
- **FIN 301** Financial Management
- **MGT 300** Principles of Management
- **MKT 300** Principles of Marketing

Required Major Courses (18 credits)

- **BUS 345** Business Ethics
- **HRM 300** Prin. of Human Resource Mgt.
- **MGT 301** Organizational Behavior
- **MGT 320** Teamwork and Leadership
- **MGT 431** International Business Mgt.
- **MGT 450** Management Research

Related Electives (9 credits)

- **MGT 492** Management Internship
- ACC, BUS, ECO, FIN, HRM, MGT, MIS or MKT courses, 300-level or above not already required or included in the Business Core or Required Major Courses above

Required Minor/Certificate (12 credits*)

- Students select one of the following minors or certificates: Accounting, Economics, Finance, Forensic Accounting, Management Information Systems or Marketing or the Certificate in Innovation & Entrepreneurship or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser, in which case the 9 credits of Related Electives may be fulfilled with courses required for the minor.

* These minors are 21 credits; however, 9 of these credits are required in the "Business Core Courses" above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above.

Business, Economics and Enterprise Sciences

Note: All students must complete a special experience course, a laboratory course and two writing-intensive courses.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/management/index.aspx>

B.S.B.A. in Marketing

Program Description

The Bachelor of Science in Business Administration (B.S.B.A.) in Marketing degree builds skills that help organizations succeed in a competitive business environment. The program covers knowledge and skills needed by marketing professionals.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ECO 201 Principles of Microeconomics	3
ENG 101 English Composition I	3
MAT 181 College Algebra	3
UNI 100 First-Year Seminar	1
General Education Courses/Electives	6
Second Semester	15
BUS 281 Management Science I	3
ECO 202 Principles of Macroeconomics	3
ENG 211 Business Writing I	3
PSY 100 General Psychology	3
General Education Course/Elective	3
Sophomore Year	
Third Semester	15
ACC 200 Financial Accounting	3
BUS 242 Business Law I	3

Business, Economics and Enterprise Sciences

Course	Credits
CDC 101 Public Speaking	3
MAT 225 Business Statistics	3
General Education Course/Elective	3
Fourth Semester	15
ACC 321 Managerial Accounting	3
BUS 381 Management Science II	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
General Education Course/Elective	3
Junior Year	
Fifth Semester	15
FIN 301 Financial Management	3
MIS 201 Management Info Systems	3
Concentration/Business Electives	6
General Education Course/Elective	3
Sixth Semester	15
Concentration/Business Electives	9
General Education Course/Electives	6
Senior Year	
Seventh Semester	15
BUS 499 Integrated Strat. Capstone	3
Concentration/Business Electives	9
General Education Course/Elective	3
Eighth Semester	15
Concentration/Business Electives	9

Business, Economics and Enterprise Sciences

Course	Credits
General Education Course/Elective	6
Total	120

Program Requirements

Business Core Courses (30 credits)

- **ACC 200** Financial Accounting
- **ACC 321** Managerial Accounting
- **BUS 242** Business Law I
- **BUS 381** Management Science II
- **BUS 499** Integrated Strategic Capstone
- **ECO 201** Principles of Microeconomics
- **ECO 202** Principles of Macroeconomics
- **FIN 301** Financial Management
- **MGT 300** Principles of Management
- **MKT 300** Principles of Marketing

Required Major Courses (18 credits)

- **MKT 320** Prin. of Selling
- **MKT 341** Non-profit Marketing
- **MKT 351** Advertising Mgt
- **MKT 401** Marketing Mgt
- **MKT 421** Consumer Behavior
- **MKT 431** Marketing Research

Related Electives (9 credits)

- **MKT 492** Marketing Internship
- ACC, BUS, ECO, FIN, HRM, MGT, MIS or MKT courses, 300-level or above not already required or included in the Business Core OR Required Major Courses above

Required Minor/Certificate (12 credits*)

- Students select one of the following minors or certificates: Accounting, Economics, Finance, Forensic Accounting, Human Resource Management, Management or Management Information Systems or the Certificate in Innovation & Entrepreneurship or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser, in which case the 9 credits of Related Electives may be fulfilled with courses required for the minor.

* These minors are 21 credits; however, 9 of these credits are required in the “Business Core Courses” above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above.

Note: All students must complete a special experience course, a laboratory course and two writing-intensive courses.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/marketing/index.aspx>

Business, Economics and Enterprise Sciences

Certificate in Forensic Accounting

Program Description

The certificate in Forensic Accounting is a stand-alone credential. The program builds skills and knowledge related to identifying, preventing, detecting and correcting fraud.

Delivery Mode

Global Online (100% online)

Curriculum

Course	Credits
ACC 200 Financial Accounting	3
ACC 301 Intermediate Accounting I*	3
ACC 441 Auditing*	3
ACC 450 Introduction to Accounting Fraud Investigation*	3
ACC 451 Advanced Accounting Fraud Investigation*	3
BUS 345 Business Ethics*	3
MGT 376 Cyberlaw and E-Privacy Issues for Business*	3
Total	21

* These courses have pre-requisites.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/forensic-accounting-minor/index.aspx>

Certificate in Innovation and Entrepreneurship

Program Description

The certificate in Innovation and Entrepreneurship covers key principles related to small business management and growth.

Delivery Mode

Global Online (100% online)

Curriculum

Course	Credits
Required Courses	9
MGT 303 Entrepreneurship I: Small-Business Fundamentals	3
MGT 305 Entrepreneurship II: Small-Business Management	3
MGT 403 Innovation Management	3

Business, Economics and Enterprise Sciences

Course	Credits
Select two courses from the following:	6
FIN 341 Entrepreneurial Finance	3
FIN 371 Introduction to Fintech	3
MGT 377 E-Business Management*	3
MKT 311 E-Marketing*	3
Any 300+ ACC, BUS, ECO, FIN, MGT, MIS or MKT course, with adviser approval	3
Total	15

* Course has pre-requisites not included in the certificate.

Program Webpage

<https://www.calu.edu/academics/undergraduate/certificate/innovation-and-entrepreneurship/index.aspx>

Minor in Arts Administration Curriculum

Course	Credits
**Select 6 credits from the following:	6
ACC 200 Financial Accounting	3
BUS 100 Introduction to Business	3
BUS 242 Business Law I	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
**Select 12 credits from the following:	12
ACC 341 Non-profit Accounting*	3
FIN 301 Financial Management*	3
FIN 304 Personal Finance	3
MGT 303 Entrepreneurship I: Small Business Fundamentals	3
MGT 305 Entrepreneurship II: Small Business Management	3
MKT 311 eMarketing*	3
MKT 341 Marketing for Non-profit Organizations*	3

Business, Economics and Enterprise Sciences

Course	Credits
MKT 361 Entrepreneurial Marketing*	3
Select at least 3 credits from the following:	3
ART 329 Art Internship	3 to 6
BUS 479 Field Studies in Business	3 to 6
BUS 492 Internship	3 to 6
GCM 495 Graphics Communication Internship	3 to 6
MUS 488 Music Tech Internship	3 to 6
Total	21 to 24

* These courses have pre-requisites.

** No more than 9 credits in the minor from these areas may be applied to satisfy requirements in the student's major. (Internship not included in this restriction.)

Program Notes: This minor is available only to students enrolled in the following majors: Art (BA and BFA); Commercial Music Technology; Digital Media Technology; Graphic Design; and Theater. (If a student changes their major, they can change their minor to the "Business" minor.)

Minor in Business Curriculum

Course	Credits
Required Courses	12
ACC 200 Financial Accounting	3
BUS 100 Intro to Business*	3
ECO 100 Elem. of Econ. OR ECO 201 Principles of Micro OR ECO 202 Principles of Macro	3
MGT 300 Principles of Management	3
300- or 400-Level Business Electives	9
Select three upper-level (300 and above) ACC, BUS, FIN, HRM, MGT, MIS or MKT courses**	9
Total	21

* May be substituted by an upper-level Business (ACC, BUS, FIN, MGT, MKT) elective.

** No more than one course from each discipline. These courses should not have been used to meet the requirements of major/concentration. No more than 3 credits can be internship courses (ACC 491, BUS 492, ECO 492, FIN 492, MGT 492, MIS 492, MKT 492).

Business, Economics and Enterprise Sciences

Note: No more than 9 credits for a minor may be used to satisfy requirements of the student's major or concentration.

Minor in Economics Curriculum

Course	Credits
Required Courses	9
BUS 100 Intro to Business*	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
300- or 400-Level Economics Electives	12
Select four upper-level (300 and above) ECO courses (no more than 3 credits can be ECO 492 Internship)	12
Total	21

* BUS 100 may be substituted by an upper-level business elective.

Note: No more than 9 credits may be used to satisfy requirements of the student's major or concentration.

Minor in Event Planning and Management Curriculum

Course	Credits
Required Courses	12
GEO 155 Hospitality Industry Operations	3
GEO 330 Meetings, Expositions, Events and Convention Operations	3
REC 235 Special Event Management in Recreation Settings	3
REC 412 Program Planning and Evaluation	3
Electives (select two)	6
COM 203 Introduction to Public Relations	3
GEO 150 Introduction to Tourism Studies	3
GEO 277 Casinos and Gaming Entertainment	3
GEO 352 Hotels, Resorts and Lodging	3
GEO 479 Internship	3 (max)

Business, Economics and Enterprise Sciences

Course	Credits
PGM 350 Food and Beverage Management (PGM majors only)	3
REC 165 Introduction to Recreation and Leisure	3
REC 374 Commercial Recreation Management	3
SPT 315 Facility and Event Management	3
Total	18

NOTE: Students may declare multiple minors.

Minor in Finance Curriculum

Course	Credits
Required Courses	15
ACC 200 Financial Accounting	3
BUS 100 Intro to Business*	3
ECO 100 Elem. of Economics OR ECO 201 Principles of Microeconomics OR ECO202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
FIN 304 Personal Finance	3
300- or 400-Level Finance Electives	6
Select two upper-level (300 and above) FIN courses (no more than 3 credits can be FIN 492 Internship)	6
Total	21

* BUS 100 may be substituted by an upper-level business elective.

Note: No more than 9 credits may be used to satisfy requirements of the student's major or concentration.

Minor in Forensic Accounting Curriculum

Course	Credits
ACC 200 Financial Accounting	3
ACC 301 Intermediate Accounting I*	3
ACC 441 Auditing*	3

Business, Economics and Enterprise Sciences

Course	Credits
ACC 450 Introduction to Accounting Fraud Investigation*	3
ACC 451 Advanced Accounting Fraud Investigation*	3
BUS 345 Business Ethics*	3
MGT 376 Cyberlaw and E-Privacy Issues for Business*	3
Total	21

* These courses have pre-requisites.

** No more than 9 credits in the minor from these areas may be applied to satisfy requirements in the student's major. (Internship not included in this restriction.)

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/forensic-accounting-minor/index.aspx>

Minor in GIS and Emergency Management Curriculum

Course	Credits
GEO 100 Introduction to Geography	3
GEO 360 Emergency Management	3
GIS 222 Geo-Business	3
GIS 311 Geog Info Systems	3
GIS 350 Remote Sensing of Environment	3
GIS 413 Env Apps of GIS	3
GIS 314 Spatial Land Data OR GIS 303 Crime Mapping	3
Total	21

Minor in Human Resource Management Curriculum

Course	Credits
Required Courses	15
BUS 100 Intro to Business*	3
ECO 100 Elem. of Economics OR ECO 201 Principles of Microeconomics OR ECO 202 Principles of Macroeconomics	3

Business, Economics and Enterprise Sciences

Course	Credits
HRM 300 Principles of Human Resource Management	3
HRM 400 HR Strategy and Planning	3
PSY 100 General Psychology	3
Select two of the following:	6
HRM 310 Compensation Management	3
MIS/HRM 322 Human Resource Information Systems	3
HRM 330 Labor Relations	3
Total	21

* May be replaced by any 300+ course in ACC, BUS, ECO, FIN, HRM, MIS, MGT or MKT as long as it is not otherwise listed as a minor requirement.

Note: No more than 9 credits may be used to satisfy requirements of the student's major or concentration.

Minor in Management Curriculum

Course	Credits
Required Courses	15
BUS 100 Intro to Business*	3
ECO 100 Elem. of Economics OR ECO 201 Principles of Microeconomics OR ECO202 Principles of Macroeconomics	3
MGT 300 Principles of Management	3
MGT 301 Organizational Behavior	3
MGT 320 Teamwork and Leadership	3
300- or 400-Level Management (MGT) Electives**	6
Select two upper-level (300 and above) HRM/MGT courses	6
Total	21

* BUS 100 may be substituted by any business course 300+ (ACC, BUS, ECO, ENP, FIN, HRM, MGT, MKT, MIS).

Business, Economics and Enterprise Sciences

** Elective courses should not have been used to meet requirements of major/concentration. No more than 3 credits may be internship courses (MGT 492 or BUS 492).

Minor in Management Information Systems Curriculum

Course	Credits
BUS 100 Introduction to Business*	3
ECO 100 Elements of Economics OR ECO 201 Principles of Microeconomics OR ECO 202 Principles of Macroeconomics	3
CIS 120 Introduction to Programming	3
MIS 201 Management Information Systems	3
MIS 321 Accounting Information Systems	3
MIS 375 Information Technology Ethics	3
MIS 401 Business Driven Management Info Systems	3
Total	21

* May be replaced by any 300+ course in ACC, BUS, ECO, FIN, MIS, MGT or MKT.

Note: No more than 9 credits in the minor from these areas may be applied to satisfy requirements in the student's major.

Minor in Marketing Curriculum

Course	Credits
Required Courses	9
BUS 100 Intro to Business*	3
ECO 100 Elem. of Economics OR ECO 201 Principles of Microeconomics OR ECO 202 Principles of Macroeconomics	3
MKT 300 Principles of Marketing	3
300- or 400-Level Marketing Electives	12
Select four upper-level (300 and above) MKT courses (no more than 3 credits can be MKT 492 Internship)	12
Total	21

* BUS 100 may be substituted by an upper-level business elective.

Business, Economics and Enterprise Sciences

Note: No more than 9 credits may be used to satisfy requirements of the student's major or concentration.

Minor in Parks and Recreation Curriculum

Course	Credits
Required Course	3
REC 165 Introduction to Recreation and Leisure*	3
Electives**	15
<i>Group 1 Courses: 300-Level REC</i>	<i>6 to 12</i>
REC 361 Recreation for Diverse Populations	3
REC 362 Recreation Facility Design and Management	3
REC 365 Recreation Resource Management	3
REC 374 Recreation Management and Leadership	3
REC 378 Commercial Recreation	3
<i>Group 2 Courses: 400-Level REC/GEO</i>	<i>3 to 9</i>
REC 412 Recreation Program Design and Evaluation	3
REC 478 Professional Development in Parks and Recreation	3
GEO 474 Developing the Master Plan	3
<i>Group 3 Courses: Other Parks and Recreation Management Courses</i>	<i>0 to 6</i>
REC 225 Recreation and Youth Development	3
REC 235 Special Event Management in Recreation Settings	3
REC 240 Human Ecology	3
REC 246 Scenic Areas of U.S.	3
REC 270 Interpretative Methods in Recreation	3
REC 280 Adventure/Outdoor Recreation Outfitting	3
GEO 479A Internship in Parks & Recreation	3 only
Any Other Future REC Courses	3

Business, Economics and Enterprise Sciences

Course	Credits
Total	18

* REC 165 is a pre-requisite/co-requisite for ALL 300- and 400-level REC courses.

** Use the following guidance when selecting electives:

- Choose two courses from Group 1 (6 credits).
- Choose one course from Group 2 (3 credits).
- Choose two additional courses from groups 1, 2 or 3 (6 credits).

Minor in Tourism Studies Curriculum

Course	Credits
Required Courses	9
GEO 150 Introduction to Tourism Studies	3
GEO 155 Hospitality Industry and Operations	3
GEO 426 Impacts and Sustainability of Tourism	3
Electives	9
GEO 100 Introduction to Geography	3
GEO 205 World Cities Geography of Tourism	3
GEO 220 Geography of NA/PA	3
GEO 277 Casinos and Gaming Entertainment	3
GEO 330 Meetings, Expositions, Events and Convention Operations	3
GEO 351 Research Methods for Tourism Studies	3
GEO 352 Hotels, Resorts and Lodging	3
GEO 358 Comprehensive Tourism Planning	3
GEO 383 Dark Tourism and Extreme Topics	3
GEO 479 Internship	3
<i>Maximum of 3 credits:</i>	
GIS 311 Geographic Information Systems	3
REC 165 Introduction to Recreation and Leisure	3
REC 374 Commercial Recreation	3
Total	18

Computer Science, Information Systems and Engineering

Department of Computer Science, Information Systems and Engineering

Faculty

Dr. Ghassan Al-Sinbol | Dr. Gina Boff | Dr. Vamsi Borra | Dr. Mark E. Bronakowski | Dr. Weifeng Chen | Dr. Fanourios Halkiadakis | Dr. Larry D. Horath | Dr. Lisa Kovalchick | Dr. Pratibha Menon | Nader Mohamed | Aleksandra Prokic | Dr. Anthony S. Pyzdrowski | Joseph G. Schickel | Paul Sible | Jeffrey S. Sumey | Dr. John M. Thompson | Susan E. Urbine | Dr. Brenton Wilburn | Dr. Jennifer Wilburn

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Programs

Cal U's Department of Computer Science, Information Systems and Engineering includes undergraduate programs in CADD, computer engineering technology, computer information systems, computer science, digital media technology, electrical engineering technology, mechatronics engineering technology, robotics engineering technology and unmanned aerial systems/drone technology.

Associate and Bachelor's Degree Programs

Degrees offered through this department include:

- A.S. in Computer-Aided Design and Drafting
- A.S. in Computer Engineering Technology
- A.S. in Digital Media Technology
- A.A.S. in Electrical Engineering Technology
- A.S. in Industrial Technology
- A.S. in Technical Studies
- A.S. in Technical Studies: Robotics Engineering Technology
- A.S. in Technical Studies: Unmanned Aerial Systems/Drone Technology
- B.S. in Computer Engineering Technology
- B.S. in Computer Information Systems
- B.S. in Computer Science
- B.S. in Digital Media Technology
- B.S. in Electrical Engineering Technology
- B.S. in Industrial Technology Management
- B.S. in Mechatronics Engineering Technology

Note: Cal U also offers a B.S.Ed. in Technology Education.

Certificates

The department also offers a certificate program in:

- Industrial Safety

Minors

Minors available through this department include:

- Computer Information Systems
- Computer Science
- Digital Media Technology
- Electrical Engineering Technology
- Industrial Technology
- Robotics Engineering Technology

Facilities

Courses are taught in three buildings on campus.

Computer Science, Information Systems and Engineering

- The **Eberly Science and Technology Center** houses the EET Analog Lab, the Digital/Embedded Systems Lab and the California Manufacturing Assistance Center, which includes labs for CADD, materials testing, metrology, computer numerical control and automation/robotics.
- **Helsel Hall** has labs for CADD/drafting, digital prepress, electronics, foundry, graphics/printing, machine tools, manufacturing technology, multimedia technology, photography darkroom and photography studio.
- **Coover Hall** has labs for bio-related technologies, elementary school technology, screen printing, flexography, engineering materials and physical technologies.

Student Clubs

Digital Media Technology: Students may join the Screen Printing Student Associate, which performs printing and design services, conducts industrial tours and attends conferences. Active club participants gain beneficial hands-on experience beyond required class and lab time.

A.A.S. in Electrical Engineering Technology

Program Description

The Associate of Applied Science in Electrical Engineering Technology (EET) degree prepares students to install, test, maintain, calibrate and repair electrical and electronic systems.

Delivery Mode

Traditional (on campus)

Curriculum

The following four-semester schedule of courses provides a recommended framework for completing this program of study in two years.

Course	Credits
First Semester	16
CSC 120 Problem Solving and Program Constr.	3
GET 130 Intro to Engineering Technology*	3
ENG 101 English Composition I**	3
MAT 181 College Algebra**	3
UNI 100 First-Year Seminar**	1
Elective	3
Second Semester	16
CSC 124 Computer Programming I*	3
EET 110 Electrical Circuits I*	4
ENG 217 Scientific and Technical Writing I**	3
MAT 191 College Trigonometry*	3
Public Speaking Course	3
Third Semester	15

Computer Science, Information Systems and Engineering

Course	Credits
CET 235 Digital Electronic Design*	4
EET 160 Electric Circuits II*	4
PHY 121 General Physics I**	4
Elective*	3
Fourth Semester	14
CET 270 Introduction to Microprocessor Design*	4
EET 210 Linear Electronics I*	4
MTR 325 Fundamentals of Programmable Logic Controllers*	3
Technical Elective*	3
Total	60

* Required major and related courses

** Required and recommended general education courses

Technical Electives (3 credits)

- **EET 325** Intro to Power
- **ITE 305** OSHA General Industrial Safety
- **MTR 335** Advanced PLCs
- **RET 110** Agile Robotics I

Continuing Education

Associate degree graduates may transfer credits earned in this program to the bachelor's degree in Electrical Engineering Technology at Cal U with no loss of time or credits when proper advising is followed.

A.S. in Computer Engineering Technology

Program Description

The Associate of Science in Computer Engineering Technology (CET) degree provides education and skill development in hardware configuration, software development, programming applications and the interfacing of hardware and software systems. Students receive hands-on training on various computer systems, test equipment and software products.

Delivery Mode

Traditional (on campus)

Curriculum

The following four-semester schedule of courses provides a recommended framework for completing this program of study in two years.

Course	Credits
First Semester	13

Computer Science, Information Systems and Engineering

Course	Credits
CSC 120 Problem Solving and Programming Constructs**	3
GET 130 Intro to Engineering Technology**	3
ENG 101 English Composition I**	3
MAT 181 College Algebra**	3
UNI 100 First-Year Seminar**	1
Second Semester	16
CSC 124 Computer Programming I**	3
EET 110 Electrical Circuits I*	4
ENG 217 Scientific and Technical Writing I**	3
MAT 191 College Trigonometry*	3
General Education Course	3
Third Semester	15
CET 235 Digital Electronic Design*	4
CSC 265 Object-Oriented Programming*	3
EET 160 Electrical Circuits II*	4
PHY 101 College Physics OR PHY 121 General Physics I **	4
Fourth Semester	16
CET 270 Introduction to Microprocessor Design*	4
CSC 328 Data Structures*	3
EET 215 Intro to Instrumentation*	3
MAT 195 Discrete Math Structures*	3
Elective	3
Total	60

* Required major and related courses

** Required and recommended general education courses

Program Notes:

Computer Science, Information Systems and Engineering

- Students may take MAT 199 Pre-Calc in lieu of MAT 181 and MAT 191, followed by MAT 281 Calculus I, for a more rigorous math track.
- Students planning to continue on to the B.S. CET program should take Calculus I and PHY 101 College Physics (instead of PHY 121).
- Students must have a minimum 2.0 GPA to qualify for graduation.

Substitutions

College Algebra (3 crs.) and College Trigonometry (3 crs.) may be substituted for Pre-Calculus, if math placement test score does not permit direct entry into Pre-Calculus, or if students would prefer less intense coverage of this material.

Continuing Education

Graduates of the A.S.-CET program are eligible to enroll in the B.S.-CET program. All credits earned toward the A.S.-CET degree count toward the B.S.-CET degree. Students considering completion of a bachelor's degree in CET should select General Education credits that apply. Consult your adviser.

A.S. in Computer-Aided Design and Drafting

Program Description

This Associate of Science in Computer-Aided Design and Drafting (CADD) degree provides practical skills, knowledge and experience in technical drafting, design and computer-aided drawing techniques using the latest software. Students also gain associated knowledge in production through studies in manufacturing processes, materials and the use of precision measuring tools. The primary focus is on total design and development for manufacturing and includes hands-on practice in the design and integration of related parts and components.

Deliver Mode

Traditional (on campus)

Curriculum

The following four-semester schedule of courses provides a recommended framework for completing this program of study in two years.

Course	Credits
First Semester	16
ENG 101 English Composition I	3
GET 130 Intro to Engineering Tech	3
ITE 115 Interpreting and Sketching of Technical Drawings	3
MAT 181 College Algebra*	3
UNI 100 First-Year Seminar	1
General Education Elective	3
Second Semester	16
ENG 217 Scientific and Technical Writing	3
ITE 151 3D Printing	3
ITE 215 Computer Aided Drafting/Design I	3

Computer Science, Information Systems and Engineering

Course	Credits
MAT 191 College Trigonometry	3
PHY 121 General Physics I	4
Third Semester	15
ITE 181 Materials Technology I	3
ITE 251 Product Design/Development	3
ITE 315 CAD in 3 Dimensions	3
Technical Elective	3
Any CIS/CSC Course on Menu	3
Fourth Semester	13
Technical Electives	6
General Education Course	4
Free Elective	3
Total	60

* Placement by testing. Students who are not required to take College Algebra may use these credits as free electives.

Approved Technical Electives (6 credits)

- **ITE 341** Quality Control (3 credits)
- *Select one from the approved courses below:*
 - **ITE 165** Machine Processing I (3 credits)
 - **ITE 250** Intro to Automation (3 credits)
 - **ITE 320** Architectural Drafting & Design (3 credits)
 - **ITE 415** Geometric Dim & Tolerancing (3 credits)
 - **ITE 416** Intro to Finite Element Analysis (3 credits)
 - **RET 110** Agile Robotics I (3 credits)

Program Notes

- Students considering completion of a bachelor's degree in Technology should select General Education credits that apply.

A.S. in Digital Media Technology

Program Description

The Associate of Science in Digital Media Technology (DMT) degree prepares students to design, create and deliver content using digital media technologies.

Delivery Mode

Traditional (on campus)

Computer Science, Information Systems and Engineering

Accreditation

The program has national accreditation from the Accrediting Council for Collegiate Graphic Communication (ACCGC).

Curriculum

The following four-semester schedule of courses provides a recommended framework for completing this program of study in two years.

Course	Credits
First Semester	16
DMT 100 Foundations of Print Media	3
DMT 180 Foundations of Digital Media	3
ENG 101 English Composition I	3
MAT 181 College Algebra	3
UNI 100 First-Year Seminar	1
General Education Course	3
Second Semester	15
DMT 101 Time-Based Media	3
DMT 200 Print Media Production Processes	3
DMT 225 Digital Page Layout	3
Elective	3
General Education Course	3
Third Semester	15
CIS 120 Application Programming	3
DMT 220 Digital Photography	3
DMT 320 Digital Video	3
DMT 240 Vector Based Graphics	3
General Education Course	3
Fourth Semester	15
BUS 100 Introduction to Business	3
DMT 250 Digital Imaging	3
DMT Elective Course	3

Computer Science, Information Systems and Engineering

Course	Credits
DMT Elective Course	3
Elective Course	3
Total	61

Program Webpage

<https://www.calu.edu/academics/undergraduate/associate/graphics/index.aspx>

A.S. in Industrial Technology

Program Description

The Associate of Science in Industrial Technology develops technical skills in industrial safety, machine tool manufacturing, materials technology, automation/robotics, electronics, drafting and design, CADD and quality control.

Delivery Mode

Traditional (on campus)

Curriculum

The following four-semester schedule of courses provides a recommended framework for completing this program of study in two years.

Course	Credits
First Semester	13
ENG 101 English Composition I	3
MAT 181 College Algebra**	3
UNI 100 First-Year Seminar	1
Any CIS/CSC Course on Menu	3
Technical Elective	3
Second Semester	15
ITE 181 Materials Technology I	3
ITE 215 CAD I	3
ITE 250 Introduction to Automation	3
ITE 315 CAD in 3 Dimensions (eight weeks)	3
MAT 191 College Trigonometry*	3
Third Semester	16
ENG 217 Sci Tech Writing	3

Computer Science, Information Systems and Engineering

Course	Credits
ITE 305 OSHA Safety	3
PHY 121 General Physics I*	4
General Education Course	3
Technical Elective	3
Fourth Semester	16
ECO 201 Principles of Microeconomics	3
ITE 341 Quality Control	3
MTR 300 Manufacturing Processes*	3
Elective Course	3
General Education Course	4
Total	60

* Denotes pre-requisite satisfied by other courses.

** Placement by testing. Students who are not required to take College Algebra may use these credits as free electives.

Approved Technical Electives

Any DMT, GCM, GET, ITE, MTR or RET course offered for which you have the required pre-requisite or none is required.

Program Webpage

<https://www.calu.edu/academics/undergraduate/associate/industrial-technolgy/index.aspx>

A.S. in Technical Studies

Program Description

The Associate of Science in Technical Studies degree addresses the rapidly expanding technician-level employment opportunities available in the new economy by providing customized technical concentrations that meet the ever-changing needs of business and industry. The recommended framework for completing this program is flexible and customized to meet specific workforce needs.

Delivery Modes

- Traditional (on campus)
- Global Online (100% online)

Curriculum

Course	Credits
General Education	
ENG 101 Composition I	3
MAT 181 College Algebra	3

Computer Science, Information Systems and Engineering

Course	Credits
UNI 100 First Year Seminar	1
General Education Courses	9 or 10
Natural Sciences Course	3 or 4
Public Speaking Course	3
Technological Literacy Course	3
Program Requirements	
Professional Technical Core: Certificate programs, apprenticeship equivalencies, workforce training equivalencies, minors, regular, coursework, internships, on-the-job work experience, etc.	33 or 35
Total	60

Students must have a minimum overall 2.0 GPA to qualify for graduation.

Developmental Courses do not count toward graduation.

As an option and if needed, Related Technical Electives can be taken at California University of Pennsylvania as part of the 33 to 35 credits.

Program Webpage

<https://www.calu.edu/academics/undergraduate/associate/technical-studies/index.aspx>

A.S. in Technical Studies: Robotics Engineering Technology

Program Description

The Associate of Science in Technical Studies: Robotics Engineering Technology degree provides an introduction to mechatronic systems with a special emphasis on agile robots (that is, robots with free-ranging mobility). Students gain a fundamental understanding of computer, electronics and mechanical engineering technology principles through this program.

Delivery Mode

Traditional (on campus)

Curriculum

The following four-semester schedule of courses provides a recommended framework for completing this program of study in two years.

Course	Credits
First Semester	14
CSC 120 Problem Solving and Program Constructs	3
EET 110 Electric Circuits I	4
MAT 181 College Algebra	3

Computer Science, Information Systems and Engineering

Course	Credits
RET 110 Agile Robotics I	3
UNI 100 First-Year Seminar	1
Second Semester	16
CSC 124 Computer Programming I	3
EET 160 Electrical Circuits II	4
ENG 101 English Composition I	3
MAT 191 College Trigonometry	3
RET 160 Agile Robotics II	3
Third Semester	15
ENG 217 Scientific and Technical Writing I	3
GET 130 Introduction to Engineering Technology	3
MTR 300 Manufacturing Processes	3
MTR 325 Fundamentals of Programmable Controllers	3
RET 210 Robotics Teaming	3
Fourth Semester	16
ECO 201 Introductory Microeconomics	3
PHY 121 General Physics	4
RET 120 CADD Concepts	3
RET 260 Robotic Systems Project	3
General Education Course	3
Total	61

Program Webpage

<https://www.calu.edu/academics/undergraduate/associate/robotics-engineering-technology/index.aspx>

A.S. in Technology Studies: UAS Technology

Program Description

The Associate of Science in Technology Studies: UAS Technology (Unmanned Aerial Systems/Drone Technology) prepares students to design, construct and deploy commercial-grade civilian drones.

Delivery Mode

Traditional (on campus)

Computer Science, Information Systems and Engineering

Curriculum

Course	Credits
First Semester	17
EAS 104 Intro to Meteorology	4
GET 130 Intro to Engineering Tech	3
MAT 181 College Algebra	3
UAS 110 Intro to Unmanned Aerial Vehicles	3
UNI 100 First-Year Seminar	1
General Education Course	3
Second Semester	15
COM 250 Oral Communication Mgmt	3
ENG 101 English Composition I	3
MAT 191 College Trigonometry	3
UAS 120 Principles of Aviation	3
UAS 160 UAS Design and Construction	3
Third Semester	14 or 15
ENG 217 Scientific and Technical Writing	3
GIS 350 Remote Sensing of Environment	3
PHY 121 General Physics	4
UAS 220 UAV Operations	3
Technical Elective	1 or 2
Fourth Semester	13 or 14
PHY 121 General Physics	4
UAS 270 Avionic Systems	3
UAS 310 UAS Sensing & Analytics	3
Technical Elective	3 or 4
Total	60

Technical Electives (5 credits)

Five credits are required from the specified "Approved Technical Electives" list.

Computer Science, Information Systems and Engineering

Approved Technical Electives

- **EAS 315** Surface Geology for Land Mgmt. (3 cr)
- **ENS 101** Intro to Environmental Science (3 cr)
- **GIS 314** Spatial Land Data in the Oil and Gas Industry (3 cr)
- **ITE 101** Intro to Industrial Safety (3 cr)
- **RET 110** Agile Robotics I (3 cr)
- **RET160** Agile Robotics II (3 cr)
- **UAS 250** UAS Certification Prep (1 cr)
- Others per adviser approval

Program Webpage

<https://www.calu.edu/academics/undergraduate/associate/drone-technology/index.aspx>

B.S. in Computer Engineering Technology

Program Description

The Bachelor of Science in Computer Engineering Technology (CET) degree prepares students for technically oriented careers involving both computer system hardware and software, with an emphasis on embedded systems design. Students gain a broad understanding of fundamental engineering knowledge and technical skills as well as in-depth knowledge in areas of computer science, computer engineering technology, digital electronics, mathematics and physical sciences.

Delivery Mode

Traditional (on campus)

Accreditation

The CET bachelor's degree program is accredited by the Engineering Technology Accreditation Commission (ETAC), www.abet.org. All graduates from the B.S.-CET program will receive accredited degrees. Seniors and graduates of the programs are eligible to sit for a prelicensing Fundamentals of Engineering (FE) exam.

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	13
CSC 120 Problem Solving and Programming Constructs**	3
ENG 101 English Composition I**	3
GET 130 Introduction to Engineering Technology**	3
MAT 199 Pre-Calculus**	3
UNI 100 First-Year Seminar**	1
Second Semester	16
CSC 124 Computer Programming I**	3

Computer Science, Information Systems and Engineering

Course	Credits
ECO 100 Elements of Economics**	3
EET 110 Electrical Circuits I*	4
MAT 195 Discrete Math Structures for General Education*	3
General Education Course	3
Sophomore Year	
Third Semester	14
CET 235 Digital Electronics Design*	4
CSC 265 Object-Oriented Programming*	3
EET 160 Electric Circuits II*	4
MAT 281 Calculus I**	3
Fourth Semester	17
CET 270 Introduction to Microprocessor Design*	4
CSC 328 Data Structures*	3
EET 215 Introduction to Instrumentation**	3
MAT 282 Calculus II*	3
PHY 101 College Physics I**	4
Junior Year	
Fifth Semester	15
CET 335 Microprocessor Interfacing*	4
ENG 217 Scientific & Technical Writing**	3
PHY 202 College Physics II*	4
Approved Related Elective	4
Sixth Semester	16
CET 350 Technical Computing using JAVA*	3
CET 360 Microprocessor Engineering*	4
CSC 400 Operating Systems*	3

Computer Science, Information Systems and Engineering

Course	Credits
MAT 341 Linear Algebra I*	3
General Education Course	3
Senior Year	
Seventh Semester	14
CET 440 Computer Networking*	4
CET 490 Senior Project I*	3
Approved Related Elective*	4
General Education Course	3
Eighth Semester	16
CET 492 Senior Project II*	3
CSC 378 Computer Architecture*	3
Approved Related Elective*	4
General Education Courses	6
Total	120

* Required major and related courses

** Required and recommended General Education courses

Approved Related Electives

- **CET 485** Special Topics in CET (credits variable)
- **CET 495** CET Internship (single instance, 4 credits max)
- **CSC 306** FORTRAN OR **CSC 308** Python
- **CSC 323** Assembly Language
- **CSC 360** Analysis of Algorithms
- **CSC 420** Artificial Intelligence
- **CSC 455** Structures of Programming Languages
- **CSC 460** Language Translation
- **CSC 475** Theory of Languages
- **CSC 485** Special Topics in Computer Science
- **MAT 381** Calculus III
- **MAT 382** Calculus IV

Substitutions

College Algebra (3 crs.) and College Trigonometry (3 crs.) may be substituted for Pre-Calculus, if math placement test score does not permit direct entry into Pre-Calculus, or if students would prefer less intense coverage of this material.

Computer Science, Information Systems and Engineering

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/computer-engineering-technology/index.aspx>

B.S. in Computer Information Systems

Program Description

The Bachelor of Science in Computer Information Systems degree combines knowledge of leading-edge information technologies and systems methodologies with an understanding of the ever-changing needs of today's dynamic business environment.

Delivery Modes

- Traditional (on campus)
- Global Online (100% online)

The online format is designed as an upper-division program primarily for students who have already earned an associate degree or at least 50 credits.

Accreditation

This program is accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering Technology (ABET), www.abet.org.

Curriculum

On Campus

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
CIS 110 Introduction to Information Systems	3
CIS 120 Application Programming I	3
ENG 101 English Composition I	3
MAT 281 Calculus I	3
PSY 100 General Psychology	3
UNI 100 First-Year Seminar	1
Second Semester	15
ENG 217 Scientific and Technical Writing	3
ECO ____ Business Related	3
BUS 100 Introduction to Business	3
MGT ____ Business Related	3
General Education Course	3

Computer Science, Information Systems and Engineering

Course	Credits
Sophomore Year	
Third Semester	16
CIS 341 CISCO CCNA	4
MAT 215 Statistics OR MAT 225 Business Statistics	3
ACC 200 Financial Accounting	3
Public Speaking Course	3
General Education Course	3
Fourth Semester	15
CIS 299 System Analysis I	3
CIS 352 Global, Economic and Social Ethical Issues in Computing	3
MAT 195 Discrete Mathematical Structures	3
General Education Course	3
Free Elective	3
Junior Year	
Fifth Semester	15
CIS 354 Systems Project Management	3
CIS 321 Database Management Systems and Design	3
CSC 330 Web Programming I	3
MAT 281 Calculus I OR MAT 273 Applied Calculus	3
CIS Elective	3
Sixth Semester	15
CIS 322 Database Application Development	3
CIS 332 Web Programming II	3
MKT ____ Business Related	3
CIS Elective	3
Related Elective	3

Computer Science, Information Systems and Engineering

Course	Credits
Senior Year	
Seventh Semester	15
CIS 490 Systems Analysis II	3
CIS Elective Course	3
General Education Course	3
Free Elective Courses	6
Eighth Semester	13
BUS 242 OR FIN ____ Business Related	3
CIS 492 Systems Development and Implementation	3
CIS Elective	3
Free Elective Courses	4
Total	120

In order to graduate, the student must complete a minimum of 48 credits of upper-level course work (300 level or higher).

Electives

Select 12 credits from the following:

Networking

- **CIS 342** CISCO CCNA 2
- **CIS 343** CISCO CCNA 3
- **CIS 344** CISCO CCNA 4

Programming

- **CIS 302** Visual Programming
- **CIS 304** COBOL
- **CIS 308** Python

Analytics

- **CIS 207** Data Preparation and Cleaning
- **CIS 213** Data Visualization
- **CIS 251** Big Data Tools
- **CIS 261** Big Data Analytics
- **CIS 325** Decision Support Systems
- **CIS 401** Concepts in Enterprise Resource
- **CIS 402** Data Analytics Capstone Project

Others

- **CIS 419** Internship (a maximum of 3 credits can be used toward the program)

Computer Science, Information Systems and Engineering

- CIS 474 Special Topics in Information Systems

Online

Course	Credits
CIS 110 Introduction to Information Systems	3
CIS 120 Application Programming I	3
CIS 220 Application Programming II	3
CIS 299 Systems Analysis I	3
CIS 302 Visual Programming	3
CIS 304 COBOL	3
CIS 321 Data Base Management Systems & Design	3
CIS 322 Database Application Development	3
CIS 325 Decision Support Systems	3
CIS 330 Web Programming I	3
CIS 332 Web Programming II	3
CIS 341 CISCO CCNA 1	3
CIS 352 Global, Economic and Social Ethical Issues in Computing	3
CIS 354 Systems Project Management	3
CIS 401 Concepts in Enterprise Resource Planning	3
CIS 490 Systems Analysis II	3
CIS 492 Systems Development and Implementation	3
General Education/Math/Electives	69
Total	120

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/computer-information-systems/index.aspx>

<https://www.calu.edu/academics/undergraduate/bachelors/computer-information-systems/online.aspx>

B.S. in Computer Science

Program Description

The Bachelor of Science in Computer Science degree builds students' understanding and expertise in computer hardware, operating systems and programming languages.

Delivery Mode

Traditional (on campus)

Computer Science, Information Systems and Engineering

Accreditation

This program is accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering Technology (ABET), www.abet.org.

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
CSC 120 Problem Solving and Programming Constructs	3
ENG 101 English Composition I	3
MAT 281 Calculus I	3
UNI 100 First-Year Seminar	1
General Education Courses	6
Second Semester	15
CSC 124 Computer Programming	3
ENG 217 Science and Technical Writing	3
MAT 195 Discrete Mathematical Structures	3
MAT 282 Calculus II	3
General Education Course	3
Sophomore Year	
Third Semester	15
CSC 216 Logic and Switching Theory	3
CSC 265 Object-Oriented Programming	3
Public Speaking Course	3
Free Elective	3
General Education Course	3
Fourth Semester	16
CSC 323 Assembly Language Programming	3

Computer Science, Information Systems and Engineering

Course	Credits
CSC 328 Data Structures	3
CSC 352 Global, Economic and Social Ethical Issues in Computing	3
MAT 341 Linear Algebra I	3
Laboratory Science I	4
Junior Year	
Fifth Semester	17
CSC 360 Analysis of Algorithms	3
CSC 378 Computer Architecture	3
CET 440 Computer Networking	4
CS Elective Course	3
Laboratory Science II	4
Sixth Semester	15
CET 350 Technical Computing Using Java	3
CSC 400 Operating Systems	3
CSC 455 Structure of Programming Languages	3
MAT 215 Statistics	3
Free Elective	3
Senior Year	
Seventh Semester	12
CSC 475 Theory of Languages	3
CSC 490 Senior Project I	3
CS Elective	3
Free Elective	3
Eighth Semester	14
CSC 460 Language Translation	3
CSC 492 Senior Project II	3

Computer Science, Information Systems and Engineering

Course	Credits
CS Elective	3
Free Elective	5
Total	120

Select one course from the following:

- **CSC 322** Data Base Application Development
- **CSC 420** Artificial Intelligence
- **CSC 424** Numerical Analysis
- **CSC 485** Special Topics in Computer Science

Select two courses from the following:

- **CSC 304** COBOL
- **CSC 306** FORTRAN
- **CSC 308** Python
- **CSC 419** Internship (a maximum of 3 credits can be used from Internship toward the program)

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/computer-science/index.aspx>

B.S. in Digital Media Technology

Program Description

This Bachelor of Science in Digital Media Technology degree prepares students to design, create and deliver content using print and digital media technologies. The program includes a core curriculum of technical, hands-on laboratory courses that explore relevant concepts. Once students have completed core courses, they select an area of concentration: print or multimedia.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
DMT 100 Foundations of Print Media	3
DMT 180 Foundations of Digital Media	3
ENG 101 English Composition I	3
MAT 181 College Algebra	3
UNI 100 First-Year Seminar	1
General Education Course	3

Computer Science, Information Systems and Engineering

Course	Credits
Second Semester	15
BUS 100 Introduction to Business	3
DMT 101 Time-Based Media	3
DMT 200 Print Media Production	3
DMT 225 Digital Page Layout	3
General Education Course	3
Sophomore Year	
Third Semester	15
CIS 120 Application Programming I	3
DMT 220 Digital Photography	3
DMT 240 Vector Based Graphics	3
DMT 320 Digital Video	3
General Education Course	3
Fourth Semester	15
DMT 250 Digital Imaging	3
DMT 342 Cost Analysis for Digital Media	3
Elective	3
General Education Courses	6
Junior Year	
Fifth Semester	15
DMT 445 Digital Media Project Planning	3
DMT Concentration Course	3
MKT 300 Principles of Marketing	3
Elective	3
General Education Course	3

Computer Science, Information Systems and Engineering

Course	Credits
Sixth Semester	15
MGT 300 Principles of Management	3
DMT Concentration Courses	6
Elective Course	3
General Education Course	3
Senior Year	
Seventh Semester	15
DMT Concentration Courses	6
DMT Elective	3
Elective Courses	6
Eighth Semester	14
DMT 485 Senior Seminar	3
DMT 495 Internship	3
DMT Concentration Course	3
Elective Courses	5
Total	120

Areas of Concentration (choose one)

Print Concentration (18 credits)

- **DMT 312** Specialty Graphics Print Techniques (3 credits)
- **DMT 302** Commercial Print Techniques (3 credits)
- **DMT 330** Package Printing Processes (3 credits)
- **DMT 365** Color Imaging (3 credits)
- **DMT 402** Advanced Print Techniques (3 credits)
- **DMT 406** Digital Workflow and Print Technology (3 credits)

Multimedia Concentration (18 credits)

- **CIS 220** Application Programming II
- **DMT 331** Web Publishing (3 credits)
- **DMT 340** 3D Computer (3 credits)
- **DMT 350** Motion Graphics (3 credits)
- **DMT 360** Game Development (3 credits)
- **DMT 431** Advanced Web Development (3 credits)

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/digital-media-technology/index.aspx>

Computer Science, Information Systems and Engineering

B.S. in Electrical Engineering Technology

Program Description

The Bachelor of Science in Electrical Engineering Technology (EET) degree provides students with the knowledge required to design, develop, modify, maintain and repair sophisticated electrical and electronic systems.

Delivery Mode

Traditional (on campus)

Accreditation

The Bachelor of Science in Electrical Engineering Technology degree program is accredited by the Engineering Technology Accreditation Commission (ETAC), www.abet.org. All graduates of this program receive accredited degrees. Seniors and graduates of the programs are eligible to sit for a pre-licensing Fundamentals of Engineering (FE) exam.

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	14
CHE 101 General Chemistry I**	4
CSC 120 Problem Solving and Programming Constructs**	3
ENG 101 English Composition I**	3
GET 130 Introduction to Engineering Technology*	3
UNI 100 First-Year Seminar**	1
Second Semester	16
COM 101 Oral Communication**	3
CSC 124 Computer Programming I**	3
EET 110 Electrical Circuits I*	4
ENG 217 Science and Technical Writing I**	3
MAT 199 Pre-Calculus**	3
Sophomore Year	
Third Semester	14
CET 235 Digital Electronics Design*	4
EET 160 Electric Circuits II*	4

Computer Science, Information Systems and Engineering

Course	Credits
MAT 281 Calculus I**	3
General Education Course**	3
Fourth Semester	15
CET 270 Introduction to Microprocessor Design*	4
EET 210 Linear Electronics I*	4
MAT 282 Calculus II*	3
PHY 101 College Physics I*	4
Junior Year	
Fifth Semester	16
CET 335 Microprocessor Interfacing*	4
EET 325 Intro to Electric Power*	4
EET 365 Linear Electronics II*	4
PHY 202 College Physics II*	4
Sixth Semester	17
CET 360 Microprocessor Engineering*	4
ECO 100 Intro to Economics**	3
EET 310 Methods in Engineering Analysis*	3
EET 320 Network Analysis*	4
General Education Course**	3
Senior Year	
Seventh Semester	15
EET 370 Instrumentation Design I*	4
EET 400 Senior Project Proposal*	1
EET 410 Automatic Control Systems*	4
Technical Elective*	3
General Education Course**	3

Computer Science, Information Systems and Engineering

Course	Credits
Eighth Semester	14
EET 430 RF Communications*	4
EET 450 Senior Project*	3
Approved Technical Elective*	4
General Education Course**	3
Total	121

* Required major and related courses

** Required and recommended General Education courses

Approved EET Electives

- **CET 440** Computer Networking
- **T 420** Instrumentation Design II
- **EET 460** Digital Signal Processing
- **EET 485** Special Topics in EET
- **EET 495** EET Internship (single instance, 4 credits max)

Approved Technical Electives

- Any approved EET Elective
- Any ITE Course
- MTR XXX
- **CHE 102** General Chemistry II
- **CSC 202** or above
- **MAT 195, MAT 300** or above
- **PHY 221** or above

Substitutions

College Algebra (3 crs.) and College Trigonometry (3 crs.) may be substituted for Pre-Calculus, if math placement test score does not permit direct entry into Pre-Calculus, or if students would prefer less intense coverage of this material.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/electrical-engineering-technology/index.aspx>

B.S. in Industrial Technology Management

Program Description

The Bachelor of Science in Industrial Technology Management degree focuses on operations management, industrial cost analysis, operations research, project management, computer-integrated manufacturing, and production and inventory control.

Delivery Mode

Global Online (100% online)

Computer Science, Information Systems and Engineering

Pre-requisite

Admission to this program is open to students who have completed an associate of science degree in an industrial technology-related area (60 credits minimum) or approved equivalent. Of the 60 associate degree credits, 30 will be applied to the California University requirements in General Education, and 30 credits will be applied to the major requirements. Associate of Applied Science degree programs qualify for admission to this program, provided students have completed algebra, trigonometry and physics. Students who have not taken Statistical Quality Control should do so as a technical elective.

Curriculum

Course	Credits
Required Major Courses	60
Related Associate Degree Credits	27
ITE 305 OSHA General Industrial Safety	3
ITE 342 Quality Planning and Analysis	3
ITE 375 Principles of Production	3
ITE 376 Technical Supervision	3
ITE 385 Industrial Cost Estimating	3
ITE 420 Production Analysis	3
ITE 461 Supply Chain Fundamentals	3
ITE 471 Project Management	3
ITE 481 Concepts and Issues in Industrial Technology	3
ITE 495 Internship OR ITE 499 Research Project	6
Free Electives	18
Related Associate Degree Credits	6
Student-Selected Electives	12
General Education	42
Related Associate Degree Credits	27
ECO 201 Principles of Microeconomics	3
General Education Courses	12
Total	120

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/industrial-technology-management/index.aspx>

Computer Science, Information Systems and Engineering

B.S. in Mechatronics Engineering Technology

Program Description

The Bachelor of Science in Mechatronics Engineering Technology degree prepares students to apply mathematical and scientific principles to the design, development and operational evaluation of automated systems (computer-controlled with embedded electronics, sensors and actuators).

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	17
CSC 120 Problem Solving and Programming Constructs	3
ENG 101 English Composition I	3
GET 130 Introduction to Engineering Technology	3
MAT 199 Pre-Calculus	3
PHY 121 General Physics I	4
UNI 100 First-Year Seminar	1
Second Semester	17
CSC 124 Computer Programming I	3
EET 110 Electrical Circuits I	4
ITE 215 CAD I	3
MAT 281 Calculus I	3
PHY 122 General Physics II	4
Sophomore Year	
Third Semester	17
CET 235 Digital Electronics Design	4
EET 160 Electric Circuits II	4
ITE 305 OSHA General Industrial Safety	3
MAT 282 Calculus II	3
MTR 300 Manufacturing Processes	3

Computer Science, Information Systems and Engineering

Course	Credits
Fourth Semester	15
ECO 201 Introduction to Economics	3
ENG 217 Science and Technical Writing	3
MTR 310 Principles of Automatic Control	3
MTR 320 Statics	3
Technical Elective	3
Junior Year	
Fifth Semester	16
EET 325 Introduction to Electric Power	4
MTR 325 Fundamental of Programmable Logic Controllers	3
MTR 330 Dynamics	3
MTR 340 Fluid Power	3
General Education Course	3
Sixth Semester	13
EET 215 Introduction to Instrumentation	3
MTR 335 Advanced PLCs and Integration	3
MTR 370 Properties and Strength of Materials	4
General Education Course	3
Senior Year	
Seventh Semester	13
ITE 375 Principles of Production	3
MTR 400 Machine Design Elements and Kinematics	3
MTR 410 Process Control	3
MTR 445 Senior Project Proposal	1
General Education Course	3

Computer Science, Information Systems and Engineering

Course	Credits
Eighth Semester	12
MTR 420 Computer Integrated Manufacturing	3
MTR 450 Senior Projects	3
General Education Courses	6
Total	120

Related (Technical) Electives (3 credits)

- **CIS 341** CISCO CCNA 1 (4 credits)
- **CIS 354** Systems Project Management (3 credits)
- **CET 335** Microprocessor Interfacing (4 credits)
- **CET 270** Introduction to Microprocessor Design (4 credits)
- **ITE 460** Principles of Manufacturing (3 credits)
- **ITE 385** Industrial Cost Estimating (3 credits)
- **MTR 495** Mechatronics Internship (4 credits)
- **RET 260** Robotics Systems Project (3 credits)
- **RET 210** Robotic Teaming (3 credits)

Substitutions

College Algebra (3 crs.) and College Trigonometry (3 crs.) may be substituted for Pre-Calculus, if math placement test score does not permit direct entry into Pre-Calculus, or if students would prefer less intense coverage of this material.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/mechatronics-engineering-technology/index.aspx>

Certificate in Industrial Safety

Curriculum

Course	Credits
HSC 315 First-Aid and Personal Safety	3
ITE 101 Introduction to Industrial Safety	3
ITE 220 Introduction to Industrial Health and Hygiene	3
ITE 305 OSHA General and Industrial Safety	3
Total	12

Minor in Computer Information Systems

Curriculum

Course	Credits
Required Courses	19
CIS 110 Introduction to Information Systems	3
CIS 120 Application Programming I	3

Computer Science, Information Systems and Engineering

Course	Credits
CIS 220 Application Programming II	3
CIS 299 Systems Analysis I	3
CIS 321 Data Base Management Systems and Data Base Design	3
CIS 341 CISCO CCNA 1	4
Electives (select one)	3
CIS 330 Web Programming I	3
CIS 302 Visual Programming	3
CIS 322 Data Base Application Development	3
CIS 419 Internship (variable credit, maximum of 3)	3
MAT 195 Discrete Mathematical Structures	3
Total	22

Minor in Computer Science Curriculum

Course	Credits
Required Courses	18
CSC 120 Problem Solving and Programming Constructs	3
CSC 124 Computer Programming I	3
CSC 216 Logic and Switching Theory	3
CSC 265 Object-Oriented Programming	3
CSC 328 Data Structures	3
MAT 195 Discrete Mathematical Structures	3
Electives (select one)	3
CSC 304 COBOL	3
CSC 306 FORTRAN	3
CSC 308 Python	3

Computer Science, Information Systems and Engineering

Course	Credits
Total	21

Note: No more than one course substitution will be permitted for the minor (could occur in required or elective area).

Minor in Digital Media Technology Curriculum

Course	Credits
Required Courses	15
DMT 100 Foundations of Print Media	3
DMT 180 Foundations of Digital Media	3
DMT 220 Digital Photography	3
DMT 240 Vector Based Graphics	3
DMT 250 Digital Imaging	3
Elective Courses (any two of the following, maintaining prerequisite requirements)	6
DMT 101 Time Based Media	3
DMT 200 Print Media Production Processes	3
DMT 225 Digital Page Layout	3
DMT 302 Commercial Print Technologies	3
DMT 312 Specialty Graphics Print Techniques	3
DMT 320 Digital Video	3
DMT 330 Package Printing Processes	3
DMT 331 Web Publishing	3
DMT 340 3D Computer Animation	3
DMT 342 Cost Analysis for Digital Media	3
DMT 350 Motion Graphics	3
DMT 360 Game Development	3
DMT 365 Color Imaging	3
DMT 402 Advanced Print Techniques	3
DMT 406 Digital Workflow and Print Technology	3
DMT 420 Technical Studies in Digital Media Technology	3

Computer Science, Information Systems and Engineering

Course	Credits
DMT 431 Advanced Web Development	3
DMT 445 Project Management	3
DMT 485 Senior Seminar	3
Total	21

Minor in Electrical Engineering Technology

Curriculum

Course	Credits
Required Courses	16
EET 110 Electric Circuits*	4
CET 235 Digital Electronic Design	4
CET 270 Introduction to Microprocessor Design	4
CET 335 Microprocessor Interfacing	4
Elective Courses (any two of the following, maintaining prerequisite requirements)	7
EET 160 Electric Circuits II**	4
EET 215 Intro to Instrumentation	3
EET 325 Introduction to Electric Power	4
CET 360 Microprocessor Engineering	4
CET 440 Computer Networking	4
Total	23

* Requires College Algebra or Tech Math I

** Requires College Trig or Tech Math II

Prerequisite Requirements

- EET 110 > EET 160 > EET 215, EET 325
- CET 235 > CET 270 > CET 335 > CET 360

Computer Science, Information Systems and Engineering

Minor in Industrial Technology Curriculum

Course	Credits
Required Courses	12
ITE 181 Material Technology I	3
ITE 215 CAD I	3
ITE 250 Introduction to Automation	3
ITE 305 OSHA	3
Elective Courses <i>(any three of the following, maintaining pre-requisite requirements)</i>	9
ITE 315 CAD II	3
ITE 341 Quality Control	3
ITE 342 Quality Planning and Analysis	3
ITE 375 Principles of Production	3
ITE 376 Technical Supervision	3
ITE 385 Industrial Cost Estimating	3
ITE 461 Supply Chain Fundamentals	3
ITE 471 Project Management	3
ITE 495 Internship	6
ITE 499 Research Project	6
MTR 300 Manufacturing Processes	3
Total	21

Minor in Robotics Engineering Technology Curriculum

Course	Credits
CET 235 Digital Electronics Design	3
CSC 120 Problem Solving and Prog. Const.	3
CSC 124 C Programming	3
RET 110 Agile Robotics I	3
RET 160 Agile Robotics II	3

Computer Science, Information Systems and Engineering

Course	Credits
RET 210 Robotics Teaming	3
RET 260 Robotics Systems Project	3
Total	21

Students may wish to take the following additional courses to enhance the RET minor:

- **CET 270** Intro to Microprocessors (4 credits)
- **EET 110** Electrical Circuits I (4 credits)

Prerequisite Requirements (certain courses may be taken concurrently)

- RET 110 > RET 160 > RET 210 > RET 260
- MAT 181* > CET 235 > CET 270 > CSC 120 > CSC 124

* MAT 181 is also a co-requisite for EET 110.

Culture, Media, and Performance

Department of Culture, Media, and Performance

Faculty

Dr. M.G. Aune | Diane Eperthener Buffington | Dr. Anthony (Todd) Carlisle | Greg Davis | Dr. Sarah Downey | Brian Eisminger | Dr. Christina L. Fisanick | Dr. Sylvia Foil | Dr. Craig Fox | Jan Fung | Dr. Debbie Goh | Ralph Guzzi | Greg Harrison | Dr. Brent House | Sabrina Hykes-Davis | Dr. Macdonald Kale | Ken Karsh | Lisa Brovey Kovach | Nancy Lonich | Dr. Karen McCullough | James T. McVey | Dr. Patricia Milford | Dr. Keat Murray | Spencer Norman | Dr. Michele A. Pagen | Dr. Cindy Persinger | Dr. Joel Press | Margaret Schottman | Dr. Nancy J. Shaffer | Edward Shultz | Dr. Greg Spicer | Brian Stahurski | Dr. John Paul Staszal | Dr. Frank Stetar | Dr. Randy Tillmutter | Dr. Yana Tyulkova | Dr. Kimberly Vanderlaan | Brandon VanSickle | Joseph Weaver

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Programs

Cal U's Department of Culture, Media, and Performance includes undergraduate programs in art history, communication, English, graphic design, music, philosophy and theatre.

Bachelor's Degree Programs

Degrees offered through this department include:

- B.S. in Commercial Music Technology
- B.S. in Commercial Music Technology: Commercial Music Business
- B.A. in Communication Studies
- B.A. in English: Creative Writing
- B.A. in English: Journalism
- B.A. in English: Literature
- B.S. in Graphic Design
- B.A. in Theatre
- B.A. in Theatre: Design and Entertainment Technology
- B.A. in Theatre: Musical Theatre

Note: Cal U also offers B.S.Ed. secondary education degrees in English and Communications as well as a Language Arts/Reading concentration in middle level education through its Department of Education.

Minors

Minors offered through this department include:

- Acting
- Art History
- Communication Studies
- Creative Writing
- Dance
- Design and Entertainment Technology (Theatre)
- Journalism
- Literature
- Music
- Musical Theatre Performance
- Philosophy
- Theatre
- Theatre History and Literature
- Writing

Honor Societies

Lambda Pi Eta is the national communication honor society that recognizes outstanding achievement by undergraduates majoring in communication studies.

Culture, Media, and Performance

Pi Kappa Delta is the honor society for intercollegiate debaters, individual events competitors and teachers of communication. Our department has a long and storied history with successful competition in speech and debate.

Sigma Tau Delta is the national English honor society. The California University of Pennsylvania chapter, Delta Theta, was chartered in 1959 and is the oldest chapter in Pennsylvania's State System of Higher Education.

Activities

The California University chapter of the **Society of Professional Journalists** helps prepare students for careers in the media, offering professional and social ties.

The department advises the **Philosophy Club**, which gives students informal social opportunities for discussions, debates and lectures.

The department hosts a chapter of the **Public Relations Student Society of America**. This student organization offers students the opportunity to develop leadership skills and provides professional development opportunities.

The Vulcan Speech and Debate Team offers students the opportunity to develop and sharpen oral presentation skills through participation in regional competitions.

The department also hosts topical lectures and forums.

B.A. in Communication Studies

Program Description

The Bachelor of Arts in Communication Studies is a unique degree program that explores human communication and its influence on our personal, professional, social and cultural lives. The curriculum is carefully crafted to develop in our students the skills and dispositions needed to succeed in a variety of professional contexts and to become leaders in democratic society. Students work closely with faculty advisers to develop a tailored experience that aligns with their personal interests, talents and career goals.

This innovative program allows students to design their own specific areas of emphasis through project-based, experiential learning. These areas could include: Media Studies/Film; Applied Fields (e.g., Public Relations, Consulting, Branding, Media Writing); Advocacy/Political Communication; Art History and Visual Culture; Communication Ethics; Rhetoric (e.g., Pre-law); and Academic Preparation for Graduate School.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
UNI 100 First-Year Seminar	1
ENG 101 English Composition I OR HON 150	3
CDC 100 Communication Perspectives	3
CDC 101 Public Speaking	3
CDC 120 Visual Communication I	3

Culture, Media, and Performance

Course	Credits
Gen Ed/Elective/Minor Course	3
Second Semester	15
ENG 102 English Composition II, ENG 211 Business and Professional Writing, ENG 217 Science and Technical Writing OR HON 250 Honors Composition II	3
CDC 150 Imagine, Design, Create	3
CDC 201 Argumentation and Advocacy, PHI 115 Logic and Language OR PHI 311 Formal Logic I	3
Gen Ed/Elective/Minor Course	6
Sophomore Year	
Third Semester	15
ART 270 Art History Today, CDC 252 The Art of Film OR PHI 335 Aesthetic Theory	3
CDC 200 Truth and Representation	3
CDC 151 Producing Media Messages I	3
Gen Ed/Elective/Minor Course	6
Fourth Semester	15
PHI 220 Ethics	3
CDC 220 Visual Culture	3
CDC 230 Strategic Professional Communication	3
Gen Ed/Elective/Minor Course	6
Junior Year	
Fifth Semester	15
CDC 304 Communication Research OR PHI 335 Aesthetic Theory	3
Required Related Elective*	3
Gen Ed/Elective/Minor Course	9

Culture, Media, and Performance

Course	Credits
Sixth Semester	15
Required Related Electives*	6
Gen Ed/Elective/Minor Courses	9
Senior Year	
Seventh Semester	15
Required Related Electives*	6
Gen Ed/Elective/Minor Courses	9
Eighth Semester	15
CDC 490 Theorizing Human Communication OR ART 422 After Modernism	3
CDC 498 Senior Project in Communication, Design and Culture OR CDC 499 Career Design Strategies	3
Required Related Elective*	3
Gen Ed/Elective/Minor Courses	6
Total	120

* Advanced Standing Electives

(Select at least one from each category.)

Conversations/Seminars

- **CDC 310** Seminar in CDC
- **CDC 350** Image, Sound, Text
- **CDC 431** PR Cases and Problems
- **CDC 490** Theorizing Human Communication
- **CDC 461** Communication and Social Meaning
- **CDC 465** Media Ethics

Experiential Learning

- **CDC 301** Advanced Performance
- **CDC 311** Special Experience Lab in CDC
- **CDC 331** Public Relations Applications
- **CDC 351** Media Production II
- **CDC 430** PR & Integrated Communication Practicum
- **CDC 432** Public Relations Campaign Management
- **CDC 451** Producing Media Messages III
- **CDC 455** Media Writing III
- **CDC 497** Internship in CDC

Culture, Media, and Performance

Area Studies

- **ART 422** After Modernism
- **CDC 210** Special Topics in CDC
- **CDC 302** Persuasion
- **CDC 303** Organizational Communications
- **CDC 304** Communication Research
- **CDC 305** Sports Com & Media Relations
- **CDC 312** Area Studies in CDC
- **CDC 330** Intro to Public Relations
- **CDC 355** Media Writing I
- **CDC 356** Media Writing II
- **CDC 357** Media Management
- **CDC 370** Challenges in Communicating Science
- **CDC 431** PR Cases & Problems
- **CDC 450** Media, Society, Culture
- **CDC 460** Phil of Art, His, Theory & Criticism
- **CDC 498** Senior Project in CDC
- **CDC 499** Career Design Strategies
- **PHI 335** Aesthetic Theory

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/communication-studies/index.aspx>

B.A. in English: Creative Writing Concentration

Program Description

The Creative Writing concentration of the Bachelor of Arts in English degree allows students to hone their craft as they study contemporary literature and apply what they've learned to their own works of poetry, fiction, nonfiction and drama.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
General Education Courses	12
Second Semester	15
ENG 102 English Composition II OR Equivalent	3
General Education Courses	12

Culture, Media, and Performance

Course	Credits
Sophomore Year	
Third Semester	15
Creative Writing Course	3
Literature Core Course	3
Writing Core Course	3
General Education OR Elective Courses	6
Fourth Semester	15
Creative Writing Course	3
Literature Core Course	3
Writing Core Course	3
General Education OR Elective Courses	6
Junior Year	
Fifth Semester	15
Creative Writing Course	3
Literature Core Course	3
Writing Core Course	3
General Education OR Elective Courses	6
Sixth Semester	15
Creative Writing Course	3
Literature Core Course	3
General Education OR Elective Courses	9
Senior Year	
Seventh Semester	15
ENG 499 English Studies Capstone Class	3
Creative Writing Course	3

Culture, Media, and Performance

Course	Credits
General Education OR Elective Courses	9
Eighth Semester	15
Creative Writing Seminar	3
General Education OR Elective Courses	12
Total	120

All English majors are required to take two writing-intensive courses from among the following: ENG 334, 337, 448.

At least 42 credits of the required 120 credits must include upper division (300-400 level) courses.

Program Requirements

Literature Core (select one)

- **ENG 301** Brit Literature I
- **ENG 302** Brit Literature II
- **ENG 315** Survey of American Woman Writers
- **ENG 325** World Lit to 1600
- **ENG 326** World Lit from 1600
- **ENG 337** Survey of American Literature I
- **ENG 338** Survey of American Literature II

Language and Linguistics Core (select one)

- **ENG 345** Grammar and Usage
- **ENG 346** History of English Language
- **ENG 347** Introduction to Linguistics

Composition and Literacy Core (select one)

- **ENG 308** Research for Writers
- **ENG 352** Stud.in Writing
- **ENG 372** Comp Theory and Teaching of Writing
- **ENG 375** Advanced Writing
- **ENG 590** Summer Institute for Teachers and Writers

Journalism Core (select one)

- **ENG 167** Journalism I
- **ENG 169** Journalism II
- **ENG 312** Journalism III
- **ENG 334** Newspaper Rep

Special Topics (select three)

- **ENG 320** Multimedia Journalism
- **ENG 350** Journalism Genres
- **ENG 351** Publish the Mag
- **ENG 419** Internship

Culture, Media, and Performance

- **ENG 481** Old/Mid English
- **ENG 484** 19th Cent Lit.
- **ENG 485** 20th Cent Lit.
- **ENG 487** Amer Literary Genres
- **ENG 489** Eng Literary Genres

Special Experience

- **ENG 499** English Capstone Class

Creating Writing Courses (select six)

- **ENG 351** Publish the Mag
- **ENG 375** Advanced Writing
- **ENG 376** Creative Writing: Fiction
- **ENG 377** Creative Writing: Poetry
- **ENG 378** Creative Writing: Drama
- **ENG 430** Adaptation of Literary Materials
- **ENG 495** Creative Writing Seminar

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/english/creative-writing.aspx>

B.A. in English: Journalism Concentration

Program Description

The Journalism concentration of the Bachelor of Arts degree in English prepares students to cultivate sources, find accurate information and report news in an ethical manner and using digital platforms.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
General Education Courses	12
Second Semester	15
ENG 102 English Composition II OR Equivalent	3
General Education Courses	12

Culture, Media, and Performance

Course	Credits
Sophomore Year	
Third Semester	15
ENG 167 Journalism I	3
Literature Core Course	3
Writing Core Course	3
General Education OR Elective Courses	6
Fourth Semester	15
ENG 169 Journalism II	3
Literature Core Course	3
Writing Core Course	3
General Education OR Elective Courses	6
Junior Year	
Fifth Semester	15
ENG 334 Newspaper Reporting	3
Literature Core Course	3
Writing Core Course	3
General Education OR Elective Courses	6
Sixth Semester	15
ENG 312 Journalism III	3
Literature Core Course	3
General Education OR Elective Courses	9
Senior Year	
Seventh Semester	15
ENG 499 English Studies Capstone Class	3
Any Journalism Elective	3
General Education OR Elective Courses	9

Culture, Media, and Performance

Course	Credits
Eighth Semester	15
Any Journalism Elective	3
General Education OR Elective Courses	12
Total	120

All English majors are required to take two writing-intensive courses from among the following: ENG 334, 337, 448.

42 of the 120 credits must be 300- or 400-level courses.

Program Requirements

Creating Writing Core (select one)

- **ENG 376** Creative Writing: Fiction
- **ENG 377** Creative Writing: Poetry
- **ENG 378** Creative Writing: Drama
- **ENG 495** Creative Writing Seminar
- **ENG 590** Summer Institute for Teachers and Writers

Literature Core (select one)

- **ENG 301** Brit Literature I
- **ENG 302** Brit Literature II
- **ENG 315** Survey of American Woman Writers
- **ENG 325** World Lit to 1600
- **ENG 326** World Lit from 1600
- **ENG 337** Survey of American Literature I
- **ENG 338** Survey of American Literature II

Language and Linguistics Core (select one)

- **ENG 345** Grammar and Usage
- **ENG 346** History of English Language
- **ENG 347** Introduction to Linguistics

Composition and Literacy Core (select one)

- **ENG 308** Research for Writers
- **ENG 352** Stud.in Writing
- **ENG 372** Comp Theory and Teaching of Writing
- **ENG 375** Advanced Writing
- **ENG 590** Summer Institute for Teachers and Writers

Special Topics (select three)

- **ENG 320** Multimedia Journalism
- **ENG 350** Journalism Genres
- **ENG 351** Publish the Mag
- **ENG 419** Internship
- **ENG 481** Old/Mid English

Culture, Media, and Performance

- **ENG 484** 19TH Cent Lit.
- **ENG 485** 20th Cent Lit.
- **ENG 487** Amer Literary Genres
- **ENG 489** Eng Literary Genres

Special Experience

- **ENG 499** English Capstone Class

Journalism Courses

- **ENG 167** Journalism I
- **ENG 169** Journalism II
- **ENG 312** Journalism III
- **ENG 334** Newspaper Rep

Journalism Electives (select two)

- **ENG 306** Press Law and Ethics
- **ENG 320** Multimedia Journalism
- **ENG 351** Publish the Mag
- **ENG 354** Amer. Journ.
- **ENG 350** Journalism Genres
- **ENG 419** Internship

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/english/journalism.aspx>

B.A. in English: Literature Concentration

Program Description

The Literature concentration of the Bachelor of Arts in English degree builds critical analysis, interpretative and communication skills through the study of works by American, British and world authors.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
General Education Courses	12
Second Semester	15
ENG 102 English Composition II OR Equivalent	3

Culture, Media, and Performance

Course	Credits
General Education Courses	12
Sophomore Year	
Third Semester	15
Literature Elective (300- or 400-level)	3
Literature Core Course	3
Writing Core Course	3
General Education OR Elective Courses	6
Fourth Semester	15
Literature Elective (300- or 400-level)	3
Literature Core Course	3
Writing Core Course	3
General Education OR Elective Courses	6
Junior Year	
Fifth Semester	15
Literature Elective (300- or 400-level)	3
Literature Core Course	3
Writing Core Course	3
General Education OR Elective Courses	6
Sixth Semester	15
Literature Elective (300- or 400-level)	3
Literature Core Course	3
General Education, Minor OR Elective Courses	9
Senior Year	
Seventh Semester	15
ENG 499 English Studies Capstone Class	3

Culture, Media, and Performance

Course	Credits
Literature Elective (300- or 400-level)	3
General Education, Minor OR Elective Courses	9
Eighth Semester	15
Literature Elective (300- or 400-level)	3
General Education OR Elective Courses	12
Total	120

All English majors are required to take two writing-intensive courses from among the following: ENG 334, 337, 448.

42 of the 120 credits must be 300- or 400-level courses.

Program Requirements

Literature Core (select six)

- **ENG 301** Brit Literature I
- **ENG 302** Brit Literature II
- **ENG 315** Survey of American Woman Writers
- **ENG 325** World Lit to 1600
- **ENG 326** World Lit from 1600
- **ENG 337** Survey of American Literature I
- **ENG 338** Survey of American Literature II
- **ENG 355** Survey of African American Literature
- **ENG 425** Shakespeare

Creating Writing Core (select one)

- **ENG 376** Creative Writing: Fiction
- **ENG 377** Creative Writing: Poetry
- **ENG 378** Creative Writing: Drama
- **ENG 495** Creative Writing Seminar
- **ENG 590** Summer Institute for Teachers and Writers

Language and Linguistics Core (select one)

- **ENG 345** Grammar and Usage
- **ENG 346** History of English Language
- **ENG 347** Introduction to Linguistics

Composition and Literacy Core (select one)

- **ENG 308** Research for Writers
- **ENG 352** Stud.in Writing
- **ENG 372** Comp Theory and Teaching of Writing
- **ENG 375** Advanced Writing
- **ENG 590** Summer Institute for Teachers and Writers

Journalism Core (select one)

Culture, Media, and Performance

- **ENG 167** Journalism I
- **ENG 169** Journalism II
- **ENG 312** Journalism III
- **ENG 334** Newspaper Rep

Special Topics (select three)

- **ENG 320** Multimedia Journalism
- **ENG 350** Journalism Genres
- **ENG 351** Publish the Mag
- **ENG 419** Internship
- **ENG 481** Old/Mid English
- **ENG 484** 19TH Cent Lit.
- **ENG 485** 20th Cent Lit.
- **ENG 487** Amer Literary Genres
- **ENG 489** Eng Literary Genres

Special Experience

- **ENG 499** English Capstone Class

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/english/literature.aspx>

B.A. in Theatre

Program Description

The Bachelor of Arts in Theatre degree is a flexible program that combines academic and production work. Students explore and hone skills related to text analysis, production conceptualization, design, construction, acting, voice, dance, management and directing.

Delivery Mode

Traditional (on campus)

Accreditation and Affiliation

This program is accredited the National Association of Schools of Theatre.

It has also earned Educational Affiliate status with Estill Voice International®. Students can elect to pursue their Certificate of Proficiency in EVT prior to graduation.

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
DAN 131 Foundations of Dance	3
ENG 101 English Composition I	3
THE 141 Stagecraft I	3
UNI 100 First-Year Seminar	1

Culture, Media, and Performance

Course	Credits
General Education Courses	6
Second Semester	16
THE 131 Fundamentals of Acting	3
THE 150 Introduction to Theatrical Design	3
THE 356 Practicum: Technical Production	1
General Education Courses	6
Theatre Elective	3
Sophomore Year	
Third Semester	13
THE 302 History of Theatre I	3
THE 356 Practicum: Technical Production	1
General Education, Minor OR Additional Elective Courses	6
Theatre Elective	3
Fourth Semester	16
THE 312 History of Theatre II	3
THE 356 Practicum: Technical Production	1
General Education, Minor OR Additional Elective Courses	9
Theatre Elective	3
Junior Year	
Fifth Semester	16
THE 304 World Drama OR ENG 425 Shakespeare OR THE 306 Modern Drama	3
THE 320 Fundamentals of Directing	3
THE 356 Practicum: Technical Production	1
General Education, Minor OR Additional Elective Courses	9

Culture, Media, and Performance

Course	Credits
Sixth Semester	16
THE 356 Practicum: Technical Production	1
General Education, Minor OR Additional Elective Courses	15
Senior Year	
Seventh Semester	13
THE 356 Practicum: Technical Production	1
General Education, Minor OR Additional Elective Courses	12
Eighth Semester	15
THE 450 Senior Thesis	3
General Education, Minor OR Additional Elective Courses	12
Total	120

Additional Requirements

Theatre majors are required to take practicum credits, which give students practical experience in various areas of production: acting, dance, design, directing, dramaturgy, outreach, stage management, technical production and technical direction. As students advance in their training, they have the opportunity to be awarded significant production responsibility working alongside faculty as a member of the artistic team. Opportunities include:

- Full production direction
- Design
- Technical direction
- Choreography
- Playwrighting
- Dramaturgy

Special Recommendations

A minor in art, arts administration, event planning, music, psychology, sociology or social work is recommended for those majoring in theatre.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/theater/index.aspx>

B.A. in Theatre: Design and Entertainment Technology Concentration

Program Description

The Design and Entertainment Technology concentration of the Bachelor of Arts in Theatre degree focuses on the skills and technology used to create theater productions.

Culture, Media, and Performance

Delivery Mode

Traditional (on campus)

Accreditation and Affiliation

This program is accredited the National Association of Schools of Theatre.

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
THE 140 Script Analysis (recommended EMEL Gen Ed)	3
THE 141 Stagecraft I	3
THE 143 Drafting and Rendering for Theatre	3
UNI 100 First-Year Seminar	1
General Education Course	3
Second Semester	16
ART 110 Drawing I (recommended Fine Arts Gen Ed)	3
THE 131 Fundamentals of Acting	3
THE 150 Introduction to Theatrical Design	3
THE 356 Practicum: Technical Production (recommended elective)	1
General Education Course	6
Sophomore Year	
Third Semester	16
DAN 131 Foundations of Dance	3
THE 302 History of Theatre I	3
THE 356 Practicum: Technical Production (recommended elective)	1
Concentration Elective	3
General Education, Minor OR Additional Elective Courses	6

Culture, Media, and Performance

Course	Credits
Fourth Semester	16
THE 312 History of Theatre II	3
THE 340 Advanced Theatrical Design	3
THE 356 Practicum: Technical Production (recommended elective)	1
General Education, Minor OR Additional Elective Courses	9
Junior Year	
Fifth Semester	16
THE 304 World Drama OR ENG 425 Shakespeare OR THE 306 Modern Drama	3
THE 320 Fundamentals of Directing	3
THE 354 OR 355 Practicum	1
General Education, Minor OR Additional Elective Courses	9
Sixth Semester	13
THE 354 OR 355 Practicum	1
Concentration Elective	3
General Education, Minor OR Elective Courses	9
Senior Year	
Seventh Semester	13
THE 354 OR 355 Practicum	1
General Education, Minor OR Elective Courses	12
Eighth Semester	15
THE 450 Senior Thesis	3
General Education, Minor OR Elective Courses	12
Total	120

Culture, Media, and Performance

Program Requirements

Theatre Core Courses (27 credits)

- **DAN 131** Foundations of Dance
- **THE 131** Fundamentals of Acting
- **THE 141** Stagecraft I
- **THE 150** Introduction to Theatrical Design
- **THE 302** History of Theatre I
- **THE 304** World Drama OR **ENG 425** Shakespeare OR **THE 306** Modern Drama
- **THE 312** Theatre History II
- **THE 320** Fundamentals of Directing
- **THE 450** Senior Thesis

Required Design/Tech Core (9 credits)

- **THE 143** Drafting and Rendering for the Theatre (3 credits)
- **THE 340** Advanced Theatrical Design (3 credits)
- **THE 354** Practicum: Management AND/OR **THE 355** Practicum: Design (1 credit each, 3 total)

Concentration Electives (6 credits)

Select at least two from the following:

- **THE 120** Entertainment Audio I
- **THE 126** Makeup I
- **THE 220** Entertainment Audio II
- **THE 211** Lighting Technology
- **THE 225** Costume Construction
- **THE 226** Makeup II
- **THE 255** Puppetry
- **THE 271** Scene Design I
- **THE 272** Properties Design for Theatre
- **THE 311** Lighting Design
- **THE 325** Costume Design
- **THE 327** Stage Management
- **THE 328** Scene Painting
- **THE 341** Stagecraft II
- **THE 480** Digital Performance

Additional Electives/Minor (38 credits)

Recommended:

- **ART 212** Art History I (3 credits)
- **ART 214** Art History II (3 credits)
- **THE 356** Practicum: Tech Production (1 credit each, 6 total)

Recommended General Education Courses

- **ART 110** Drawing I (Fine Arts)
- **GET 130** Introduction to Engineering OR **DMT 180** Foundations of Digital Media (Technological Literacy)
- **HSC 315** First Aid and Personal Safety (Health and Wellness)
- **THE 140** Script Analysis (Ethics and Multicultural Awareness)

Special Recommendations

A minor in art, arts administration, event planning, music, psychology, sociology or social work is recommended for those majoring in theatre.

Culture, Media, and Performance

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/design-entertainment-technology/>

B.A. in Theatre: Musical Theatre

Program Description

The Musical Theatre concentration of the Bachelor of Arts in Theatre degree hones students' performance skills, in acting, voice and dance.

Delivery Mode

Traditional (on campus)

Accreditation and Affiliation

This program is accredited by the National Association of Schools of Theatre.

It has also earned Educational Affiliate status with Estill Voice International®. Students can elect to pursue their Certificate of Proficiency in EVT prior to graduation.

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
DAN 131 Foundations of Dance	3
ENG 101 English Composition I	3
MUS 104 Voice Class (recommended Fine Arts Gen Ed)	3
THE 140 Script Analysis (recommended EMEL Gen Ed)	3
THE 141 Stagecraft I	3
UNI 100 First-Year Seminar	1
Second Semester	15
THE 131 Fundamentals of Acting	3
THE 150 Introduction to Theatrical Design	3
THE 401 Finding Your Voice (recommended elective)	3
General Education, Minor OR Elective Courses	6
Sophomore Year	
Third Semester	15
THE 302 History of Theatre I	3

Culture, Media, and Performance

Course	Credits
Musical Theatre Core Course(s)	3
General Education, Minor OR Elective Courses	9
Fourth Semester	15
THE 312 History of Theatre II	3
THE 431 Acting in Musical Theatre (recommended elective)	3
Musical Theatre Core Course(s)	3
General Education, Minor OR Elective Courses	6
Junior Year	
Fifth Semester	15
CMD 221 Speech Science (recommended Natural Science Gen Ed)	3
THE 304 World Drama OR ENG 425 Shakespeare OR THE 306 Modern Drama	3
THE 320 Fundamentals of Directing	3
Musical Theatre Core Course(s)	3
General Education, Minor OR Elective Courses	3
Sixth Semester	15
MUS 211 Keyboard Class (recommended elective)	3
Musical Theatre Core Course(s)	3
General Education, Minor OR Elective Courses	9
Senior Year	
Seventh Semester	15
Musical Theatre Core Course(s)	3
General Education, Minor OR Elective Courses	12
Eighth Semester	15
THE 450 Senior Thesis	3

Culture, Media, and Performance

Course	Credits
General Education, Minor OR Elective Courses	12
Total	120

Program Requirements

Theatre Core Courses (27 credits)

- **DAN 131** Foundations of Dance
- **THE 131** Fundamentals of Acting
- **THE 141** Stagecraft I
- **THE 150** Introduction to Theatrical Design
- **THE 302** History of Theatre I
- **THE 304** World Drama OR **ENG 425** Shakespeare OR **THE 306** Modern Drama
- **THE 312** Theatre History II
- **THE 320** Fundamentals of Directing
- **THE 450** Senior Thesis

Required Musical Theatre Core (15 credits)

Select from the following:

- **DAN 132** Ballet Technique
- **DAN 134** Tap Technique I
- **DAN 133** Jazz Technique I
- **DAN 233** Jazz Technique II
- **DAN 260** Modern Dance
- **DAN 301** Theatre Dance I
- **DAN 302** Theatre Dance II
- **MUS 215** Comprehensive Musicianship I
- **THE 126** Makeup I
- **THE 145-445** Private Instruction (4 credits)
- **THE 203** Musical Theatre Performance I
- **THE 255** Puppetry
- **THE 303** Musical Theatre Performance II
- **THE 403** Musical Theatre Performance III
- **THE 356** Practicum: Technical Practicum (3 to 6 credits)

Additional Electives/Minor (38 credits)

Recommended:

- **MUS 211** Keyboard Class
- **THE 401** Finding Your Voice
- **THE 431** Acting in Musical Theatre

Recommended General Education Courses

- **CDC 201** Argumentation and Advocacy (Public Speaking)
- **CMD 221** Speech Science (Natural Sciences)
- **HSC 315** First Aid and Personal Safety (Health and Wellness)
- **MUS 104** Voice Class (Fine Arts)
- **PSY 100** General Psychology OR **PSY 211** Social Psychology (Social Sciences)
- **THE 140** Script Analysis (Ethics and Multicultural Awareness)
- **THE 480** Digital Performance (Technological Literacy)

Culture, Media, and Performance

Special Recommendations

A minor in art, arts administration, event planning, music, psychology, sociology or social work is recommended for those majoring in theatre.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/musical-theater/>

B.S. in Commercial Music Technology

Program Description

The Bachelor of Science in Commercial Music Technology degree delves into three distinct areas: music, technology and entrepreneurship. The curriculum combines traditional approaches to the study of music performance, music history and theory and modern-day applications (including popular music analysis, live sound reinforcement, audio engineering and entrepreneurship).

Note: Students wishing to enroll in the Commercial Music Technology program must go through the audition process outlined on the Cal U website.

Curriculum

This program can be completed in four years. The curriculum shown below illustrates the scope of courses that are required for graduation from this program. In addition to courses in music history, music theory and performance, commercial music technology majors will take classes in audio and video production, digital video, Web publishing, 3-D and computer animation, and music production, as well as business courses in economics and finance.

Course	Credits
Freshman Year	
First-Semester	15
DMT 180 Foundations of Digital Media	3
MUS 100 Intro to Music	3
MUS 211 Keyboard Class	3
MUS 215 Comprehensive Musicianship I	3
MUS Applied Instruction	1
MUS Performance Ensemble	1
UNI 100 First-Year Seminar	1
Second Semester	14
ENG 101 English Comp I	3
MUS 275 Music and Recording Technology I	3
MUS 315 Comprehensive Musicianship II	3
MUS Applied Instruction	1
MUS Performance Ensemble	1
General Education Course	3

Culture, Media, and Performance

Course	Credits
Sophomore Year	
Third Semester	14
CDC 101 Public Speaking	3
CMD 221 Speech Science	3
MUS 316 Comprehensive Musicianship III	3
MUS 375 Music and Recording Technology II	3
MUS Applied Instruction	1
MUS Performance Ensemble	1
Fourth Semester	14
ENG 217 Scientific/Tech Writing	3
MUS 300 Jazz: History, Form and Analysis	3
MUS 416 Comprehensive Musicianship IV	3
MUS 475 Music and Recording Technology III	3
MUS Applied Instruction	1
MUS Performance Ensemble	1
Junior Year	
Fifth Semester	17
MUS 425 Commercial Music Arranging	3
MUS 476 Music and Recording Technology IV	3
MUS Applied Instruction	1
MUS Performance Ensemble	1
THE 211 Lighting I	3
General Education Course	3
Technology Elective	3
Sixth Semester	15
MUS 477 Music and Recording Technology V	3

Culture, Media, and Performance

Course	Credits
MUS Applied Instruction	1
MUS History/Forms/Analysis Elective	3
MUS Performance Ensemble	1
General Education Courses	6
Special Experience	1
Senior Year	
Seventh Semester	17
Business Electives	6
MUS Applied Instruction	1
MUS History/Forms/Analysis Elective	3
Special Experience	1
Technology Elective	3
General Education Course	3
Eighth Semester	14
Free Electives	5 to 6
MUS Applied Instruction	1
Special Experience	4
Business Elective	3
Total	120

Note: Developmental courses **do not** count toward the 120 credits necessary for graduation, but are calculated in your overall GPA.

Program Requirements

Course	Credits
Core Requirements	
MUS 211 Keyboard Class	3
MUS 215 Comprehensive Musicianship I	3
MUS 315 Comprehensive Musicianship II	3
MUS 316 Comprehensive Musicianship III	3
MUS 416 Comprehensive Musicianship IV	3

Culture, Media, and Performance

Course	Credits
MUS 425 Commercial Music Arranging	3
MUS 275 Music and Recording Technology I	3
MUS 375 Music and Recording Technology II	3
MUS 475 Music and Recording Technology III	3
MUS 476 Music and Recording Technology IV	3
MUS 477 Music and Recording Technology V	3
History, Form and Analysis Electives (select from list)	6
MUS 304 The American Musical: HF&A	3
MUS 305 African American Gospel and Caribbean Music: HF&A	3
MUS 306 The Opera: HF&A	3
MUS 310 Music and the Media	3
MUS 313 Rock 'N Roll: HF&A	3
MUS 314 The Music Industry: HF&A	3
Performance Ensembles (select from list)	6
MUS 187 Guitar Ensemble	1
MUS 188 String Ensemble	1
MUS 191 Choir	1
MUS 192 California Singers	1
MUS 193 Gospel Choir	1
MUS 196 Jazz Ensemble	1
MUS 197 Pep Band	1
MUS 198 Marching Band	1
MUS 199 Concert Band	1
MUS 307 Special Music Project	1
Applied Instruction Electives (select from list)	8
Brass - MUS 109, 209, 309, 409	1 to 3

Culture, Media, and Performance

Course	Credits
Piano - MUS 119, 219, 319, 419	1 to 3
Percussion - MUS 129, 229, 329, 429	1 to 3
Woodwind - MUS 149, 249, 349, 449	1 to 3
Voice - MUS 159, 259, 359, 459	1 to 3
Guitar - MUS 170, 270, 370, 470	1 to 3
String - MUS 179, 279, 379, 479	1 to 3
Special Experience Electives (select from list)	6
MUS 485 Music Tech Practicum	1 to 3
MUS 488 Music Tech Internship	1 to 3
MUS 499 Senior Project/Recital	1 to 3
Required Business Course	3
MKT 300 Principles of Marketing	3
Business Courses (select from list)	6
ACC 200 Financial Accounting	3
FIN 304 Personal Finance	3
MGT 300 Principles of Management	3
MGT 303 Entrepreneurship I: Fundamentals	3
MGT 376 Cyberlaw & E-Privacy Issues	3
Technology Courses (select from list)	6
CDC 151 Producing Media Messages I	3
DMT 220 Digital Photography	3
DMT 225 Digital Page Layout	3
DMT 240 Vector Based Graphics	3
DMT 250 Digital Imaging	3
DMT 320 Digital Video	3
DMT 331 Web Publishing	3

Culture, Media, and Performance

Course	Credits
DMT 340 3D Computer	3
THE 311 Lighting II	3
THE 480 Digital Performance	3
EET 110 Electrical Circuits I	3
EET 160 Electrical Circuits II	3

Note: All prescribed courses, including general education courses, may not be substituted, except at the discretion of the music department.

Additional Requirements

- **Music:** Each student is required to become an accomplished performer on an instrument of their choice. This entails students being able to read, write and analyze a musical score, to perform in an ensemble setting and to then apply their musical understanding to popular or commercial applications. Students perform regularly in one (or more) of the 11 ensembles at Cal U in order to gain professional performance experience, both on and off campus. Students also complete projects in capstone music theory courses (for example, composition/arranging projects, film score projects, etc.) that aide them in applying the theoretical knowledge to which they are exposed.
- **Technology:** The CMT program's five-course Music and Recording Technology (MRT) curriculum focuses on providing students with solid foundational knowledge within the disciplines of audio engineering and modern music production. The curriculum is experiential in nature, focusing on having students apply theoretical knowledge of acoustics, signal flow, recording, editing and mixing audio in various classroom projects and on-campus activities. To ensure students gain additional hands-on-experience, each student is required to earn a total of 6 credits of "special experience." These experience credits are earned through the student's choice of on-campus practicum assignments, off-campus internships or a senior recital/project. Examples of on-campus special experience assignments include audio engineering responsibilities for any of our departmental ensembles, music recital and performance archive engineer, sporting events audio engineer, university event and ceremony audio engineer. Lastly, Cal U is one of only a few recognized Academic Avid Learning Partners in the state of Pennsylvania that prepares and tests students for professional certifications of Avid software products, including Pro Tools, one of the music industry's standards for music production. The MRT curriculum incorporates extensive exploration and usage of Pro Tools hardware and software. Students are provided with the opportunity to take a certification exam, which (if passed) awards them with a professional certification in Pro Tools. This professional certification provides our degree seekers with an employment advantage both regionally and nationally.
- **Entrepreneurship:** Finding success in today's entertainment industry depends just as much upon understanding business and entrepreneurship as upon music and media. Cal U's CMT program requires students to take business courses that encourage them to think of their artistic skills as marketable business assets. Courses such as Financial Accounting, Principles of Marketing and The Music Industry offer students a broad perspective on how to think critically and competitively. Students also attend weekly convocation meetings in the music department that feature guest speakers, guest performances, etc. Our guests have included touring musicians, professional sound engineers, recording studio owners, lighting designers and songwriters, and each has shared their business, experiences and insight into the music and media industries.

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (B.S. in Commercial Music Technology to MBA) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Culture, Media, and Performance

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/commercial-music-technology/index.aspx>

B.S. in Commercial Music Technology: Commercial Music Business Concentration

Program Description

The Commercial Music Business (CMB) concentration of the Bachelor of Science in Commercial Music Technology follows the three-tiered curricular structure of the Commercial Music Technology (CMT) degree, but places greater emphasis on business and entrepreneurship training. Students enrolled in the CMB program take approximately 18 additional business credits when compared to a CMT major (9 credits).

CMB students have the option of customizing their business studies in order to place them on a fast-track for completing a Masters of Business Administration (MBA) one year after their four-year CMB studies.

Note: Students wishing to enroll in the Commercial Music Business program must go through the audition process outlined on the Cal U website.

Delivery Mode

Traditional (on campus)

Curriculum

This program can be completed in four years. The curriculum shown below illustrates the scope of courses that are required for graduation from this program.

Course	Credits
Freshman Year	
First-Semester	15
DMT 180 Foundations of Digital Media	3
MUS 100 Introduction to Music	3
MUS 211 Keyboard Class	3
MUS 215 Comprehensive Musicianship I	3
MUS Applied Instruction	1
MUS Performance Ensemble	1
UNI 100 First-Year Seminar	1
Second Semester	14
ENG 101 English Comp I	3
MUS 275 Music and Recording Technology I*	3
MUS 315 Comprehensive Musicianship II*	3
MUS Applied Instruction	1
MUS Performance Ensemble	1
General Education Course	3

Culture, Media, and Performance

Course	Credits
Sophomore Year	
Third Semester	17
BUS 100 Intro to Business	3
CMD 221 Speech Science	3
MUS 375 Music and Recording Technology II**	3
MUS Applied Instruction	1
MUS Performance Ensemble	1
General Education Courses	6
Fourth Semester	17
BUS 242 Business Law I	3
MKT 300 Principles of Marketing	3
MUS 300 Jazz: History, Form and Analysis	3
MUS Applied Instruction	1
MUS Performance Ensemble	1
Business Elective (select one group)	3
General Education Course	3
Junior Year	
Fifth Semester	14
THE 211 Lighting I**	3
MGT 300 Principles of Management	3
MUS 314 The Music Industry**	3
MUS Applied Instruction	1
MUS Performance Ensemble	1
General Education Course	3
Sixth Semester	15
MUS Applied Instruction	1
MUS Performance Ensemble	1

Culture, Media, and Performance

Course	Credits
Business Elective (select course from your group)	3
Free Elective	3
General Education Courses	6
Special Experience - Music Business Practicum	1
Senior Year	
Seventh Semester	14
Business Electives (select from your group)	6
Business Ethics Requirement	3
MUS Applied Instruction	1
Special Experience - Music Business Practicum	1
Free Elective	3
Eighth Semester	14
ACT 200 Financial Accounting (Suggested Free Elective)	3
Free Electives	6
MUS Applied Instruction	1
Special Experience - Music Business Internship	4
Total	120

* Offered in spring only.

** Offered in fall only.

Note: Developmental courses **do not** count toward the 120 credits necessary for graduation, but are calculated in your overall GPA.

Program Requirements

Course	Credits
Core Requirements	18
MUS 211 Keyboard Class	3
MUS 215 Comprehensive Musicianship	3
MUS 275 Music & Recording Technology	3
MUS 314 The Music Industry: HF&A	3

Culture, Media, and Performance

Course	Credits
MUS 315 Comprehensive Musicianship II	3
MUS 375 Music & Recording II	3
Performance Ensemble (select from list)	6
MUS 187 Guitar Ensemble	1
MUS 188 String Ensemble	1
MUS 191 Choir	1
MUS 192 California Singers	1
MUS 193 Gospel Choir	1
MUS 196 Jazz Ensemble	1
MUS 197 Pep Band	1
MUS 198 Marching Band	1
MUS 199 Concert Band	1
MUS 307 Special Music Project	1
Applied Instruction Electives (select from list)	8
Brass - MUS 109, 209, 309, 409	1
Piano - MUS 119, 219, 319, 419	1
Percussion - MUS 129, 229, 329, 429	1
Woodwind - MUS 149, 249, 349, 449	1
Voice - MUS 159, 259, 359, 459	1
Guitar - MUS 170, 270, 370, 470	1
String - MUS 179, 279, 379, 479	1
Special Experience Electives (select from list)	6
MUS 485 Music Tech Practicum	1-3
MUS 488 Music Tech Internship	1-12
Business Courses	12
BUS 100 Introduction to Business	3

Culture, Media, and Performance

Course	Credits
BUS 242 Business Law I	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Business Ethics (select one)	3
BUS 342 Business, Society and Government	3
BUS 343 Corporate Social Responsibility	3
BUS 345* Business Ethics (required for Law Group, so Law Group students must choose additional ethics course above)	3
Business Elective Groups (choose one group)	
Law Group	
BUS 345* (see above)	3
BUS 346 Business Law II	3
MGT 375 Info Tech Ethics	3
MGT 376 Cyber Law	3
Entrepreneurship Group	
MGT 303 Entrepreneurship I	3
MGT 305 Entrepreneurship II	3
FIN 321 Entrepreneurial Finance	3
MKT 361 Entrepreneurial Marketing	3
Sales and Marketing Group	
MKT 320 Selling	3
MKT 321 Sales Management	3
MKT 351 Advertising	3
MKT 311 E-Marketing	3

Note: All prescribed courses, including general education courses, may not be substituted, except at the discretion of the music department.

Culture, Media, and Performance

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/music-business/index.aspx>

B.S. in Graphic Design

Program Description

The Bachelor of Science in Graphic Design degree program focuses on development of concepts, skills and sensitivities essential to the graphic designer. In addition to gaining a solid technical foundation in graphic design, students learn communication, critical and analytic thinking and problem-solving skills, as well as individual initiative and responsibility and professional knowledge.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ART 127 Introduction to Graphic Design	3
ART 212 Art History I	3
UNI 100 First-Year Seminar	1
ENG 101 English Composition I	3
General Education Courses	6
Second Semester	15
ART 261 Typography	3
ART 214 Art History II	3
ART Studio Course (100-200 level)	3
ENG 102 English Composition II	3
General Education Course	3
Sophomore Year	
Third Semester	15
ART 262 Color Theory	3
ART 119 Design 2-D	3
GCM 180 Multimedia Foundations	3
COM 230 Argumentation and Debate	3

Culture, Media, and Performance

Course	Credits
General Education Course	3
Fourth Semester	15
ART Studio Course (300-400 level)	3
COM 142 Video Production	3
GCM 331 Web Publishing	3
PHI 335 Aesthetic Theory	3
Elective Course	3
Junior Year	
Fifth Semester	15
ART 120 Design 3-D	3
ART 227 Graphic Design Studio I	3
ART 243 Introduction to Asian Art	3
COM 331 Radio/TV Commercials	3
General Education Course	3
Sixth Semester	15
ART 110 Drawing I	3
ART 327 Graphic Design Studio II	3
General Education Courses	6
Elective Course	3
Senior Year	
Seventh Semester	15
ART 427 Graphic Design Studio III	3
PHI 220 Ethics	3
General Education Course	3
Elective Courses	6

Culture, Media, and Performance

Course	Credits
Eighth Semester	14
ART 422 Art History: The Art World After Modernism	3
ART 428 Graphic Design Studio IV	3
General Elective Course	3
Elective Courses	5
Total	120

Note: One Laboratory Component course must be completed as part of the General Education requirements.

Students must achieve an overall GPA of 2.50 or higher and successfully complete a portfolio review before scheduling Graphic Design Studio I (ART 227) - see adviser.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/graphic-design/index.aspx>

Minor in Acting Curriculum

Course	Credits
Required Courses	14
THE 101 Voice and Speech	3
THE 131 Fundamentals of Acting	3
THE 221 Theatrical Foundations	3
THE 231 Intermediate Acting	3
THE 350 Practicum: Performance*	2
Electives (select two courses)	6
DAN 131 Foundations of Dance	3
THE 145 Private Instruction (may repeat)	1
THE 245 Private Instruction	1
THE 201 Voice and Interpretation	3
THE 301 Voice and Speech II: Dialects	3
THE 331 Advanced Acting	3
Total	20

* The performance practicum credit must be fulfilled by performing in department theatre productions.

Culture, Media, and Performance

Minor in Art History Curriculum

Course	Credits
Required Courses	15
ART 212 Art History 1	3
ART 214 Art History 2	3
ART 243 Intro to Asian	3
ART 345 Methods of Art History	3
ART 422 Art History: Art World after Modernism	3
Electives (select two)	6
ART 311 Medieval Art and Architecture	3
ART 319 Ancient Greek and Roman Art	3
ART 323 Women in Art	3
ART 324 Modern Art	3
ART 326 Contemporary Art	3
ART 328 Italian Renaissance Art	3
ART 333 American Art: European Settlement through 1918	3
ART 420 Contemporary Issues in Art	3
PHI 335 Aesthetic Theory	3
PHI 336 Philosophy of Film	3
HIS 333 Film and History	3
Total	21

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/art-history/index.aspx>

Minor in Communication Studies Curriculum

Course	Credits
Required Courses*	6
CDC 100 Communication Perspectives OR CDC 150 Imagine, Design, Create	3

Culture, Media, and Performance

Course	Credits
CDC 450 Media, Society, Culture OR CDC 490 Theorizing Human Communication	3
Electives	12
Select any 12 credits of coursework in the field of Communication, Design, & Culture**	12
Total	18

* Students must take at least one of these courses in the "lower" (100) level and one at the upper (400) level.

** To be eligible, a course must have a CDC designator in the University's catalog of courses. At least half of your minor must consist of courses at the 300 and 400 level. Students may use up to 6 credits of CDC 497 (Communication, Design, & Culture Internship) toward their 12 credits of CDC electives. Finally, please pay attention to course pre-requisites.

Minor in Creative Writing Curriculum

Course	Credits
Required Courses	6
ENG 495 Creative Writing Seminar	3
ENG 496 Writing for Publication	3
Creative Writing Electives	15
ENG 376 Creative Writing: Fiction	3
ENG 377 Creative Writing: Poetry	3
ENG 378 Creative Writing: Drama	3
ENG 308 Research for Writers	3
ENG 318 Poetics	3
ENG 351 Publishing the Magazine	3
ENG 352 Studies in Writing	3
ENG 430 Adaptations of Literary Material	3
Total	21

Minor in Dance Curriculum

Culture, Media, and Performance

Course	Credits
Required Courses	9
DAN 131 Foundations of Dance	3
DAN 132 Ballet Technique I	3
THE 131 Fundamentals of Acting	3
Electives (select at least two courses)	6
DAN 133 Jazz Technique I	3
DAN 134 Tap Technique I	3
DAN 232 Ballet Technique II	3
DAN 233 Jazz Technique II	3
DAN 260 Modern Dance	3
DAN 301 Theatre Dance I	3
DAN 302 Theatre Dance II	3
THE 131 Fundamentals of Acting	3
THE 150 Introduction to Theatrical Design	3
THE 221 Theatrical Foundations	3
THE 225 Costume Construction	3
Practicum Credits	3
THE 350 Practicum: Performance	2
THE 352 Practicum: Directing and Choreography	1
Total	18

Program Notes

- Substitutions will be considered by the department, pending course availability.
- All minors must have a minimum of 2 credits in THE 350 through participation in department productions. The remaining practicum credit can be attained by choreographing for or participating in a department production.

Minor in Design and Entertainment Technology Curriculum

Course	Credits
Required Courses	12

Culture, Media, and Performance

Course	Credits
THE 141 Stagecraft I	3
THE 143 Drafting and Rendering for the Theatre	3
THE 150 Introduction to Theatrical Design	3
THE 340 Advanced Theatrical Design	3
Practicum Credits <i>(Select from any combination of the following.)</i>	3
THE 354 Practicum: Management	1
THE 355 Practicum: Design	1
THE 356 Practicum: Technical Production	1
Electives <i>(Select two from the following.)</i>	6
THE 120 Entertainment Audio I	3
THE 126 Makeup I	3
THE 220 Entertainment Audio II	3
THE 221 Lighting Technology	3
THE 225 Costume Construction	3
THE 226 Makeup II	3
THE 255 Puppetry	3
THE 271 Scene Design I	3
THE 272 Properties Design for the Theatre	3
THE 311 Lighting Design	3
THE 325 Costume Design	3
THE 327 Stage Management	3
THE 341 Stagecraft II	3
THE 480 Digital Performance	3
Total	21

Note: Substitutions will be considered based on a student's focus. For example, a Technical Director might take GET 130 Intro to Engineering, or a Projection Designer might take DMT 180 Foundations of Digital Media.

Culture, Media, and Performance

Minor in Journalism Curriculum

Course	Credits
Required Courses	15
ENG 167 Journalism I	3
ENG 169 Journalism II	3
ENG 312 Journalism III	3
ENG 334 Newspaper Reporting I	3
ENG 312 Press Law/Media Ethics OR ENG 354 American Journalism	3
Journalism Electives (select two courses)	6
ENG 320 Multimedia Journalism	3
ENG 350 Journalism Genres	3
ENG 351 Publishing the Magazine	3
ENG 419 Internship	3
Total	21

Minor in Literature Curriculum

Course	Credits
Major Core (select one course)	3
ENG 106 Introduction to Poetry	3
ENG 107 Introduction to Fiction	3
ENG 108 Introduction to Drama	3
Literature Core (select two courses)	6
ENG 205 World Literature I	3
ENG 206 World Literature II	3
ENG 301 English Literature I	3
ENG 302 English Literature II	3
ENG 337 American Literature I	3
ENG 338 American Literature II	3

Culture, Media, and Performance

Course	Credits
Literature Electives (select four courses)	12
ENG 315 Survey of American Women Writers	3
ENG 425 Shakespeare	3
ENG 481 Studies in Old and Middle English	3
ENG 484 Studies in 19th Century Literature	3
ENG 485 Studies in 20th Century Literature	3
ENG 487 Studies in American Literary Genres	3
ENG 489 Studies in English Literary Genres	3
Total	21

Minor in Music

Program Description

The Music minor is an abbreviated version of Cal U's B.S. in Commercial Music Technology (CMT), and is designed for students who wish to study music in conjunction with another major area of study. Similar to the CMT degree, the Cal U Music minor has three distinct areas of focus that aid students in developing a well-rounded set of artistic and multimedia skills. These three areas of focus are:

- Music
- Technology
- Entrepreneurship

Curriculum

Course	Credits
Required Courses	9
MUS 100 Introduction to Music	3
MUS 215 Comprehensive Musicianship I	3
MUS 315 Comprehensive Musicianship II	3
History, Theory and Education Electives (select from list)	9
MUS 275 Music and Recording Technology I	3
MUS 300 Jazz: History, Form and Analysis	3
MUS 304 American Musical: History, Form and Analysis	3

Culture, Media, and Performance

Course	Credits
MUS 305 African American Gospel and Caribbean Music: History, Form and Analysis	3
MUS 306 The Opera: History, Form and Analysis	3
MUS 310 Music in the Media	3
MUS 313 Rock 'N Roll: History, Form and Analysis	3
MUS 314 The Music Industry: History, Form and Analysis	3
MUS 372 Creative Arts for Elementary Ed	3
MUS 375 Music and Recording Technology II	3
Applied Electives (select from options)	3
Option 1 (select one)	
MUS 104 Voice Class	3
MUS 211 Keyboard Class	3
Option 2* (Private Instruction - select 3 credits)	
Brass - MUS 109, 209, 309, 409	1
Piano - MUS 119, 219, 319, 419	1
Percussion - MUS 129, 229, 329, 429	1
Woodwind - MUS 149, 249, 349, 449	1
Voice - MUS 159, 259, 359, 459	1
Guitar - MUS 170, 270, 370, 470	1
Strings - MUS 179, 279, 379, 479	1
Performance Electives** (select from list)	3
MUS 187 Guitar Ensemble	1
MUS 188 String Ensemble	1
MUS 191 University Choir	1
MUS 192 California Singers	1
MUS 193 University Gospel Choir	1

Culture, Media, and Performance

Course	Credits
MUS 196 Jazz Ensemble	1
MUS 198 University Marching Band	1
MUS 199 University Concert Band	1
MUS 307 Special Music Project	1
MUS 485 Music Tech Practicum	1
Total	24

* Courses are repeatable to a maximum of 8 credits each.

** Courses are repeatable to a maximum of 8 credits. The option to continue without credit is available.

Program Notes

- 9 of the 24 credits for the minor must be at the 300 or 400 level.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/music/index.aspx>

Minor in Musical Theatre Performance Curriculum

Course	Credits
Required Courses	13
MUS 104 Voice Class I	3
MUS 215 Comprehensive Musicianship I	3
THE 131 Fundamentals of Acting	3
THE 401 Finding Your Voice	3
THE 350 Practicum: Performance*	1
Choose two courses from the following:	6
DAN 131 Foundations of Dance	3
DAN 134 Tap Technique I	3
DAN 301 Theatre Dance I	3
DAN 302 Theatre Dance II	3
MUS 221 Keyboard Class	3
THE 203 Musical Theatre Performance I	3
THE 221 Theatrical Foundations	3
THE 303 Musical Theatre Performance II	3
THE 431 Acting Musical Theatre	3

Culture, Media, and Performance

Course	Credits
Choose two courses from the following:	2
MUS 191 University Choir	1
MUS 192 California Singers	1
THE 145 Private Instruction	1
Total	21

* The performance practicum credit must be fulfilled by performing in a department musical theatre production.

Minor in Philosophy Curriculum

Course	Credits
Logic Courses (select one course)	3
PHI 115 Logic and Language	3
PHI 311 Formal Logic I	3
History of Philosophy (select two courses)	6
PHI 201 Ancient Philosophy	3
PHI 205 Medieval Philosophy	3
PHI 206 16th-18th Century Phil.	3
PHI 431 Analytic Philosophy	3
Philosophy Electives	12
Select four PHI courses at the 300 or 400 level	12
Total	21

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/philosophy/index.aspx>

Minor in Theatre Curriculum

Course	Credits
Required Courses	15
DAN 131 Foundations of Dance	3

Culture, Media, and Performance

Course	Credits
THE 100 Introduction to Theatre	3
THE 131 Fundamentals of Acting	3
THE 141 Stagecraft I	3
THE 150 Introduction to Theatrical Design	3
Choose two from the following:	6
DAN 132 Ballet Technique I	3
DAN 133 Jazz Technique I	3
DAN 134 Tap Technique I	3
DAN 260 Modern Dance	3
DAN 301 Theatre Dance I	3
THE 101 Voice and Speech	3
THE 126 Makeup I	3
THE 140 Script Analysis	3
THE 211 Lighting Technology	3
THE 221 Theatrical Foundations	3
THE 225 Costume Construction	3
THE 255 Puppetry	3
THE 327 Stage Management	3
THE 350 Practicum: Performance* (may repeat)	1
THE 356 Practicum: Technical Production (may repeat)	1
Total	21

*The performance practicum credit must be fulfilled by performing in theatre productions.

Note: Substitutions will be considered by the department based on student's focus.

Minor in Theatre History and Literature Curriculum

Course	Credits
Required Courses	18
ENG 108 Introduction to Drama	3

Culture, Media, and Performance

Course	Credits
ENG 425 Shakespeare I	3
THE 140 Script Analysis	3
THE 302 Theatre History I	3
THE 304 World Drama OR THE 306 Modern Drama	3
THE 312 Theatre History II	3
Choose one of the following:	3
ENG 178 Literature and Film	3
THE 304 World Drama	3
THE 306 Modern Drama	3
Total	21

Minor in Writing Curriculum

Course	Credits
Required Courses	6
ENG 102 English Composition II	3
ENG 372 Advanced Composition	3
Electives (select four courses)	12
ENG 211 Business Writing	3
ENG 217 Scientific and Technical Writing	3
ENG 345 Grammar and Usage	3
ENG 346 History of the English Language	3
ENG 347 Introduction to Linguistics	3
ENG 350 Special Topics in Journalism Genres	3
ENG 376 Creative Writing: Fiction	3
ENG 377 Creative Writing: Poetry	3
ENG 378 Creative Writing: Drama	3
ENG 419 Internship in Professional Writing	3

Culture, Media, and Performance

Course	Credits
ENG 448 Practical Criticism	3
ENG 496 Writing for Publication	3
ENG ____ Additional Course as Scheduled*	3
Total	18

* The additional course must be an upper-level writing course approved by a faculty adviser.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/writing-minor/index.aspx>

Education

Department of Education

Faculty

Childhood Education: Dr. Peter Cormas | Dr. Holly L. Diehl | Dr. Diane Fine | Dr. J. William Hug | Dr. Rebecca Maddas | Dr. Christine Peterson | Dr. Michelle Torregano | Dr. Clover Simms Wright

Secondary Education: Dr. Silvia Braidic | Dr. Keith Hepner | Dr. Marcia Hoover | Dr. J. Kevin Lordon | Dr. Connie Monroe | Dr. Susan Morris-Rutledge | Dr. Michael Perrotti | Dr. Mary Wolf

Special Education: Dr. James Burton | Dr. Peter Heh | Dr. Jason Kight | Dr. Kalie Kossar

Technology Education: Dr. Rene Kruse | Michael Ulderich

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Programs

Cal U's Department of Education includes undergraduate programs in childhood, secondary and special education.

Associate and Bachelor's Degree Programs

Degrees offered through this department include:

- A.S. in Early Childhood Education
- B.S.Ed. in Grades 4-8 and Special Education, with concentrations in:
 - Language Arts/Reading
 - Mathematics
 - Science
 - Social Studies
- B.S.Ed. in Middle Level, Grades 4-8 Education, with concentrations in:
 - Language Arts/Reading
 - Mathematics
 - Science
 - Social Studies
- B.S.Ed. in PreK-Grade 4 Education with Certification
- B.S.Ed. in PreK-Grade 4 Education with Certification and Special Education
- B.S. in Professional Studies in Education
- B.S.Ed. degrees with secondary teacher certification in:
 - Art (K-12)
 - Biology
 - Chemistry
 - Communications
 - Earth and Space Science
 - English
 - Mathematics
 - Physics
 - Social Studies
- B.S.Ed. degrees in with secondary/special education 7-12 teacher certification in:
 - Biology
 - English
 - Mathematics
 - Social Studies
- B.S.Ed. in Special Education PreK-12
- B.S.Ed. in Technology Education

Post-Baccalaureate Certification-Only Programs

Post-baccalaureate certification-only programs are also available in:

Education

- Grades 4-8 Education: Language Arts and Reading
- Grades 4-8 Education: Mathematics
- Grades 4-8 Education: Science
- Grades 4-8 Education: Social Studies
- PreK-4

Minors

Cal U's Department of Education also offers minors in:

- Education Multidisciplinary
- Foundations of Secondary Education

Honor Society

Kappa Delta Pi, an international honor society in education, has a California University of Pennsylvania chapter. Students in education who have demonstrated a high level of academic achievement are invited to apply for induction.

A.S. in Early Childhood Education

Program Description

The Associate of Science in Early Childhood Education degree program is a hands-on program that builds students' understanding of early childhood learning and pedagogy.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following four-semester schedule of courses provides a recommended framework for completing this program of study in two years.

Course	Credits
First Semester	16
ENG 101 English Composition I	3
HIS 101 OR 102 U.S. History	3
MAT 120 Elementary Topics in Math I	3
PSY 216 Child Psychology Birth-Age 4	3
UNI 100 First-Year Seminar	1
Any Natural Science Course with Lab	3
Second Semester	15
CHD 200 Intro to PreK-Grade 8 Education	3
ELE 220 Instruction and Assessment in PreK	3

Education

Course	Credits
ELE 221 Instruction and Assessment in K-4	3
ESP 210 Special Education Foundation and Collaboration	3
MAT 130 Elementary Topics in Math II	3
Third Semester	15
CHD 350 Family and Community Collab. and Partnerships	3
ELE 300 Emergent Literacy	3
ELE 310 Teaching PreK Math/Science	3
ELE 410 PreK-4 Field Experience	3
Any Approved American/British Literature Course	3
Fourth Semester	15
CHD 250 Health and PE for PreK-4	3
CHD 312 Instruction: Leadership in Child. Ed.	3
EDU 333 Technology for Teach. and Learn.	3
ESP 311 Assmt. Positive Behavior Intervention	3
PSY 217 Child Psychology Age 5-9	3
Total	61

Program Notes

- **Course titles in bold** are scheduled together and must be taken at the same time.
- CHD 200 and ELE 220 require current clearances and minimum 2.0 GPA to register for courses.
- All other EDU, ELE, ESP and CHD courses require current clearances and minimum 2.5 GPA to register for courses.
- Pre-requisites for all CHD and ELE 300 level courses are ELE 200 and ELE 220.
- Current clearances are required prior to enrolling in program courses.

Approved British or American Literature Courses

- **ENG 107** Introduction to Fiction
- **ENG 125** The American West
- **ENG 127** Woman as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 160** Introduction to British and American Literature
- **ENG 203** Great Books
- **ENG 301** English Literature I (prerequisites ENG 101, 102)
- **ENG 302** English Literature II (prerequisites ENG 101, 102)

Education

- **ENG 337** Survey of American Literature I (prerequisites ENG 101, 102)
- **ENG 338** Survey of American Literature II (prerequisites ENG 101, 102)
- **HON 250** Honors Composition II (prerequisite HON 150)

B.S. in Professional Studies in Education

Program Description

The Bachelor of Science in Professional Studies in Education degree is designed for students who are interested in education but who are not seeking Pennsylvania teaching certification. Coursework develops skills and knowledge relevant to working with young children, and students gain hands-on experience through internships.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
Math and Qualitative Literacy Course	3
General Education Electives	9
Second Semester	15
ELE 220 Introduction and Assessment PreK	3
PSE 200 Intro to Professional Studies in Education*	3
GEN ED: Any Approved AM/BRIT LIT Course	3
Math and Qualitative Literacy Menu Course	3
General Education Elective	3
Sophomore Year	
Third Semester	15
ELE 300 Emergent Literacy	3
ELE 310 Teaching PreK STEAM	3
ELE 410 Field Experience PreK-4	3

Education

Course	Credits
General Education Electives, Minor Courses OR Free Electives	6
Fourth Semester**	15
CHD 250 Health & PE for PreK-Grade 4	3
CHD 312 Instructional Leadership in Childhood Education	3
ELE 221 Instruction and Assessment in K-4	3
General Education Electives, Minor Courses OR Free Electives	6
Junior Year	
Fifth Semester**	15
CHD 350 Family and Community Collab. and Partnerships	3
GEN ED: MUS/ART/THE 372 Creative Arts PK-4 or General Education Fine Arts Menu Course	3
General Education Electives, Minor Courses OR Free Electives	9
Sixth Semester	15
CHD 322 Professional Education Internship	3
General Education Electives, Minor Courses OR Free Electives	12
Senior Year	
Seventh Semester**	15
EDU 350 Supporting English Language Learners OR Any General Education Public Speaking Menu Course	3
General Education Electives, Minor Courses OR Free Electives	12
Eighth Semester	15
CHD 322 Professional Education Internship	3

Education

Course	Credits
General Education Electives, Minor Courses OR Free Electives	12
Total	120/121

* PSE 200 is a spring-only course.

** Internship could be taken this semester (see adviser).

Program Notes

- **Course titles in bold** indicate a block of courses that must be taken together.
- The following courses need a grade of "C" or higher to pass: MAT 120, MAT 130, ENG 101, Am/Brit Lit course and all ELE, CHD or ESP courses.
- PSE 200 requires a 2.0 GPA and current clearances. CHD/ELE 200 and ELE 220 require a 2.0 GPA and current clearances; all other ELE, CHD and ESP courses require current clearances and a minimum 2.5 GPA to register.
- 40% of courses (16 courses) must be 300 to 400 level.
- At least one minor must be selected.
- Internship application, training and guidelines must be completed a semester in advance of registration.
- Internship: must take at least two 3-credit internships. Can repeat up to 12 credits. Consult your department adviser.

Approved British or American Literature Courses

- **ENG 107** Introduction to Fiction
- **ENG 125** The American West
- **ENG 127** Woman as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 160** Introduction to British and American Literature
- **ENG 203** Great Books
- **ENG 301** English Literature I (pre-requisite ENG 101, 102)
- **ENG 302** English Literature II pre-requisite ENG 101, 102)
- **ENG 337** Survey of American Literature I pre-requisite ENG 101, 102)
- **ENG 338** Survey of American Literature II pre-requisite ENG 101, 102)
- **HON 250** Honors Comp II (pre-requisite HON 250)

Accelerated Bachelor's-to-Master's Program

Accelerated bachelor's-to-master's programs are also available to undergraduate students who qualify, including:

- B.S. in Professional Studies in Education to M.S. in Clinical Mental Health Counseling
- B.S. in Professional Studies in Education to M.Ed. in School Counseling

Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/professional-studies-education/index.aspx>

B.S.Ed. in Art: Secondary Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Art: Secondary Education degree is designed for students seeking to teach art in K-12 school settings. Through this program, students build knowledge of pedagogical

Education

principles as well as studio art and art history. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ART 110 Drawing I	3
ENG 101 English Composition I	3
MAT Course	3
PSY 100 General Psychology	3
UNI 100 First-Year Seminar	1
General Education Course (Health or Science)	3
Second Semester	15
ART 119 Design 2-D	3
ESP 210 Special Education Foundations and Collaboration	3
English Course	3
Math Course	3
General Education Course	3
Sophomore Year	
Third Semester	15
ART 120 Design 3-D	3
ART 382 Ceramics Studio	3
PSY 206 Adolescent Psychology	3

Education

Course	Credits
SEC 210 Introduction to Secondary Education	3
SEC 220 Standards-based Education in Secondary Education	3
Fourth Semester	15
ART 212 Art History 1	3
ART 383 Painting	3
EDU 310 Teaching in a Multicultural Society	3
EDU 333 Technology in Teaching and Learning	3
ESP 311 Assessment and Positive Behavior Interventions	3
Junior Year	
Fifth Semester	15
ART 214 Art History 2	3
ART 385 Sculpture Studio	3
SEC 310 Instructional Strategies in Secondary Education	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration in Secondary Education	3
Sixth Semester	15
ART 243 Intro to Asian	3
ART 350 Printmaking: Relief OR ART 351 Printmaking: Intaglio	3
ART Elective	3
SEC 400 Classroom Management	3
SEC 420 Assessments and Interventions in Secondary Education	3
Senior Year	
Seventh Semester	15

Education

Course	Credits
ART 376 Jewelry/Metals: Casting OR ART 377 Jewelry/Metals: Fabrication	3
ART Elective	3
EDU 350 Supporting English Language Learners	3
ESP 413 Evidence-based Practices for Secondary Education	3
SEC 391 Teaching of Art	3
Eighth Semester	15
SEC 460 Professional Practices in Secondary Education	3
SEC 461 Student Teaching Practicum	12
Total	120

Additional Requirements

Undergraduate secondary education majors are required to:

- Maintain a GPA of 2.80.
- Pass the required PAPA exams.
- Have Act 34, 151 and 114 clearances for formal Admission to Teacher Education.

A GPA of 3.00 and passing scores for Praxis II are needed to apply for a Recommendation for Student Teaching.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/secondary-education/art.aspx>

B.S.Ed. in Biology: Secondary Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Biology: Secondary Education degree is designed for students seeking to teach middle and high school (grades 7-12) biology. Through this program, students build knowledge and competencies in education and the life sciences. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Education

Course	Credits
Freshman Year	
First Semester	14
BIO 120 General Zoology	4
ENG 101 English Composition I	3
MAT 199 Pre-Calculus	3
PSY 100 General Psychology	3
UNI 100 First-Year Seminar	1
Second Semester	16
BIO 125 General Botany	4
ESP 210 Special Education Foundations and Collaboration	3
English Course	3
Math Course	3
General Education Course (Art)	3
Sophomore Year	
Third Semester	17
BIO 215 Introduction to Cellular and Molecular Biology	4
CHE 101 General Chemistry I	4
PSY 206 Adolescent Psychology	3
SEC 210 Introduction to Secondary Education	3
SEC 220 Standards-based Education in Secondary Education	3
Fourth Semester	17
BIO 248 General Ecology	4
CHE 102 General Chemistry II	4
EDU 310 Teaching in a Multicultural Society	3
EDU 333 Technology in Teaching and Learning	3

Education

Course	Credits
ESP 311 Assessment and Positive Behavior Interventions	3
Junior Year	
Fifth Semester	13
BIO 305 Comparative Vertebrate Anatomy OR BIO 306 Human Anatomy	4
SEC 310 Instructional Strategies in Secondary Education	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration in Secondary Education	3
Sixth Semester	14
BIO 318 Genetics	4
BIO 328 Human Physiology OR BIO 486 Comparative Animal Physiology	4
SEC 400 Classroom Management	3
SEC 420 Assessments and Interventions in Secondary Education	3
Senior Year	
Seventh Semester	17
EDU 350 Supporting English Language Learners	3
ESP 413 Evidence-based Practices for Secondary Education	3
HSC 315 First Aid and Personal Safety	4
PHY 121 General Physics I	4
SEC 395 Teaching of Science	3
Eighth Semester	15
SEC 460 Professional Practices in Secondary Education	3
SEC 461 Student Teaching Practicum	12

Education

Course	Credits
Total	122

Additional Requirements

Undergraduate secondary education majors are required to:

- Maintain a GPA of 2.80.
- Pass the required PAPA exams.
- Have Act 34, 151 and 114 clearances for formal Admission to Teacher Education.

A GPA of 3.00 and passing scores for Praxis II are needed to apply for a Recommendation for Student Teaching.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/secondary-education/biology.aspx>

B.S.Ed. in Biology: Secondary/Special Education 7-12

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Biology: Secondary/Special Education 7-12 degree is designed for individuals interested in teaching middle and high school biology in special education settings. The program develops students' knowledge of teaching and special education as well as the life sciences and related disciplines. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Certification that includes Special Education may require an extra semester to complete.

Note: This is a dual certification, not a dual degree.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following sections include an eight-semester schedule of courses provided as a recommended framework for completing the certification programs in four years.

Course	Credits
Freshman Year	
First Semester	18
BIO 120 General Zoology	4
CHE 101 General Chemistry	4
ENG 101 English Composition I	3
MAT 199 Pre-Calculus	3
UNI 100 First-Year Seminar	1

Education

Course	Credits
GEN ED: Fine Arts Course	3
Second Semester	18
ENG 127 OR 155	3
ESP 210 Special Education Foundations and Collaboration	3
ESP 311 Assessment and PBS	3
MAT XXX Math Elective	3
PSY 206 Adolescent Psychology	3
SEC 210 Introduction to Secondary Education	3
Sophomore Year	
Third Semester	18
BIO 125 General Botany	4
CHE 102 General Chemistry II	4
PHY 121 General Physics	4
SEC 220 Standards-Based Education in Secondary Education	3
SEC 310 Instructional Strategies Secondary Ed	3
Fourth Semester	18
BIO 215 Cellular and Molecular Biology	4
BIO 248 General Ecology	4
BIO 306 Human Anatomy	4
EDU 333 Technology in Teaching and Learning	3
HSC 315 First Aid and Personal Safety	3
Junior Year	
Fifth Semester	19
BIO 328 Human Physiology	4
ESP 312 ABA for Special Education	3

Education

Course	Credits
ESP 339 Special Education Field Experience I	3
ESP 403 Assessment and Prescriptive Teaching	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration	3
Sixth Semester	18
EDU 350 Supporting English Language Learners	3
ESP 406 Transition Planning and Instruction	3
ESP 411 Special Education History, Planning and Excpt.	3
ESP 413 EBP for Secondary Inclusion	3
SEC 400 Classroom Management	3
SEC 420 Assessments and Interventions	3
Senior Year	
Seventh Semester	16
BIO 318 Genetics	4
ESP 349 Special Education Field Experience II	3
ESP 402 Life Skills: Planning and Instruction	3
ESP 418 Advanced EBP for Secondary Ed	3
SEC 395 Teaching of Science	3
Eighth Semester	15
ESP 461 Student Teaching	6
SEC 460 Professional Practices	3
SEC 461 Student Teaching	6
Total	140

Program Notes

- Student teaching will consist of a split placement between Special and Secondary Education. In addition, field experience will be completed for both certification areas.
- All required courses need a grade of "C" or higher.

Education

B.S.Ed. in Chemistry: Secondary Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Chemistry: Secondary Education degree is designed for students seeking to teach middle and high school (grades 7-12) chemistry. Through this program, students build knowledge and competencies in education and chemistry. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	14
CHE 101 General Chemistry I	4
ENG 101 English Composition I	3
MAT 281 Calculus I	3
PSY 100 General Psychology	3
UNI 100 First-Year Seminar	1
Second Semester	17
CHE 102 General Chemistry II	4
CHE 331 Organic Chemistry I	4
ESP 210 Special Education Foundations and Collaborations	3
MAT 282 Calculus II	3
English Course	3
Sophomore Year	
Third Semester	16
CHE 104 Introduction to Experimental Chemistry	3
CHE 306 Inorganic Chemistry	3

Education

Course	Credits
CHE 341 Organic Chemistry II	3
PHY 101 College Physics I	4
General Education Course (Art)	3
Fourth Semester	16
CHE 320 Analytical/Instruments Methods	3
CHE 371 Intermediate Lab I	1
EDU 333 Technology in Teaching and Learning	3
ESP 311 Assessment and Positive Behavior Interventions	3
SEC 210 Introduction to Secondary Education	3
SEC 220 Standards-based Inclusions in Secondary Education	3
Junior Year	
Fifth Semester	14
CHE 372 Intermediate Chemistry Lab II	1
CHE 415 Biochemistry	4
SEC 310 Instructional Strategies in Secondary Education	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration in Secondary Education	3
Sixth Semester	16
CHE 461 Physical Chemistry I	3
CHE 471 Advanced Lab II	1
ESP 413 Evidence-based Practices for Secondary Education	3
HSC 315 First Aid and Personal Safety	3
SEC 400 Classroom Management	3
SEC 420 Assessments and Interventions in Secondary Education	3

Education

Course	Credits
Senior Year	
Seventh Semester	16
CHE 415 Biochemistry	4
EDU 350 Supporting English Language Learners	3
PSY 206 Adolescent Psychology	3
SEC 395 Teaching of Science	3
Science Elective	3
Eighth Semester	15
SEC 460 Professional Practices in Secondary Education	3
SEC 461 Student Teaching Practicum	12
Total	123

Additional Requirements

Undergraduate secondary education majors are required to:

- Maintain a GPA of 2.80.
- Pass the required PAPA exams.
- Have Act 34, 151 and 114 clearances for formal Admission to Teacher Education.

A GPA of 3.00 and passing scores for Praxis II are needed to apply for a Recommendation for Student Teaching.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/secondary-education/chemistry.aspx>

B.S.Ed. in Communications: Secondary Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Communications: Secondary Education degree is designed for students seeking to teach communications in high school settings. Through this program, students build knowledge of pedagogical principles as well as communication theory and theater. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Education

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
COM 101 Oral Communications	3
ENG 101 English Composition I	3
PSY 100 General Psychology	3
THE 131 Fundamentals of Acting	3
UNI 100 First-Year Seminar	1
Math Course	3
Second Semester	15
COM 230 Argumentation	3
ENG 102 English Composition II	3
ESP 210 Special Education Foundations and Collaboration	3
English Course	3
Math Course	3
Sophomore Year	
Third Semester	15
COM 142 Video Production I	3
SEC 210 Introduction to Secondary Education	3
SEC 220 Standards-based Education in Secondary Education	3
THE 150 Introduction to Theatrical Design	3
General Education Course (Health)	3
Fourth Semester	15
EDU 310 Teaching in a Multicultural Society	3
EDU 333 Technology in Teaching and Learning	3

Education

Course	Credits
ESP 311 Assessment and Positive Behavior Interventions	3
THE 141 Stagecraft	3
General Education Course (Science)	3
Junior Year	
Fifth Semester	15
ENG 345 English Grammar and Usage OR ENG 347 Introduction to Linguistics	3
SEC 310 Instructional Strategies in Secondary Education	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration in Secondary Education	3
THE 320 Fundamentals of Directing	3
Sixth Semester	15
COM 490 Communication Theory	3
ENG 308 Research for Writers OR ENG 352 Studies in Writing	3
ESP 413 Evidence-based Practices for Secondary Inclusion	3
SEC 400 Classroom Management	3
SEC 420 Assessments and Interventions in Secondary Education	3
Senior Year	
Seventh Semester	15
ENG 425 Shakespeare	3
English Elective	3
EDU 350 Supporting English Language Learners	3
PSY 206 Adolescent Psychology	3
THE 302 History of Theatre I OR THE 304 World Drama OR THE 306 Modern Drama	3

Education

Course	Credits
Eighth Semester	15
SEC 460 Professional Practices in Secondary Education	3
SEC 461 Student Teaching Practicum	12
Total	121

Additional Requirements

Undergraduate secondary education majors are required to:

- Maintain a GPA of 2.80.
- Pass the required PAPA exams.
- Have Act 34, 151 and 114 clearances for formal Admission to Teacher Education.

A GPA of 3.00 and passing scores for Praxis II are needed to apply for a Recommendation for Student Teaching.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/secondary-education/communications.aspx>

B.S.Ed. in Earth and Space Science: Secondary Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Earth and Space Science: Secondary Education degree is designed for students seeking to teach Earth and space science in middle and high school (grades 7-12) settings. Through this program, students build knowledge and competencies in education and Earth science. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	13
EAS 104 Introduction to Meteorology	4
EAS 150 Introduction to Geology	3
ENG 101 English Composition I	3

Education

Course	Credits
MAT 181 College Algebra	3
UNI 100 First-Year Seminar	1
Second Semester	16
EAS 200 Historical Geology	3
ESP 210 Special Education Foundations and Collaboration	3
PSY 100 General Psychology	3
English Course	3
Math Course	3
Sophomore Year	
Third Semester	16
CHE 101 General Chemistry I	4
EAS 303 Hydrology	3
ESP 311 Assessment and Positive Behavior Interventions	3
HSC 315 First Aid and Personal Safety	3
PSY 206 Adolescent Psychology	3
Fourth Semester	15
EAS 163 Introduction to Oceanography	3
EAS 242 Climatology	3
EDU 333 Technology in Education and Learning	3
SEC 210 Introduction to Secondary Education	3
SEC 220 Standards-based Education in Secondary Education	3
Junior Year	
Fifth Semester	16
EAS 230 Earth Resources	3
PHY 121 General Physics I	4

Education

Course	Credits
SEC 310 Instructional Strategies in Secondary Education	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration in Secondary Education	3
Sixth Semester	15
EAS 343 Geomorphology	3
EAS 402 Groundwater Hydrology	3
PHS 145 Astronomy	3
SEC 400 Classroom Management	3
SEC 420 Assessments and Interventions in Secondary Education	3
Senior Year	
Seventh Semester	15
EDU 310 Teaching in a Multicultural Society	3
EDU 350 Supporting English Language Learners	3
SEC 395 Teaching of Science	3
Elective	3
General Education Course (Art)	3
Eighth Semester	15
SEC 460 Professional Practices in Secondary Education	3
SEC 461 Student Teaching Practicum	12
Total	121

Additional Requirements

Undergraduate secondary education majors are required to:

- Maintain a GPA of 2.80.
- Pass the required PAPA exams.
- Have Act 34, 151 and 114 clearances for formal Admission to Teacher Education.

A GPA of 3.00 and passing scores for Praxis II are needed to apply for a Recommendation for Student Teaching.

Education

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/secondary-education/earth-science.aspx>

B.S.Ed. in English: Secondary Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in English: Secondary Education degree is designed for students seeking to teach middle and high school English. Through this program, students build knowledge of pedagogical principles as well as literature, linguistics and writing. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
PSY 100 General Psychology	3
UNI 100 First-Year Seminar	1
General Education Courses	6
Math Course	3
Second Semester	15
ENG 102 English Composition II	3
ENG 106 Introduction to Poetry OR ENG 107 Introduction to Fiction OR ENG 108 Introduction to Drama	3
ESP 210 Special Education Foundations and Collaboration	3
Math Course	3
General Education Course	3
Sophomore Year	

Education

Course	Credits
Third Semester	15
ENG 205 World Literature to 1600 OR ENG 206 World Literature from 1600	3
English Elective	3
PSY 206 Adolescent Psychology	3
SEC 210 Introduction to Secondary Education	3
SEC 220 Standards-based Education in Secondary Education	3
Fourth Semester	15
ENG 301 English Literature I OR ENG 302 English Literature II	3
ENG 346 History of the English Language OR 301 English Literature I	3
EDU 310 Teaching in a Multicultural Society	3
EDU 333 Technology in Teaching and Learning	3
ESP 311 Assessment and Positive Behavior Interventions	3
Junior Year	
Fifth Semester	15
ENG 337 Survey of American Literature I OR ENG 338 Survey of American Literature II	3
ENG 425 Shakespeare I	3
SEC 310 Instructional Strategies in Secondary Education	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration in Secondary Education	3
Sixth Semester	15
ENG 308 Research for Writers	3
ENG 345 English Grammar and Usage OR ENG 347 Introduction to Linguistics	3

Education

Course	Credits
ENG 352 Studies in Writing	3
SEC 400 Classroom Management	3
SEC 420 Assessments and Interventions in Secondary Education	3
Senior Year	
Seventh Semester	15
EDU 350 Supporting English Language Learners	3
English Literature Elective	3
English Writing Elective	3
ESP 413 Evidence-based Practices for Secondary Education	3
SEC 392 Teaching of English and Communications (Fall Only)	3
Eighth Semester	15
SEC 460 Professional Practices in Secondary Education	3
SEC 461 Student Teaching Practicum	12
Total	121

Additional Requirements

Undergraduate secondary education majors are required to:

- Maintain a GPA of 2.80.
- Pass the required PAPA exams.
- Have Act 34, 151 and 114 clearances for formal Admission to Teacher Education.

A GPA of 3.00 and passing scores for Praxis II are needed to apply for a Recommendation for Student Teaching.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/secondary-education/english.aspx>

B.S.Ed. in English: Secondary/Special Education 7-12

Program Description

The Bachelor of Science in Education (B.S.Ed.) in English: Secondary/Special Education 7-12 degree is designed for individuals interested in teaching middle and high school English in special education settings. The program develops students' knowledge of teaching and special education as well as literature, grammar and writing. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Education

Certification that includes Special Education may require an extra semester to complete.

Note: This is a dual certification, not a dual degree.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following sections include an eight-semester schedule of courses provided as a recommended framework for completing the certification programs in four years.

Course	Credits
Freshman Year	
First Semester	17
ENG 101 English Composition I	3
MAT XXX Math Course	3
PSY 100 Introduction to Psychology	3
UNI 100 First-Year Seminar	1
GEN ED: Health and Wellness Course	3
GEN ED: Natural Science with Lab	3 or 4
Second Semester	18
ENG 102 English Composition II	3
ESP 210 Special Education Foundations and Collaboration	3
ESP 311 Assessment and PBS	3
MAT XXX Math Course	3
PSY 206 Adolescent Psychology	3
SEC 210 Introduction to Secondary Education	3
Sophomore Year	
Third Semester	18
ENG 106/107/108	3

Education

Course	Credits
ENG 301 English Literature I	3
ENG 345 English Grammar and Usage	3
SEC 220 Standards-Based Education in Secondary Education	3
SEC 310 Instructional Strategies Secondary Ed	3
GEN ED: Fine Arts Course	3
Fourth Semester	18
ENG 206 World Literature to 1600	3
ENG 308 Research in Writing	3
ENG 346 History of English Language	3
EDU 310 Teaching in a Multicultural Society	3
EDU 333 Technology in Teaching and Learning	3
EDU 350 Supporting English Language Learners	3
Junior Year	
Fifth Semester	18
ENG 347 Introduction to Linguistics	3
ESP 312 ABA for Special Education	3
ESP 339 Special Education Field Experience I	3
ESP 403 Assessment and Prescriptive Teaching	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration	3
Sixth Semester	18
ENG 338 Survey of American Literature II	3
ESP 406 Transition Planning and Instruction	3
ESP 411 Special Education History, Theory and Excpt.	3
ESP 413 EBP for Secondary Education	3
SEC 400 Classroom Management	3

Education

Course	Credits
SEC 420 Assessments and Interventions in Secondary Education	3
Senior Year	
Seventh Semester	18
ENG 352 Studies in Writing	3
ENG 425 Shakespeare	3
ESP 349 Special Education Field Experience II	3
ESP 402 Life Skills: Planning and Instruction	3
ESP 418 Advanced EBP for Secondary Ed	3
SEC 392 Teaching of English	3
Eighth Semester	15
ESP 461 Student Teaching	6
SEC 460 Professional Practices	3
SEC 461 Student Teaching	6
Total	140

Program Notes

- Student teaching will consist of a split placement between Special and Secondary Education. In addition, field experience will be completed for both certification areas.
- All required courses need a grade of "C" or higher.

B.S.Ed. in Grades 4-8 and Special Education: Language Arts/Reading

Program Description

The Language Arts/Reading concentration of the Bachelor of Science in Education (B.S.Ed.) in Grades 4-8 and Special Education degree builds expertise in teaching, special education and English. The program prepares students to earn:

- A license to teach special education in PreK through grade 8
- Certification to teach in grades 4 through 8

Certification that includes Special Education may require an extra semester to complete.

Note: This is a dual certification, not a dual degree.

Delivery Mode

Traditional (on campus)

Education

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following sections include an eight-semester schedule of courses provided as a recommended framework for completing the certification programs in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
GEO/POS/ECO 102 Social Sciences Course	3
HIS 101 OR HIS 102 U.S. History	3
MAT 120 Elementary Topics in Math I	3
PSY 206 Adolescent Psychology	3
UNI 100 First-Year Seminar	1
Second Semester	18
ENG 102 English Composition II	3
ESP 210 Special Education Foundations and Collaboration	3
ESP 311 Assessment and Positive Behavior Interventions	3
HSC 115 Current Health Issues	3
MAT 130 Elementary Topics In Math II	3
Any Fine Arts Elective	3
Sophomore Year	
Third Semester	18
ELM 200 Introduction to Middle Level Education	3
ENG 108 Introduction to Drama	3
ENG 337 Survey of American Literature I	3
PHS 120 Basic Physical Science	3
MAT 181 College Algebra	3

Education

Course	Credits
Any Approved Ethics/Multicultural	3
Fourth Semester	15
BIO 103 Contemporary Issues in Biology	3
EAS 100 Introduction to Earth Science	3
ELM 220 Instruction and Assessment in Grades 4-8	3
ENG 107 Introduction to Fiction	3
ENG 338 Survey of American Literature II	3
Junior Year	
Fifth Semester	18
EDU 333 Educational Technology	3
ELM 302 Language Arts Methods Assessment	3
ELM 331 Social Studies Methods Assessment	3
ESP 312 Applied Behavior Analysis for Special Educators	3
ESP 339 Special Education Field Experience I	3
ESP 403 Assessment and Prescriptive Teaching	3
Sixth Semester	18
ELM 301 Reading Methods Assessment	3
ELM 311 Math Methods Assessment	3
ELM 411 Field Experience Grades 4-8	3
ESP 407 Early Intervention Special Education	3
ESP 411 History, Theory, and Exceptionality	3
ESP 412 Evidence Based Practices	3
Senior Year	
Seventh Semester	15
EDU 350 Supporting English Language Learners	3
ELM 321 Science Methods Assessment	3

Education

Course	Credits
ESP 349 Special Education Field Experience II	3
ESP 402 Life Skills Planning and Instruction	3
ESP 414 Advanced Evidence Based Practices for Elementary Inclusion	3
Eighth Semester	12
ELM 461 Student Teaching and School Law	6
ESP 461 Student Teaching and School Law	6
Total	130

Program Notes

- All ELM and ESP courses require current clearances and minimum 2.5 GPA to register.
- All courses required for certification must earn C or better.
- Admission to Teacher Education required for enrollment in ESP 412, ELM 301, ELM 311, ELM 321, ELM 411, ESP 461 and ELM 461.
- Pre-requisites for all 300 level ELM courses are ELM 200 and ELM 220.
- ESP 210 and ESP 311 are pre-requisites for all ESP courses.
- **Bolded courses** indicate a block of courses that must be taken together.

Approved British or American Literature Courses

- **ENG 107** Introduction to Fiction
- **ENG 125** The American West
- **ENG 127** Woman as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 160** Introduction to British and American Literature
- **ENG 203** Great Books
- **ENG 301** English Literature I
- **ENG 302** English Literature II
- **ENG 337** Survey of American Literature I
- **ENG 338** Survey of American Literature II

B.S.Ed. in Grades 4-8 and Special Education: Mathematics

Program Description

The Mathematics concentration of the Bachelor of Science in Education (B.S.Ed.) in Grades 4-8 and Special Education degree builds expertise in teaching, special education and math. The program prepares students to earn:

- A license to teach special education in PreK through grade 8
- Certification to teach in grades 4 through 8

Certification that includes Special Education may require an extra semester to complete.

Note: This is a dual certification, not a dual degree.

Education

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following sections include an eight-semester schedule of courses provided as a recommended framework for completing the certification programs in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
GEO/POS/ECO 102 Social Sciences Course	3
HIS 101 OR HIS 102 U.S. History	3
MAT 120 Elementary Topics in Math I	3
PSY 206 Adolescent Psychology	3
UNI 100 First-Year Seminar	1
Second Semester	18
ESP 210 Special Education Foundations and Collaboration	3
ESP 311 Assessment and Positive Behavior Interventions	3
HSC 115 Current Health Issues	3
MAT 130 Elementary Topics in Math II	3
MAT 181 College Algebra	3
Any Approved American/British Literature Course	3
Sophomore Year	
Third Semester	18
ELM 200 Introduction to Middle Level Education	3
MAT 191 College Trigonometry	3
MAT 272 Discrete Mathematics	3

Education

Course	Credits
PHS 120 Basic Physical Science	3
Any Fine Arts Elective	3
Any Approved Ethics/Multicultural	3
Fourth Semester	15
BIO 103 Contemporary Issues in Biology	3
EAS 100 Introduction to Earth Science	3
EDU 333 Educational Technology	3
ELM 220 Instruction and Assessment in Grades 4-8	3
MAT 341 Linear Algebra	3
Junior Year	
Fifth Semester	18
ELM 302 Language Arts Methods Assessment	3
ELM 331 Social Studies Methods Assessment	3
ESP 312 Applied Behavior Analysis for Special Educators	3
ESP 339 Special Education Field Experience I	3
ESP 403 Assessment and Prescriptive Teaching	3
MAT 303 Geometry	3
Sixth Semester	18
ELM 301 Reading Methods Assessment	3
ELM 311 Math Methods Assessment	3
ELM 411 Field Experience Grades 4-8	3
ESP 407 Early Intervention Special Education	3
ESP 411 History, Theory, and Exceptionality	3
ESP 412 Evidence Based Practices	3
Senior Year	
Seventh Semester	15

Education

Course	Credits
EDU 350 Supporting English Language Learners	3
ELM 321 Science Methods Assessment	3
ESP 349 Special Education Field Experience II	3
ESP 402 Life Skills Planning and Instruction	3
ESP 414 Advanced Evidence Based Practices for Elementary Inclusion	3
Eighth Semester	12
ELM 461 Student Teaching and School Law	6
ESP 461 Student Teaching and School Law	6
Total	130

Program Notes

- All ELM and ESP courses require current clearances and minimum 2.5 GPA to register.
- All courses required for certification must earn C or better.
- Admission to Teacher Education required for enrollment in ESP 412, ELM 301, ELM 311, ELM 321, ELM 411, ESP 461 and ELM 461.
- Pre-requisites for all 300 level ELM courses are ELM 200 and ELM 220.
- ESP 210 and ESP 311 are pre-requisites for all ESP courses.
- **Bolded course titles** indicate a block of courses that must be taken together.

Approved British or American Literature Courses

- **ENG 107** Introduction to Fiction
- **ENG 125** The American West
- **ENG 127** Woman as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 160** Introduction to British and American Literature
- **ENG 203** Great Books
- **ENG 301** English Literature I
- **ENG 302** English Literature II
- **ENG 337** Survey of American Literature I
- **ENG 338** Survey of American Literature II

B.S.Ed. in Grades 4-8 and Special Education: Science

Program Description

The Science concentration of the Bachelor of Science in Education (B.S.Ed.) in Grades 4-8 and Special Education degree builds expertise in teaching, special education and the sciences. The program prepares students to earn:

- A license to teach special education in PreK through grade 8
- Certification to teach in grades 4 through 8

Certification that includes Special Education may require an extra semester to complete.

Education

Note: This is a dual certification, not a dual degree.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following sections include an eight-semester schedule of courses provided as a recommended framework for completing the certification programs in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
GEO/POS/ECO 102 Social Sciences Course	3
HIS 101 OR HIS 102 U.S. History	3
MAT 120 Elementary Topics in Math I	3
PSY 206 Adolescent Psychology	3
UNI 100 First-Year Seminar	1
Second Semester	18
BIO 103 Contemporary Issues in Biology	3
ESP 210 Special Education Foundations and Collaboration	3
ESP 311 Assessment and Positive Behavior Interventions	3
HSC 115 Current Health Issues	3
MAT 130 Elementary Topics in Math II	3
Any Approved American/British Literature Course	3
Sophomore Year	
Third Semester	18
EAS 100 Introduction to Earth Science	3
ELM 200 Introduction to Middle Level Education	3

Education

Course	Credits
MAT 181 College Algebra	3
Any Fine Arts Elective	3
Any Approved Ethics/Multicultural	3
Any Approved Science Elective	3
Fourth Semester	15
EDU 333 Educational Technology	3
ELM 220 Instruction and Assessment in Grades 4-8	3
PHS 120 Basic Physical Science	3
Any Approved Science Electives	6
Junior Year	
Fifth Semester	18
EDU 350 Supporting English Language Learners	3
ELM 302 Language Arts Methods Assessment	3
ELM 331 Social Studies Methods Assessment	3
ESP 312 Applied Behavior Analysis for Special Educators	3
ESP 339 Special Education Field Experience I	3
ESP 403 Assessment and Prescriptive Teaching	3
Sixth Semester	18
ELM 301 Reading Methods Assessment	3
ELM 311 Math Methods Assessment	3
ELM 411 Field Experience Grades 4-8	3
ESP 407 Early Intervention Special Education	3
ESP 411 History, Theory, and Exceptionality	3
ESP 412 Evidence Based Practices	3
Senior Year	
Seventh Semester	15

Education

Course	Credits
ELM 321 Science Methods Assessment	3
ELM 360 Enviro/Ecology/Nature Study	3
ESP 349 Special Education Field Experience II	3
ESP 402 Life Skills Planning and Instruction	3
ESP 414 Advanced Evidence Based Practices for Elementary Inclusion	3
Eighth Semester	12
ELM 461 Student Teaching and School Law	6
ESP 461 Student Teaching and School Law	6
Total	130

Program Notes

- All ELM and ESP courses require current clearances and minimum 2.5 GPA to register.
- All courses required for certification must earn C or better.
- Admission to Teacher Education required for enrollment in ESP 412, ELM 301, ELM 311, ELM 321, ELM 411, ESP 461 and ELM 461.
- Pre-requisites for all 300 level ELM courses are ELM 200 and ELM 220.
- ESP 210 and ESP 311 are pre-requisites for all ESP courses.
- **Bolded course titles** indicate a block of courses that must be taken together.

Approved British or American Literature Courses

- **ENG 107** Introduction to Fiction
- **ENG 125** The American West
- **ENG 127** Woman as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 160** Introduction to British & American Literature
- **ENG 203** Great Books
- **ENG 301** English Literature I
- **ENG 302** English Literature II
- **ENG 337** Survey of American Literature I
- **ENG 338** Survey of American Literature II

B.S.Ed. in Grades 4-8 and Special Education: Social Studies

Program Description

The Social Studies concentration of the Bachelor of Science in Education (B.S.Ed.) in Grades 4-8 and Special Education degree builds expertise in teaching and special education as well as history, geography and political science. The program prepares students to earn:

- A license to teach special education in PreK through grade 8
- Certification to teach in grades 4 through 8

Certification that includes Special Education may require an extra semester to complete.

Education

Note: This is a dual certification, not a dual degree.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following sections include an eight-semester schedule of courses provided as a recommended framework for completing the certification programs in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
HIS 101 U.S. History to 1877	3
HSC 115 Current Health Issues	3
MAT 120 Elementary Topics in Math I	3
PSY 206 Adolescent Psychology	3
UNI 100 First-Year Seminar	1
Second Semester	18
ECO 100 Elements of Economics	3
ESP 210 Special Education Foundations and Collaboration	3
ESP 311 Assessment and Positive Behavior Interventions	3
HIS 102 U.S. History since 1877	3
MAT 130 Elementary Topics in Math II	3
Any Approved American/British Literature Course	3
Sophomore Year	
Third Semester	18
BIO 103 Contemporary Issues in Biology	3
EAS 100 Introduction to Earth Science	3

Education

Course	Credits
ELM 200 Introduction to Middle Level Education	3
GEO 100 Introduction to Geography	3
MAT 181 College Algebra	3
Any Fine Arts Elective	3
Fourth Semester	15
EDU 333 Educational Technology	3
ELM 220 Instruction and Assessment in Grades 4-8	3
HIS 200 History of Pennsylvania	3
PHS 120 Basic Physical Science	3
POS 100 Introduction to Political Science OR POS 105 American Politics	3
Junior Year	
Fifth Semester	18
ELM 302 Language Arts Methods Assessment	3
ELM 331 Social Studies Methods Assessment	3
ESP 312 Applied Behavior Analysis for Special Educators	3
ESP 339 Special Education Field Experience I	3
ESP 403 Assessment and Prescriptive Teaching	3
Any Approved Ethics/Multicultural	3
Sixth Semester	18
ELM 301 Reading Methods Assessment	3
ELM 311 Math Methods Assessment	3
ELM 411 Field Experience Grades 4-8	3
ESP 407 Early Intervention Special Education	3
ESP 411 History, Theory, and Exceptionality	3
ESP 412 Evidence Based Practices	3

Education

Course	Credits
Senior Year	
Seventh Semester	15
EDU 350 Supporting English Language Learners	3
ELM 321 Science Methods Assessment	3
ESP 349 Special Education Field Experience II	3
ESP 402 Life Skills Planning and Instruction	3
ESP 414 Advanced Evidence Based Practices for Elementary Inclusion	3
Eighth Semester	12
ELM 461 Student Teaching and School Law	6
ESP 461 Student Teaching and School Law	6
Total	130

Program Notes

- All ELM and ESP courses require current clearances and minimum 2.5 GPA to register.
- All courses required for certification must earn C or better.
- Admission to Teacher Education required for enrollment in ESP 412, ELM 301, ELM 311, ELM 321, ELM 411, ESP 461 and ELM 461.
- Pre-requisites for all 300 level ELM courses are ELM 200 and ELM 220.
- ESP 210 and ESP 311 are pre-requisites for all ESP courses.
- **Bolded course titles** indicate a block of courses that must be taken together.

Approved British or American Literature Courses

- **ENG 107** Introduction to Fiction
- **ENG 125** The American West
- **ENG 127** Woman as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 160** Introduction to British and American Literature
- **ENG 203** Great Books
- **ENG 301** English Literature I
- **ENG 302** English Literature II
- **ENG 337** Survey of American Literature I
- **ENG 338** Survey of American Literature II

B.S.Ed. in Grades PreK-4 Education

Program Description

The Bachelor of Science in Education in Grades PreK-4 Education degree prepares students to teach children at the pre-kindergarten to grade 4 levels. Pennsylvania certification in pre-K to grade 4 education is awarded upon graduation and completion of state certification requirements.

Education

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
HIS 101 OR HIS 102 US History	3
MAT 120 Elementary Topics in Math I	3
PSY 205 Childhood Psychology	3
UNI 100 First-Year Seminar	1
Any Approved American/British Lit Course	3
Second Semester	15
CHD 200 Introduction to PreK-Grade 8 Ed.	3
ELE 220 Instruction and Assessment in PreK	3
ELE 221 Instruction and Assessment in K-4	3
ESP 210 Special Ed Fnd. and Collaboration	3
MAT 130 Elementary Topics in Math II	3
Sophomore Year	
Third Semester	18
ELE 300 Emergent Literacy	3
ELE 310 Teaching PreK STEAM	3
ELE 410 PreK-4 Field	3
GEO/POS/ECO 102 Social Sciences	3
Any Fine Arts Course	3

Education

Course	Credits
Elective #1	3
Fourth Semester	15
CHD 250 Health and PE for PreK-4	3
CHD 312 Instructional Leadership in Childhood Education	3
ESP 311 Assessment Positive Behavior Intervention	3
PSY 208 Educational Psychology	3
Any Natural Science Course with lab	3
Junior Year	
Fifth Semester	15
CHD 350 Family and Community Collab. and Partnerships	3
ELE 301 Literacy Foundations I: Lang. Arts*	3
ELE 302 Literacy Foundations II: Reading*	3
ELE 331 Teaching Social Studies K-4*	3
Elective #2	3
Sixth Semester	15
CHD 413 Content Area Literacy Field Exp.*	3
EDU 333 Technology for Teach. Learn.	3
ELE 311 Teaching Math K-4*	3
ELE 321 Teaching Science K-4*	3
Elective #3	3
Senior Year	
Seventh Semester	15
CHD 450 Assessment and Data Literacy for Teach.*	3
EDU 350 Supporting English Lang. Learners	3
EDU 375 Intro to Integrated STEM Ed.	3

Education

Course	Credits
ELE 411 Field Experience K-4*	3
ESP 412 EBP for PreK-8 Inclusion*	3
Eighth Semester	12
ELE 461 Student Teaching and School Law*	12
Total	121

Program Notes

- **Course titles in bold** indicate a block of courses that are scheduled together and must be taken at the same time.
- Courses marked with an asterisk require admission to Teacher Education before registration.
- All courses required for certification must earn C or better.
- CHD 200 and ELE 220 require current clearances and minimum 2.0 GPA to register for courses.
- ALL other EDU, ELE, ESP and CHD courses require current clearances and minimum 2.5 GPA to register for courses.
- Candidates must follow policies for admission to Teacher Education as stated in the Teacher Education Handbook.
- Pre-requisite for all courses marked with an asterisk (*) is admission to Teacher Education.
- Pre-requisites for ELE 221 and all 300-level ELE and CHD courses are ELE 200 and ELE 220.
- State licensure exams must be passed before Student Teaching.
- Current clearances are required prior to enrolling in program courses.

Approved British or American Literature Courses

- **ENG 107** Introduction to Fiction
- **ENG 125** The American West
- **ENG 127** Woman as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 160** Introduction to British and American Literature
- **ENG 203** Great Books
- **ENG 301** English Literature I (pre-requisites ENG 101, 102)
- **ENG 302** English Literature II (pre-requisites ENG 101, 102)
- **ENG 337** Survey of American Literature I (pre-requisite ENG 102)
- **ENG 338** Survey of American Literature II (pre-requisite ENG 102)
- **HON 250** Honors Comp II (pre-requisite HON 150)

Accelerated Bachelor's-to-Master's Program

Accelerated bachelor's-to-master's programs are also available to undergraduate students who qualify, including:

- B.S.Ed. in Grades PreK-4 Education to M.Ed. in Reading Specialist
- B.S.Ed. in Grades PreK-4 Education to M.Ed. in Integrative STEM Education K-12

Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Education

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/grades-prek-4-education/index.aspx>

B.S.Ed. in Mathematics: Secondary Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Mathematics: Secondary Education degree is designed for students seeking to teach middle and high school (grades 7-12) math. Through this program, students build knowledge and competencies in teaching, problem-solving and math. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
MAT 199 Pre-Calculus	3
PSY 100 General Psychology	3
UNI 100 First-Year Seminar	1
General Education Courses	6
Second Semester	15
ESP 210 Special Education Foundations and Collaboration	3
MAT 281 Calculus I	3
PSY 206 Adolescent Psychology	3
English Course	3
General Education Course	3
Sophomore Year	
Third Semester	15

Education

Course	Credits
ESP 311 Assessment and Positive Behavior Interventions	3
MAT 272 Discrete Mathematics	3
MAT 282 Calculus II	3
SEC 210 Introduction to Secondary Education	3
SEC 220 Standards-based Education in Secondary Education	3
Fourth Semester	15
EDU 310 Teaching in a Multicultural Society	3
EDU 333 Technology in Teaching and Learning	3
MAT 290 Technology for Math	3
MAT 304 History of Mathematics	3
MAT 305 Theory of Equations	3
Junior Year	
Fifth Semester	15
MAT 303 Geometry	3
MAT 381 Calculus III	3
SEC 310 Instructional Strategies in Secondary Education	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration in Secondary Education	3
Sixth Semester	15
MAT 341 Linear Algebra I	3
MAT 400 Mathematical Modeling	3
MAT 461 Statistical Analysis I	3
SEC 400 Classroom Management	3
SEC 420 Assessments and Interventions in Secondary Education	3

Education

Course	Credits
Senior Year	
Seventh Semester	15
MAT 351 Abstract Algebra I	3
Math Elective	3
EDU 350 Supporting English Language Learners	3
ESP 413 Evidence-based Practices for Secondary Education	3
SEC 394 Teaching of Mathematics	3
Eighth Semester	15
SEC 460 Professional Practices in Secondary Education	3
SEC 461 Student Teaching Practicum	12
Total	121

Additional Requirements

Undergraduate secondary education majors are required to:

- Maintain a GPA of 2.80.
- Pass the required PAPA exams.
- Have Act 34, 151 and 114 clearances for formal Admission to Teacher Education.

A GPA of 3.00 and passing scores for Praxis II are needed to apply for a Recommendation for Student Teaching.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/secondary-education/mathematics.aspx>

B.S.Ed. in Mathematics: Secondary/Special Education 7-12

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Mathematics: Secondary/Special Education 7-12 degree is designed for individuals interested in teaching middle and high school math in special education settings. The program develops students' knowledge of teaching, special education and math. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Certification that includes Special Education may require an extra semester to complete.

Note: This is a dual certification, not a dual degree.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education

Education

(NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following sections include an eight-semester schedule of courses provided as a recommended framework for completing the certification programs in four years.

Course	Credits
Freshman Year	
First Semester	17
ENG 101 English Composition I	3
MAT 199 Pre-Calculus	3
PSY 100 Introduction to Psychology	3
UNI 100 First-Year Seminar	1
GEN ED: Health and Wellness Course	3
GEN ED: Natural Science with Lab	3 or 4
Second Semester	18
ESP 210 Special Education Foundations and Collaboration	3
ESP 311 Assessment and PBS	3
MAT 281 Calculus	3
PSY 206 Adolescent Psychology	3
SEC 210 Introduction to Secondary Education	3
Approved American/British Literature Course	3
Sophomore Year	
Third Semester	18
EDU 310 Teaching in a Multicultural Society	3
MAT 272 Discrete Mathematics	3
MAT 282 Calculus II	3
SEC 220 Standards-Based Education in Secondary Education	3
SEC 310 Instructional Strategies Secondary Ed	3
GEN ED: Fine Arts Course	3

Education

Course	Credits
Fourth Semester	18
MAT 290 Technology for Math	3
MAT 305 Theory of Equations	3
MAT 341 Linear Algebra	3
MAT 351 Abstract Algebra	3
EDU 333 Technology in Teaching and Learning	3
EDU 350 Supporting English Language Learners	3
Junior Year	
Fifth Semester	18
ESP 312 ABA for Special Education	3
ESP 339 Special Education Field Experience I	3
ESP 403 Assessment and Prescriptive Teaching	3
MAT 303 Geometry	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration	3
Sixth Semester	18
ESP 406 Transition Planning and Instruction	3
ESP 411 Special Education History, Theory and Excpt.	3
ESP 413 EBP for Secondary Education	3
MAT 304 History of Mathematics	3
SEC 400 Classroom Management	3
SEC 420 Assessments and Interventions in Secondary Education	3
Senior Year	
Seventh Semester	18
ESP 349 Special Education Field Experience II	3

Education

Course	Credits
ESP 402 Life Skills: Planning and Instruction	3
ESP 418 Advanced EBP for Secondary Ed	3
MAT 400 Mathematical Modeling	3
MAT 461 Statistical Analysis I	3
SEC 394 Teaching of Math	3
Eighth Semester	15
ESP 461 Student Teaching	6
SEC 460 Professional Practices	3
SEC 461 Student Teaching	6
Total	140

Program Notes

- Student teaching will consist of a split placement between Special and Secondary Education. In addition, field experience will be completed for both certification areas.
- All required courses need a grade of "C" or higher.

B.S.Ed. in Middle Level Grades 4-8 Education: Language Arts/Reading

Program Description

The Language Arts/Reading concentration of the Bachelor of Science in Education in Middle Level Education degree prepares students to teach English language and reading to children in grades 4 through 8. Upon successful completion of this program, students will earn a bachelor's degree and be eligible for Pennsylvania teaching certification.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3

Education

Course	Credits
HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877	3
MAT 120 Elementary Topics in Math I	3
PSY 206 Adolescent Psychology	3
UNI 100 First-Year Seminar	1
Fine Arts Elective	3
Second Semester	15
CHD 250 Teaching Health and Physical Education	3
ESP 210 Special Education Foundations and Collaboration	3
MAT 130 Elementary Topics in Math II	3
Any Approved Brit/American Lit Course	3
Natural Science with Lab	3
Sophomore Year	
Third Semester	18
CHD 350 Family and Community Collaborations	3
ELM 200 Intro to Middle Level Education	3
ENG 102 English Composition II	3
ENG 337 Survey of American Lit I	3
GEO/POS/ECO 102 Social Sciences Courses	3
MAT 181 College Algebra	3
Fourth Semester	15
ELM 220 Instruction and Assessment in 4-8 Class	3
ENG 338 Survey of American Lit II	3
ESP 311 Assessment and Positive Behavior Interventions	3
PSY 208 Educational Psychology	3
English Concentration Elective	3

Education

Course	Credits
Junior Year	
Fifth Semester	15
ELM 302 Language Arts Methods Assessment*	3
ELM 321 Science Methods Assessment*	3
ELM 331 Social Studies Methods Assessment*	3
English Concentration Course	3
Free Elective	3
Sixth Semester	15
CHD 413 Content Area Literacy Field Experience*	3
ELM 301 Reading Methods Assessment*	3
ELM 311 Math Methods Assessment*	3
EDU 333 Technology for Teaching and Learning	3
English Concentration Course	3
Senior Year	
Seventh Semester	15
CHD 450 Assessment and Data Literacy*	3
EDU 350 Supporting English Language Learners	3
EDU 375 Intro to Integrated STEM Education	3
ELM 415 Middle Level Education Field Experience*	3
ESP 412 Evidence Based Practices	3
Eighth Semester	12
ELM 461 Student Teaching*	12
Total	121

Program Notes

- **Course titles in bold** are scheduled together and must be taken at the same time.
- ALL ELM, CHD and ESP courses require current clearances and minimum 2.5 GPA to register for course, except ELM 200 and 220, which require a 2.0 GPA to register.
- All courses required for certification with a grade of C- or lower must be repeated.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.

Education

- Courses marked with an asterisk are restricted to candidates admitted to Teacher Education.
- Pre-requisite for ELM 220 and all 300-level ELM and CHD courses is ELM 200.
- State licensure for exams must be passed before student teaching.
- Current clearances are required prior to enrolling in program courses.

Approved British or American Literature Courses

- **ENG 107** Introduction to Fiction
- **ENG 125** The American West
- **ENG 127** Woman as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 160** Introduction to British and American Literature
- **ENG 203** Great Books
- **ENG 301** English Literature I (pre-requisite ENG 101, 102)
- **ENG 302** English Literature II (pre-requisite ENG 101, 102)
- **ENG 337** Survey of American Literature I (pre-requisite ENG 101, 102)
- **ENG 338** Survey of American Literature II (pre-requisite ENG 101, 102)
- **HON 250** Honors Comp II (prerequisite HON 150)

English Concentration Courses (select three)

- **ENG 308** Research for Writers
- **ENG 315** Survey of American Women Writers
- **ENG 345** English Grammar and Usage
- **ENG 347** Intro to Linguistics
- **ENG 425** Shakespeare

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Accelerated Bachelor's-to-Master's Program

Accelerated bachelor's-to-master's programs are also available to undergraduate students who qualify, including:

- B.S.Ed. in Middle Level Education: Language Arts/Reading to M.Ed. in Reading Specialist
- B.S.Ed. in Middle Level Education: Language Arts/Reading to M.Ed. in Integrative STEM Education K-12

Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/middle-level-education/english.aspx>

B.S.Ed. in Middle Level Grades 4-8 Education: Mathematics

Program Description

The Mathematics concentration of the Bachelor of Science in Education in Middle Level Education degree prepares students to teach math to children in grades 4 through 8. Upon successful completion of this program, students will earn a bachelor's degree and be eligible for Pennsylvania teaching certification.

Delivery Mode

Traditional (on campus)

Education

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
HIS 101 OR HIS 102 American History	3
MAT 181 College Algebra	3
PSY 206 Adolescent Psychology	3
UNI 100 First-Year Seminar	1
Fine Arts Elective	3
Second Semester	15
CHD 250 Teaching Health and Physical Education	3
ESP 210 Special Education Foundation and Collaboration	3
Any Approved American/British Literature Course	3
Free Elective OR MAT 130	3
Natural Science with Lab	3
Sophomore Year	
Third Semester	15
ELM 200 Intro to Middle Level Education	3
CHD 350 Family and Community Collaborations	3
GEO/POS/ECO 102 Social Sciences Courses	3
MAT 191 College Trigonometry	3
MAT 303 Geometry	3

Education

Course	Credits
Fourth Semester	15
ELM 220 Instruction and Assessment in 4-8 Class	3
ESP 311 Assessment and Positive Behavior Interventions*	3
MAT 272 Discrete Mathematics	3
MAT 281 Calculus	3
PSY 208 Educational Psychology	3
Junior Year	
Fifth Semester	15
ELM 302 Language Arts Methods Assessment*	3
ELM 321 Science Methods Assessment*	3
ELM 331 Social Studies Methods Assessment*	3
MAT 341 Linear Algebra	3
MAT 400 Mathematical Modeling	3
Sixth Semester	18
CHD 413 Content Area Literacy Field Experience*	3
ELM 301 Reading Methods Assessment*	3
ELM 311 Math Methods Assessment*	3
EDU 333 Technology for Teaching and Learning	3
MAT 215 Statistics	3
Free Elective Course	3
Senior Year	
Seventh Semester	15
CHD 450 Assessment and Data Literacy*	3
EDU 350 Supporting English Language Learners	3
EDU 375 Intro to Integrated STEM Education	3
ELM 415 Middle Level Field Experience*	3
ESP 412 Evidence Based Practices	3

Education

Course	Credits
Eighth Semester	12
ELM 461 Student Teaching	12
Total	121

Program Notes

- **Course titles in bold** are scheduled together and must be taken at the same time.
- ALL ELM, CHD and ESP courses require current clearances and minimum 2.5 GPA to register for course, except ELM 200 and 220, which require a 2.0 GPA to register.
- All courses required for certification with a grade of C- or lower must be repeated.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Courses marked with an asterisk are restricted to candidates admitted to Teacher Education.
- Pre-requisite for ELM 220 and all 300-level ELM and CHD courses is ELM 200.
- State licensure for exams must be passed before student teaching.
- Current clearances are required prior to enrolling in program courses.

Approved British or American Literature Courses

- **ENG 107** Introduction to Fiction
- **ENG 125** The American West
- **ENG 127** Woman as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 160** Introduction to British & American Literature
- **ENG 203** Great Books
- **ENG 301** English Literature I (pre-requisite ENG 101, 102)
- **ENG 302** English Literature II (pre-requisite ENG 101, 102)
- **ENG 337** Survey of American Literature I (pre-requisite ENG 101, 102)
- **ENG 338** Survey of American Literature II (pre-requisite ENG 101, 102)
- **HON 250** Honors Comp II (pre-requisite HON 150)

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (with credits toward a master's degree in Integrative STEM Education K-12) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/middle-level-education/mathematics.aspx>

B.S.Ed. in Middle Level Grades 4-8 Education: Science

Program Description

The Science concentration of the Bachelor of Science in Education in Middle Level Education degree prepares students to teach science to children in grades 4 through 8. Upon successful completion of this program, students will earn a bachelor's degree and be eligible for Pennsylvania teaching certification.

Education

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877	3
MAT 181 College Algebra	3
PSY 206 Adolescent Psychology	3
UNI 100 First-Year Seminar	1
Fines Arts Elective	3
Second Semester	15
CHD 250 Teaching Health and Physical Education	3
ESP 210 Special Education Foundation and Collaboration	3
MAT 120 Elementary Topics in Math I	3
MAT 130 Elementary Topics in Math II	3
American/British Literature Course	3
Sophomore Year	
Third Semester	16
ELM 200 Intro to Middle Level Education	3
CHD 350 Family and Community Collaborations	3
GEO/POS/ECO 102 Social Sciences Courses	3
MAT 215 Statistics	3

Education

Course	Credits
Physical Science Course from Approved List	4
Fourth Semester	17
BIO 125 General Botany OR BIO 120 General Zoology	4
ELM 220 Instruction and Assessment in 4-8 Class	3
ESP 311 Assessment and Positive Behavior Interventions*	3
PSY 208 Educational Psychology	3
Earth Science Course from Approved List	4
Junior Year	
Fifth Semester	13 to 16
ELM 302 Language Arts Methods Assessment*	3
ELM 321 Science Methods Assessment*	3
ELM 331 Social Studies Methods Assessment*	3
Free Elective	1 to 3
Science Concentration Course from Approved List	3 or 4
Sixth Semester	15 or 16
CHD 413 Content Area Literacy Field Experience*	3
ELM 301 Reading Methods Assessment*	3
ELM 311 Math Methods Assessment*	3
EDU 333 Technology for Teaching and Learning	3
Science Concentration Course from Approved List	3 or 4
Senior Year	
Seventh Semester	15
CHD 450 Assessment and Data Literacy*	3
EDU 350 Supporting English Language Learners	3
ELM 360 Environ., Eco., and Nature Study Education	3

Education

Course	Credits
ELM 415 Middle Level Field Experience*	3
ESP 412 Evidence Based Practices*	3
Eighth Semester	6 or 12
ELM 461 Student Teaching and School Law*	6 or 12
Total	121

Program Notes

- **Course titles in bold** are scheduled together and must be taken at the same time.
- ALL ELM, CHD and ESP courses require current clearances and minimum 2.5 GPA to register for course, except ELM 200 and 220, which require a 2.0 GPA to register.
- All courses required for certification with a grade of C- or lower must be repeated.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Courses marked with an asterisk are restricted to candidates admitted to Teacher Education.
- Pre-requisite for ELM 220 and all 300-level ELM and CHD courses is ELM 200.
- State licensure for exams must be passed before student teaching.
- Current clearances are required prior to enrolling in program courses.

Approved British or American Literature Courses

- **ENG 107** Introduction to Fiction
- **ENG 125** The American West
- **ENG 127** Woman as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 160** Introduction to British and American Literature
- **ENG 203** Great Books
- **ENG 301** English Literature I (pre-requisite ENG 101, 102)
- **ENG 302** English Literature II (pre-requisite ENG 101, 102)
- **ENG 337** Survey of American Literature I (pre-requisite ENG 101, 102)
- **ENG 338** Survey of American Literature II (pre-requisite ENG 101, 102)
- **HON 250** Honors Comp II (pre-requisite HON 150)

Concentration Courses

Please consult the science education adviser before selecting from the following concentration courses:

- **CHE 101** General Chemistry
- **CHE 103** Chemistry for Every Day World
- **EAS 104** Intro to Meteorology
- **EAS 105** Extreme Weather
- **EAS 142** Climatology
- **EAS 150** Intro to Geology
- **EAS 163** Introduction to Oceans
- **EAS 210** Soils
- **EDU 375** Intro to Integrated STEM Education
- **ENS 101** Intro to Environmental Science
- **PHS 137** Intro to Environmental Chemistry
- **PHS 145** Astronomy

Education

- **PHY 121** General Physics I
- **PHY 122** General Physics II

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (with credits toward a master's degree in Integrative STEM Education K-12) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/middle-level-education/science.aspx>

B.S.Ed. in Middle Level Grades 4-8 Education: Social Studies

Program Description

The Social Studies concentration of the Bachelor of Science in Education in Middle Level Education degree prepares students to teach social studies to children in grades 4 through 8. Upon successful completion of this program, students will earn a bachelor's degree and be eligible for Pennsylvania teaching certification.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
HIS 101 U.S. History to 1877	3
MAT 120 Elementary Topics in Math I	3
PSY 206 Adolescent Psychology	3
UNI 100 First-Year Seminar	1
Fine Arts Course	3
Second Semester	18
CHD 250 Teaching Health and Physical Education	3

Education

Course	Credits
ESP 210 Special Education Foundation and Collaboration	3
HIS 102 U.S. History since 1877	3
MAT 130 Elementary Topics in Math II	3
Any Approved American/British Literature Course	3
Natural Science with Lab	3
Sophomore Year	
Third Semester	15
CHD 350 Family and Community Collaborations	3
ELM 200 Intro to Middle Level Education	3
GEO 100 Intro to Geography	3
HIS 112 World History since 1500	3
MAT 181 College Algebra	3
Fourth Semester	15
ECO 100 Elements of Economics	3
ELM 220 Instruction and Assessment in 4-8 Class	3
ESP 311 Assessment and Positive Behavior Intervention*	3
POS 105 American National Government	3
PSY 208 Educational Psychology	3
Junior Year	
Fifth Semester	15
ELM 302 Language Arts Methods Assessment*	3
ELM 321 Science Methods Assessment*	3
ELM 331 Social Studies Methods Assessment*	3
HIS 200 History of Pennsylvania	3
Free Elective	3

Education

Course	Credits
Sixth Semester	15
CHD 413 Content Area Literacy Field Experience*	3
ELM 301 Reading Methods Assessment*	3
ELM 311 Math Methods Assessment*	3
EDU 333 Technology for Teaching and Learning	3
Approved Social Studies Concentration Course	3
Senior Year	
Seventh Semester	15
CHD 450 Assessment and Data Literacy*	3
EDU 350 Supporting English Language Learners	3
EDU 375 Intro to Integrated STEM Education	3
ELM 415 Middle Level Field Experience*	3
ESP 412 Evidence Based Practices*	3
Eighth Semester	12
ELM 461 Student Teaching*	12
Total	121

Program Notes

- **Course titles in bold** are scheduled together and must be taken at the same time.
- ALL ELM, CHD and ESP courses require current clearances and minimum 2.5 GPA to register for course, except ELM 200 and 220, which require a 2.0 GPA to register.
- All courses required for certification with a grade of C- or lower must be repeated.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Courses marked with an asterisk are restricted to candidates admitted to Teacher Education.
- Pre-requisite for ELM 220 and all 300-level ELM and CHD courses is ELM 200.
- State licensure for exams must be passed before student teaching.
- Current clearances are required prior to enrolling in program courses.

Approved British or American Literature Courses

- **ENG 107** Introduction to Fiction
- **ENG 125** The American West
- **ENG 127** Woman as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 160** Introduction to British & American Literature
- **ENG 203** Great Books

Education

- **ENG 301** English Literature I (pre-requisite ENG 101, 102)
- **ENG 302** English Literature II (pre-requisite ENG 101, 102)
- **ENG 337** Survey of American Literature I (pre-requisite ENG 101, 102)
- **ENG 338** Survey of American Literature II (pre-requisite ENG 101, 102)
- **HON 250** Honors Comp II (pre-requisite HON 150)

Concentration Courses

Take one of the concentration courses listed below:

- **ECO 200** Current Economics Issues
- **ECO 201** Principles of Microeconomics
- **ECO 202** Principles of Macroeconomics
- **GEO 105** Human Geography
- **GEO 217** Demographic Analysis
- **GEO 220** Geography of North America and PA
- **POS 101** Contemporary Policy and Politics
- **POS 306** The Congress
- **POS 310** The Presidency

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Accelerated Bachelor's-to-Master's Program

Accelerated bachelor's-to-master's programs are also available to undergraduate students who qualify, including:

- B.S.Ed. in Middle Level Education: Social Studies to M.Ed. in Reading Specialist
- B.S.Ed. in Middle Level Education: Social Studies to M.Ed. in Integrative STEM Education K-12

Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/middle-level-education/social-studies.aspx>

B.S.Ed. in Physics: Secondary Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Physics: Secondary Education degree is designed for students seeking to teach middle and high school (grades 7-12) physics. Through this program, students build competencies and knowledge in teaching, science and math. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Education

Course	Credits
Freshman Year	
First Semester	13
CHE 101 General Chemistry I	4
ENG 101 English Composition I	3
MAT 281 Calculus I	3
General Education Course	3
UNI 100 First-Year Seminar	1
Second Semester	16
ENG 102 English Composition II	3
ESP 210 Special Education Foundations and Collaboration	3
MAT 282 Calculus II	3
PHY 101 College Physics I	4
PSY 100 General Psychology	3
Sophomore Year	
Third Semester	16
HSC 315 First Aid and Personal Safety	3
MAT 381 Calculus III	3
PHY 202 College Physics II	4
SEC 210 Introduction to Secondary Education	3
SEC 220 Standards-based Education in Secondary Education	3
Fourth Semester	17
EDU 333 Technology in Teaching and Learning	3
ESP 311 Assessment and Positive Behavior Interventions	3
MAT 382 Calculus IV	3
PHY 203 College Physics III	4
PHY 301 Intermediate Electricity and Magnetism	4

Education

Course	Credits
Junior Year	
Fifth Semester	15
MAT 406 Differential Equations	3
PHY 331 Modern Physics I	3
PSY 206 Adolescent Psychology	3
SEC 400 Classroom Management	3
SEC 420 Assessments and Interventions in Secondary Education	3
Sixth Semester	13
ESP 413 Evidence-based Practices for Secondary Inclusion	3
PHY 495 Physics Seminar	1
SEC 310 Instructional Strategies in Secondary Education	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration in Secondary Education	3
Senior Year	
Seventh Semester	15
EDU 350 Supporting English Language Learners	3
SEC 400 Classroom Management	3
SEC 420 Assessments and Interventions in Secondary Education	3
SEC 395 Teaching of Science	3
Science Elective	3
Eighth Semester	15
SEC 460 Professional Practices in Secondary Education	3
SEC 461 Student Teaching Practicum	12

Education

Course	Credits
Total	120

Additional Requirements

Undergraduate secondary education majors are required to:

- Maintain a GPA of 2.80.
- Pass the required PAPA exams.
- Have Act 34, 151 and 114 clearances for formal Admission to Teacher Education.

A GPA of 3.00 and passing scores for Praxis II are needed to apply for a Recommendation for Student Teaching.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/secondary-education/physics.aspx>

B.S.Ed. in PreK-4 Education and Special Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in PreK-4 Education and Special Education prepares students to earn:

- Certification to teach pre-K through grade 4
- A license to teach special education in grades pre-K through grade 8

Certification that includes Special Education may require an extra semester to complete.

Note: This is a dual certification, not a dual degree.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following sections include an eight-semester schedule of courses provided as a recommended framework for completing the certification programs in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
HIS 101 OR 102 U.S. History	3
MAT 120 Elementary Topics in Math I	3
PSY 205 Childhood Psychology	3
UNI 100 First-Year Seminar	1

Education

Course	Credits
Any Natural Science Course	3
Second Semester	18
CHD 200 Introduction to PreK-Grade 4	3
ELE 220 Instruction and Assessment PreK	3
ELE 221 Instruction and Assessment in K-4	3
ESP 210 Special Education Foundations and Collaboration	3
ESP 311 Assessment and Positive Behavior Interventions	3
MAT 130 Elementary Topics in Math II	3
Sophomore Year	
Third Semester	15
ELE 300 Emerging Literacy	3
ELE 310 Teaching Math/Science PK-4	3
GEO/POS/ECO 102 Social Sciences	3
MUS/ART/THE 372 Creative Arts PK-4	3
Any Approved AM/BRIT Literature	3
Fourth Semester	12
CHD 250 Health and PE for PK-Grade 4	3
CHD 312 Instructional Leadership in Childhood Education	3
EDU 333 Educational Technology	3
PSY 208 Educational Psychology	3
Junior Year	
Fifth Semester	18
ELE 301 Literacy Foundations I: LA	3
ELE 302 Literacy Foundations II: Reading	3
ELE 331 Teaching Social Studies K-4	3

Education

Course	Credits
ESP 312 Applied Behavior Analysis for Special Educators	3
ESP 339 Special Education Field Experience I	3
ESP 403 Assessment and Prescriptive Teaching	3
Sixth Semester	18
EDU 350 Supporting ELL	3
ELE 311 Teaching Math K-4	3
ELE 321 Teaching Science K-4	3
ESP 407 Early Intervention Special Education	3
ESP 411 History, Theory, and Exceptionality	3
ESP 412 Evidence Based Practices	3
Senior Year	
Seventh Semester	18
CHD 350 Family and Community Collaboration Partnerships	3
CHD 450 Assessment and Data Literacy	3
EDU 375 Introduction to Integrative STEM Education	3
ESP 349 Special Education Field Experience II	3
ESP 402 Life Skills Planning and Instruction	3
ESP 414 Advanced Evidence Based Practices for PK-8 Inclusion	3
Eighth Semester	12
ELE 461 Student Teaching and School Law	6
ESP 461 Student Teaching and School Law	6
Total	127

Program Notes

- All ELE/ESP/CHD courses require current clearances and a minimum 2.5 GPA to register.
- All courses required for certification must earn C or better.
- Admission to Teacher Education required for enrollment in ESP 412, CHD 450, ELE 311, ELE 321, ELE 331, ESP 461 and ELE 461.

Education

- Pre-requisites for ELE 221 and all 300 level ELE and CHS courses are ELE 200 and ELE 220. ESP 210 and ESP 311 are prerequisites for all ESP courses.
- **Bolded courses titles** indicate a block of courses that must be taken together.

Approved British or American Literature Courses

- **ENG 107** Introduction to Fiction
- **ENG 125** The American West
- **ENG 127** Woman as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 160** Introduction to British and American Literature
- **ENG 203** Great Books
- **ENG 301** English Literature I
- **ENG 302** English Literature II
- **ENG 337** Survey of American Literature I
- **ENG 338** Survey of American Literature II

B.S.Ed. in Social Studies: Secondary Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Social Studies: Secondary Education degree is designed for students seeking to teach social studies in middle and high school (grades 7-12) settings. Through this program, students build competencies and knowledge related to teaching, history, political science and geography. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
HIS 101 History of the U.S. to 1877	3
PSY 100 General Psychology	3
UNI 100 First-Year Seminar	1
Math Course	3
General Education Course	3

Education

Course	Credits
Second Semester	15
ESP 210 Special Education Foundations and Collaborations	3
HIS 102 History of the U.S. Since 1877	3
English Course	3
Math Course	3
General Education Course	3
Sophomore Year	
Third Semester	15
ECO 100 Elements of Economics	3
GEO 100 Introduction to Geography	3
HIS 104 History of Western Civilization to 1500 OR HIS 111 World Civilization to 1500	3
POS 105 American Politics	3
PSY 206 Adolescent Psychology	3
Fourth Semester	15
EDU 333 Technology in Teaching and Learning	3
ESP 311 Assessment and Positive Behavior Interventions	3
HIS 106 History of Western Society Since 1500 OR HIS 112 World Civilization Since 1500	3
SEC 210 Introduction to Secondary Education	3
SEC 220 Standards-based Education in Secondary Education	3
Junior Year	
Fifth Semester	15
PSY 360 Technology Integration in Secondary Education	3

Education

Course	Credits
SEC 310 Instructional Strategies in Secondary Education	3
SEC 350 Content Area Literacy	3
SOC 100 Principles of Sociology	3
General Education Course	3
Sixth Semester	15
EDU 310 Teaching in a Multicultural Society	3
HIS 104 History of Western Civilization to 1500 OR HIS 111 World Civilization to 1500	3
HIS 3xx Non-Western History Course	3
SEC 400 Classroom Management	3
SEC 420 Assessments and Interventions in Secondary Education	3
Senior Year	
Seventh Semester	15
EDU 350 Supporting English Language Learners	3
ESP 413 Evidence-based Practices for Secondary Education	3
HIS 3xx	3
SEC 396 Teaching of Social Studies	3
Social Studies Elective	3
Eighth Semester	15
SEC 460 Professional Practices in Secondary Education	3
SEC 461 Student Teaching Practicum	12
Total	121

Additional Requirements

Undergraduate secondary education majors are required to:

- Maintain a GPA of 2.80.
- Pass the required PAPA exams.

Education

- Have Act 34, 151 and 114 clearances for formal Admission to Teacher Education.

A GPA of 3.00 and passing scores for Praxis II are needed to apply for a Recommendation for Student Teaching.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/secondary-education/social-studies.aspx>

B.S.Ed. in Social Studies: Secondary/Special Education 7-12

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Social Studies: Secondary/Special Education 7-12 degree is designed for individuals interested in teaching middle and high school social studies in special education settings. The program develops students' knowledge of teaching and special education as well as history, geography, political science and related disciplines. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Certification that includes Special Education may require an extra semester to complete.

Note: This is a dual certification, not a dual degree.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following sections include an eight-semester schedule of courses provided as a recommended framework for completing the certification programs in four years.

Course	Credits
Freshman Year	
First Semester	17
ENG 101 English Composition I	3
HIS 101 U.S. History to 1877	3
MAT XXX Math Elective	3
PSY 100 Introduction to Psychology	3
UNI 100 First-Year Seminar	1
GEN ED: Natural Science with Lab	3 or 4
Second Semester	18
ESP 210 Special Education Foundations and Collaboration	3
ESP 311 Assessment and PBS	3

Education

Course	Credits
HIS 102 U.S. History since 1878	3
MAT XXX Math Elective	3
SEC 210 Introduction to Secondary Education	3
Approved American/British Literature Course	3
Sophomore Year	
Third Semester	18
ECO 100 Elements of Economics	3
GEO 100 Introduction to Geography	3
HIS 104 History of Western Civilization	3
PSY 206 Adolescent Psychology	3
SOC 100 Principles of Sociology	3
GEN ED: Fine Arts Course	3
Fourth Semester	18
ANT 100 Introduction to Anthropology	3
HIS 106 History of Western Society	3
EDU 310 Teaching in a Multicultural Society	3
SEC 220 Standards-Based Ed in Sec Ed	3
SEC 310 Instructional Strategies in Sec Ed	3
GEN ED: Health and Wellness Course	3
Junior Year	
Fifth Semester	18
ESP 312 ABA for Special Education	3
ESP 339 Special Education Field Experience I	3
ESP 403 Assessment and Prescriptive Teaching	3
POS 105 American Politics	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration	3

Education

Course	Credits
Sixth Semester	18
ESP 406 Transition Planning and Instruction	3
ESP 411 Special Education History, Theory and Excpt.	3
ESP 413 EBP for Secondary Education	3
HIS XXX History Elective	3
SEC 400 Classroom Management	3
SEC 420 Assessments and Interventions in Secondary Education	3
Senior Year	
Seventh Semester	18
EDU 350 Supporting the English Language Learner	3
ESP 333 Tech in Teaching and Learning	3
ESP 349 Special Education Field Experience II	3
ESP 402 Life Skills: Planning and Instruction	3
ESP 418 Advanced EBP for Secondary Ed	3
SEC 396 Teaching of Social Studies	3
Eighth Semester	15
ESP 461 Student Teaching	6
SEC 460 Professional Practices	3
SEC 461 Student Teaching	6
Total	140

Program Notes

- Student teaching will consist of a split placement between Special and Secondary Education. In addition, field experience will be completed for both certification areas.
- All required courses need a grade of "C" or higher.

B.S.Ed. in Special Education PreK-12 Curriculum

The following sections include an eight-semester schedule of courses provided as a recommended framework for completing the certification programs in four years.

Education

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
ESP 210 Special Education Foundations and Collaboration	3
ESP 311 Assessment and Positive Behavior Interventions	3
PSY 205 Childhood Psychology	3
UNI 100 First-Year Seminar	1
Any 100-level Math Course	3
Second Semester	15
EDU 333 Educational Technology	3
ESP 100 Social Contexts of Disability in Popular Media	3
ESP 329 Intro to Special Education Field	3
PSY 206 Adolescent Psychology	3
Any Health and Wellness Course	3
Sophomore Year	
Third Semester	15
ESP 312 ABA for Special Education	3
ESP 339 Special Education Field II	3
ESP 403 Assessment and Prescriptive Teaching	3
AM/BRIT Literature	3
Any 100-level Math Course	3
Fourth Semester	15
CMD 105 Lang Spch Dev	3
ESP 407 Early Intervention Special Education	3
ESP 411 History, Theory and Exceptionality	3

Education

Course	Credits
ESP 419 Evidence-Based Practice for Special Education	3
PSY 208 Educational Psychology	3
Junior Year	
Fifth Semester	15
*ESP 440 Nature of Autism Spectrum Dis	3
*ESP 443 Navigating the Social World - ASD	3
Ethics and Multicultural Awareness Course	3
Natural Science Course w/ Lab	3
Social Science Course	3
Sixth Semester	15
EDU 350 Supporting English Language Learners	3
*ESP 406 Transition Planning and Instruction	3
*ESP 441 Comm, Beh and Instr - ASD	3
*ESP 442 Life Transition and Partnership	3
Fine Arts Course	3
Senior Year	
Seventh Semester	18
*ESP 349 Special Education Field Experience II	3
*ESP 402 Life Skills: Planning and Instruction	3
*ESP 420 Advanced Evidence-Based Practices	3
Free Elective	3
General Education Elective	3
Humanities Course	3
Eighth Semester	12
ESP 461 Student Teaching	12
Total	121

Education

Program Notes

- All courses required for certification must earn C or better.
- All ESP courses require current clearances and minimum 2.5 GPA to register for courses.
- Candidate must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Prerequisite for courses marked with an asterisk (*) is Admission to Teacher Education.
- State licensure exams must be passed before Student Teaching.
- Courses in bold are scheduled together and must be taken at the same time.

Recommended General Education Courses

Humanities

- **CMD 350** Sign/Braille
- **PHI 220** Ethics

Social Sciences

- **CMD 108** Nature of Language
- **SOC 315** Social Minorities
- **SOC 325** Sociology of the Family

Health and Wellness

- **HSC 315** First Aid/Personal Safety
- **SOW 303** Human Sexuality in Society

Ethics and Multicultural Awareness

- **PHI 220** Ethics
- **SOC 325** Sociology of the Family

Approved American/British Literature Courses

- **ENG 107** Introduction to Fiction
- **ENG 125** The American West
- **ENG 127** Woman as Hero
- **ENG 135** Re-reading Harry Potter
- **ENG 137** Northern Appalachian Literature
- **ENG 148** Horrors in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 156** Introduction to Native American Literature
- **ENG 160** Introduction to British and American Literature
- **ENG 181** Cultures of American Humor
- **ENG 203** Great Books
- **ENG 301** English Literature I
- **ENG 302** English Literature II
- **ENG 337** Survey of American Literature I
- **ENG 338** Survey of American Literature II
- **HON 150** Honors Comp I
- **HON 250** Honors Comp II

Education

B.S.Ed. in Technology Education

Program Description

The Bachelor of Science in Education in Technology Education degree prepares students for K-12 technology education teaching certification through the Pennsylvania Department of Education. Technology education includes the study of selected technological systems. Through this program, students explore solutions to technological problems and their associated social and environmental impacts. They also develop skills in the safe and appropriate use of tools, materials and processes as they design, produce, use and evaluate technological systems.

Delivery Mode

Traditional (on campus)

Accreditation

This program was one of the first in the nation to be accredited by the International Technology and Engineering Educators Association's (ITEEA) Council on Technology and Engineering Teacher Education and the National Council for the Accreditation of Teacher Education (NCATE). We are continuing with NCATE's successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
MAT 181 College Algebra	3
TED 105 Communicating Technical Designs	3
TED 111 Information Systems	3
TED 126 Engineering Materials and Product Design	3
UNI 100 First-Year Seminar	1
Second Semester	15
ENG Approved Literature Course	3
MAT 191 College Trigonometry	3
TED 100 Introduction to Technology Education	3
TED 210 Design and Appropriate Technology	3
TED 226 Applications and Processing of Engineering Materials	3
Sophomore Year	

Education

Course	Credits
Third Semester*	16
ESP 210 Special Education Foundations and Collaboration	3
ITE 250 Introduction to Automation	3
PSY 100 General Psychology	3
General Education Courses	7
Fourth Semester**	15
EDU 310 Teaching in a Multicultural Society	3
EDU 350 Supporting English Language Learners	3
TED 304 Designs in Bio-related Technology	3
General Education Course	3
Technical/Technological Elective	3
Junior Year	
Fifth Semester	15
ESP 311 Assessment and Positive Behavior Interventions	3
TED 300 Assessment and Instruction in Technology Education	3
TED 302 Energy and Control Systems	3
TED 316 Structural Design	3
TED 346 Digital Communications	3
Sixth Semester	15
HSC 315 First Aid and Personal Safety	3
TED 335 Transportation Systems	3
TED 436 Engineering Design and Development	3
General Elective	3
Technological/Technical Elective	3
Senior Year	

Education

Course	Credits
Seventh Semester	15
ESP 419 Evidence-based Practice K-12 Inclusion	3
TED 426 Manufacturing Enterprise	3
TED 450 Teaching Technology in the Secondary School	3
TED 451 Teaching Technology in the Elementary School	3
Technological/Technical Elective	3
Eighth Semester	13
TED 461 Student Teaching - Technology Education	10
TED 462 Professional Practices in Technology Education	3
Total	120

* Praxis exams should be taken during or immediately following the third semester.

** Students should apply for admission to teacher education during the fourth semester.

Note: Technological/technical electives: COM 141, 142, 241, 242, CSC 120 or above, THE 141, any CET, EET, GCM, ITE or TED course not required by the major, or other courses approved by the adviser.

Additional Requirements

Three credits of literature are required for all Teacher Education programs. Students must earn a grade of C or better in every TED course, one English composition course, two math courses and one American/English literature course. Grades of C- or lower in these courses must be repeated until a grade of C or better is earned. For the natural science requirement, take one 4-credit lab course (BIO 115, 206, CHE 101, PHY 121) and one course from either the lab or science (BIO 201, EAS 163, ENS 101, PHS 120, 137) selection.

Certification

Certification to teach K-12 is awarded upon graduation and completion of state certification requirements.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/technology-education/index.aspx>

Minor in Education Multidisciplinary

Note: Meet with a faculty member in the Department of Childhood Education or your adviser to discuss this minor.

Curriculum

Course	Credits
Required Courses	18
BIO 103 Contemporary Issues in Biology	3

Education

Course	Credits
EAS 100 Introduction to Earth Science	3
ELE 200 Introduction to PreK-Grade 4 Education OR CHD 200 Introduction to PreK-Grade 8 Education	3
ESP 311 Assessment Positive Behavior Interventions	3
PSY 208 Educational Psychology	3
PSY 216 Child Psychology Ages Birth-4 OR PSY 217 Child Psychology Age 5 to 9 OR PSY 205 Child Psychology	3
Electives (select one)	3
CHD 350 Family and Community Collaboration Partnerships	3
EDU 310 Teaching in a Multicultural Society	3
EDU 333 Technology in Teach and Learning	3
EDU 350 Supporting English Language Learners	3
Total	21

Minor in Foundations of Secondary Education

Program Description

The minor in Foundations of Secondary Education does not lead to teacher certification. It provides a base of knowledge for students who have an interest in education and/or teaching in other formats or settings.

Curriculum

Course	Credits
General Education	9
EDU 310 Teaching in a Multicultural Society (<i>Ethics/ Multicultural</i>)	3
EDU 333 Technology for Teaching and Learning (<i>Technological Literacy</i>)	3
ESP 210 Special Ed Foundations and Collaboration (<i>Humanities</i>)	3
Secondary Education Program	12
SEC 210 Intro to Secondary Education	3
SEC 220 Standards-based Education	3

Education

Course	Credits
SEC 310 Instructional Strategies	3
SEC 350 Content Area Literacy	3
Total	21

Post-Baccalaureate Certification Only: Grades 4-8 Education: Language Arts and Reading Curriculum

Course	Credits
General Education: PDE Content Requirements	
Mathematics (100 level or higher)	9
MAT 120 Elementary Topics I	
MAT 130 Elementary Topics II	
MAT 181 College Algebra	
Natural Sciences	9
BIO 103 Contemporary Issues Biology	
EAS 100 OR ENS 101	
Physical Science Course	
Social Sciences	6
HIS 101 OR HIS 102	
ECO 102 Economics for Elementary Ed	1
GEO 102 Geographic Systems	1
POS 102 American Government for Elementary Ed	1
Health and Wellness	3
HSC 115 Current Health Issues	
Fine Arts	3

Education

Course	Credits
Program Requirements: PDE Professional Education Requirements	
Professional Education Courses	24
EDU 310 Tchg Multicultural Society	
EDU 333 Technology for Tchg & Learning	
EDU 350 Supporting ELL in the Classroom	
ESP 210 Special Ed. Found & Collaboration	
ESP 311 Assessing Positive Behavior Interv.	
ESP 412 Evidence Based Practices	
PSY 206 Adolescent Psychology	
*PSY 208 Educational Psychology	
Grades 4-8 Specialization Courses	27
ELM 200 Intro to Middle Level Education (gr 4-8)	
ELM 220 Instruction & Assessment in 4-8 Classrooms	
ELM 311 Math Methods, Assessment and Interv.	
ELM 321 Science Methods, Assessment and Interv.	
ELM 331 Social Studies Methods, Assessment and Interv.	
ELM 461 Student Teaching PreK-Grade 4 (see Teacher Handbook for requirements)	
Concentration Courses	27
ELM 301 Reading Methods, Assessment and Interv.	
ELM 302 Lang. Arts Methods, Assessment and Interv.	
ENG 101 English Composition I	
ENG 102 English Composition II	
ENG 337 Survey of American Literature I	
ENG 338 Survey of American Literature II	
ENG ____ Approved Concentration Courses (2)**	

Education

Course	Credits
American/British Literature Course	
Field Experience Courses	6
ELM 411 Field Experience Grades 4-6	
ELM 412 Field Experience Grades 7-8	
Total	114

* Pre-requisite PSY 100 waived for this major.

** In consultation with your adviser, select courses from your area of concentration.

Approved American/British Literature Courses

- **ENG 107** Introduction to Fiction
- **ENG 127** Woman as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 203** Great Books
- **ENG 301** English Literature I (pre-requisites: ENG 101 and 102)
- **ENG 302** English Literature II (pre-requisites: ENG 101 and 102)
- **ENG 337** Survey of American Literature I (pre-requisites: ENG 101 and 102)
- **ENG 338** Survey of American Literature II (pre-requisites: ENG 101 and 102)

Program Notes

- All courses required for certification with C- or lower must be repeated.
- All ELM and ESP courses require current clearances submitted before the first day of class.
- Pre-requisite for all ELM 300 level courses is ELM 200 and 220.

Requirements

- PAPA qualifying scores at start of the program.
- GPA of 2.8 at start of the program.
- Appropriate Praxis II exams prior to student teaching.

Post-Baccalaureate Certification Only: Grades 4-8 Education: Mathematics

Curriculum

Course	Credits
General Education: PDE Content Requirements	
English and Literature Composition	6
ENG 101 English Composition I	
American or British Literature Course	
Natural Sciences	9

Education

Course	Credits
BIO 103 Contemporary Issues Biology	
EAS 100 OR ENS 101	
Physical Science Course	
Social Sciences	6
HIS 101 OR HIS 102	
ECO 102 Economics for Elementary Ed	1
GEO 102 Geographic Systems	1
POS 102 American Government for Elementary Ed	1
Health and Wellness	3
HSC 115 Current Health Issues	
Fine Arts	3
Program Requirements: PDE Professional Education Requirements	
Professional Education Courses	24
EDU 310 Tchg Multicultural Society	
EDU 333 Technology for Tchg & Learning	
EDU 350 Supporting ELL in the Classroom	
ESP 210 Special Ed. Found & Collaboration	
ESP 311 Assessing Positive Behavior Interv.	
ESP 412 Evidence Based Practices	
PSY 206 Adolescent Psychology	
* PSY 208 Educational Psychology	
Grades 4-8 Specialization Courses	30
ELM 200 Intro to Middle Level Education	
ELM 220 Instruction and Assessment in 4-8	

Education

Course	Credits
ELM 301 Reading Methods Assessment and Interv.	
ELM 302 Lang. Arts Methods Assessment and Interv.	
ELM 311 Math Methods, Assessment and Interv.	
ELM 321 Science Methods, Assessment and Interv.	
ELM 331 Social Studies Methods, Assessment and Interv.	
ELM 461 Student Teaching PreK-Grade 4 (see Teacher Handbook for requirements)	
Concentration Courses	24
MAT 120 Elementary Topics in Math I	
MAT 130 Elementary Topics in Math II	
MAT 181 College Algebra	
MAT 191 College Trigonometry	
MAT 272 Discrete Mathematics	
MAT 303 Geometry	
MAT 341 Linear Algebra	
Field Experience Courses	6
ELM 411 Field Experience Grades 4-6	
ELM 412 Field Experience Grades 7-8	
Total	111

* Pre-requisite PSY 100 waived for this major.

Approved American/British Literature Courses

- **ENG 107** Introduction to Fiction
- **ENG 127** Woman as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 203** Great Books
- **ENG 301** English Literature I (pre-requisites: ENG 101 and 102)
- **ENG 302** English Literature II (pre-requisites: ENG 101 and 102)
- **ENG 337** Survey of American Literature I (pre-requisites: ENG 101 and 102)
- **ENG 338** Survey of American Literature II (pre-requisites: ENG 101 and 102)

Program Notes

- All courses required for certification with C- or lower must be repeated.

Education

- All ELM and ESP courses require current clearances submitted before the first day of class.
- Pre-requisite for all ELM 300 level courses is ELM 200 and 220.
- All coursework must be completed before student teaching.

Requirements

- PAPA qualifying scores at start of the program.
- GPA of 2.8 at start of the program.
- Appropriate Praxis II exams prior to student teaching.
- Admission to Teacher Education before registering for ESP 412.

Post-Baccalaureate Certification Only: Grades 4-8 Education: Science Curriculum

Course	Credits
General Education: PDE Content Requirements	
English and Literature Composition	6
ENG 101 English Composition I	
American or British Literature Course	
Mathematics (100 level or higher)	9
MAT 120 Elementary Topics I	
MAT 130 Elementary Topics II	
MAT 181 College Algebra	
Social Sciences	6
HIS 101 OR HIS 102	
ECO 102 Economics for Elementary Ed	1
GEO 102 Geographic Systems	1
POS 102 American Government for Elementary Ed	1
Health and Wellness	3
HSC 115 Current Health Issues	
Fine Arts	3
Program Requirements: PDE Professional Education Requirements	

Education

Course	Credits
Professional Education Courses	24
EDU 310 Tchg Multicultural Society	
EDU 333 Technology for Tchg & Learning	
EDU 350 Supporting ELL in the Classroom	
ESP 210 Special Ed. Found & Collaboration	
ESP 311 Assessing Positive Behavior Interv.	
ESP 412 Evidence Based Practices	
PSY 206 Adolescent Psychology	
* PSY 208 Educational Psychology	
Grades 4-8 Specialization Courses	33
ELM 200 Intro to Middle Level Education	
ELM 220 Instruction and Assessment in 4-8	
ELM 301 Reading Methods Assessment and Interv.	
ELM 302 Lang. Arts Methods Assessment and Interv.	
ELM 311 Math Methods, Assessment and Interv.	
ELM 321 Science Methods, Assessment and Interv.	
ELM 331 Social Studies Methods, Assessment and Interv.	
ELM 461 Student Teaching PreK-Grade 4 (see Teacher Handbook for requirements)	
Concentration Courses	27
BIO 103 Contemporary Issues Biology	
EAS 100 Intro to Earth Science	
ELM 360 Environ, Ecology and Nature - Study Ed	
PHS 120 Basic Phys. Science with Lab	
*	
*	

Education

Course	Credits
*	
*	
*	
Field Experience Courses	6
ELM 411 Field Experience Grades 4-6	
ELM 412 Field Experience Grades 7-8	
Total	117

* Pre-requisite PSY 100 waived for this major.

Concentration Courses

Please consult with the science education adviser before selecting from the following concentration courses:

- **EAS 150** Intro to Geology
- **EAS 240** Intro to Meteorology
- **EAS 163** Intro to Oceanography
- **PHS 145** Astronomy
- **EAS 210** Soils
- **BIO 120** General Zoology (4 credits)
- **BIO 125** General Botany (4 credits)
- **ENS 101** Intro to Environmental Science
- **CHE 103** Chemistry in Every Day World
- **PHS 137** Intro to Environment Chemistry
- **PHY 121** General Physics I

Approved American/British Literature Courses

- **ENG 107** Introduction to Fiction
- **ENG 127** Woman as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 203** Great Books
- **ENG 301** English Literature I (pre-requisites: ENG 101 and 102)
- **ENG 302** English Literature II (pre-requisites: ENG 101 and 102)
- **ENG 337** Survey of American Literature I (pre-requisites: ENG 101 and 102)
- **ENG 338** Survey of American Literature II (pre-requisites: ENG 101 and 102)

Program Notes

- All courses required for certification with C- or lower must be repeated.
- All ELM and ESP courses require current clearances submitted before the first day of class.
- Pre-requisite for all ELM 300 level courses is ELM 200 and 220.
- All coursework must be completed before student teaching.

Education

Requirements

- PAPA qualifying scores at start of the program.
- GPA of 2.8 at start of the program.
- Appropriate Praxis II exams prior to student teaching.
- Admission to Teacher Education before registering for ESP 412.

Post-Baccalaureate Certification Only: Grades 4-8 Education: Social Studies Curriculum

Course	Credits
General Education: PDE Content Requirements	
English and Literature Composition	6
ENG 101 English Composition I	
American or British Literature Course	
Mathematics (100 level or higher)	9
MAT 120 Elementary Topics I	
MAT 130 Elementary Topics II	
MAT 181 College Algebra	
Natural Sciences	9
BIO 103 Contemporary Issues Biology	
EAS 100 OR ENS 101	
Physical Science Course	
Health and Wellness	3
HSC 115 Current Health Issues	
Fine Arts	3
Program Requirements: PDE Professional Education Requirements	
Professional Education Courses	24
EDU 310 Tchg Multicultural Society	

Education

Course	Credits
EDU 333 Technology for Tchg & Learning	
EDU 350 Supporting ELL in the Classroom	
ESP 210 Special Ed. Found & Collaboration	
ESP 311 Assessing Positive Behavior Interv.	
ESP 412 Evidence Based Practices	
PSY 206 Adolescent Psychology	
* PSY 208 Educational Psychology	
Grades 4-8 Specialization Courses	33
ELM 200 Intro to Middle Level Education	
ELM 220 Instruction and Assessment in 4-8	
ELM 301 Reading Methods Assessment and Interv.	
ELM 302 Lang. Arts Methods Assessment and Interv.	
ELM 311 Math Methods, Assessment and Interv.	
ELM 321 Science Methods, Assessment and Interv.	
ELM 331 Social Studies Methods, Assessment and Interv.	
ELM 461 Student Teaching PreK-Grade 4 (see Teacher Handbook for requirements)	
Concentration Courses	21
ECO 100 Elements of Economics	
GEO 100 Intro to Geography (prerequisite: ELM 220)	
HIS 101 U.S. History to 1877	
HIS 102 U.S. History since 1877	
HIS 200 History of Pennsylvania	
HIS ____ Approved World History Course	
POS 100 Intro to Political Science OR POS 105 American National Government	
Field Experience Courses	6
ELM 411 Field Experience Grades 4-6 (Sp)	

Education

Course	Credits
ELM 412 Field Experience Grades 7-8 (Fall)	
Total	114

* Pre-requisite PSY 100 waived for this major.

Approved American/British Literature Courses

- **ENG 107** Introduction to Fiction
- **ENG 127** Woman as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 203** Great Books
- **ENG 301** English Literature I (pre-requisites: ENG 101 and 102)
- **ENG 302** English Literature II (pre-requisites: ENG 101 and 102)
- **ENG 337** Survey of American Literature I (pre-requisites: ENG 101 and 102)
- **ENG 338** Survey of American Literature II (pre-requisites: ENG 101 and 102)

Program Notes

- All courses required for certification with C- or lower must be repeated.
- All ELM and ESP courses require current clearances submitted before the first day of class.
- Pre-requisite for all ELM 300 level courses is ELM 200 and 220.
- All coursework must be completed before student teaching.

Requirements

- PAPA qualifying scores at start of the program.
- GPA of 2.8 at start of the program.
- Appropriate Praxis II exams prior to student teaching.
- Admission to Teacher Education before registering for ESP 412.

Post-Baccalaureate Certification Only: PreK-4 Curriculum

Course	Credits
General Education: PDE Content Requirements	
English Composition and British & American Literature	6
ENG 101 English Composition I	3
British/American Lit (see list below)	3
Mathematics	6
MAT 120 Elementary Topics I	3
MAT 130 Elementary Topics II	3

Education

Course	Credits
Natural Sciences	9
BIO 103 Contemporary Issues Biology	3
EAS 100 OR ENS 101	3
Physical Science Course	3
Social Sciences	6
HIS 101 OR HIS 102	3
ECO 102 Economics for Elementary Ed	1
GEO 102 Geographic Systems	1
POS 102 American Government for Elementary Ed	1
Health and Wellness	3
HSC 250 Health and PE for PreK-4	3
Fine Arts	3
MUS/ART/THE 372 Creative Arts for PreK-4	3
Program Requirements: PDE Professional Education Requirements	
Professional Education Courses	24
EDU 310 Tchg Multicultural Society	3
EDU 333 Technology for Tchg & Learning	3
EDU 350 Supporting ELL in the classroom	3
ESP 210 Special Ed. Found & Collaboration	3
ESP 311 Assessing Positive Behavior Interv.	3
ESP 412 Evidence Based Practices	3
PSY 206 Adolescent Psychology	3
*PSY 208 Educational Psychology	3
PreK to 4 Certification Track	48

Education

Course	Credits
ELE 200 Intro to Pre-K Grade 4 Education	3
ELE 220 Instruction & Assessment in PreK	3
ELE 300 Emerging Literacy	3
ELE 301 Literacy Foundations I: Language Arts	3
ELE 302 Literacy Foundations II: Reading	3
ELE 310 Teaching Math/Science PreK	3
ELE 311 Teaching Math K-4	3
ELE 321 Teaching Science K-4	3
ELE 331 Teaching Social Studies K-4	3
ELE 350 Family and Community Relations	3
ELE 400 Issues, Advocacy, & Leadership PreK	3
ELE 410 K-4 Field Experience	3
ELE 461 Student Teaching PreK-Grade 4 (see Teacher Handbook for requirements for Recommendations for Student Teaching)	3
Field Experience Courses	6
ELM 411 Field Experience Grades 4-6	3
ELM 412 Field Experience Grades 7-8	3
Total	111

*Pre-requisite PSY 100 waived for this major.

Approved American/British Literature Courses

- **ENG 107** Introduction to Fiction
- **ENG 127** Woman as Hero
- **ENG 148** Horror in Literature
- **ENG 150** Baseball in Literature
- **ENG 155** Black Literature
- **ENG 203** Great Books
- **ENG 301** English Literature I (pre-requisites: ENG 101 and 102)
- **ENG 302** English Literature II (pre-requisites: ENG 101 and 102)
- **ENG 337** Survey of American Literature I (pre-requisites: ENG 101 and 102)
- **ENG 338** Survey of American Literature II (pre-requisites: ENG 101 and 102)

Program Notes

- ALL ELE and ESP courses require current clearances and minimum 2.5 GPA to register for courses.
- All courses required for certification with a grade of "C-" or lower must be repeated.
- Pre-requisites for ELE 221 and all 300 level courses are ELE 200 and ELE 220.

Education

Requirements

- PAPA (on admission)
- Current Clearances (within 30 days)
- PECT (prior to Student Teaching)
- Upon admission-All requirements for Admission to Teacher Ed.

Exercise Sciences and Sport Studies

Department of Exercise Science and Sport Studies

Faculty

Justin Barroner | Wendy Batts | Dr. Carol Biddington | Dr. Joni L. Cramer Roh | Dr. Marc S. Federico | Lindsay M. Hammond | Dr. Jeffrey R. Hatton | Dr. Rebecca A. Hess | Dr. Mary Kreis | Dr. Barry E. McGlumphy | Dr. Laura Miller | Dr. Linda Platt Meyer | Dr. Brian Oddi | Dr. Benjamin Reuter | Dr. Christine Romani-Ruby | Dr. Robert G. Taylor | Dr. Ronald Wagner | Dr. Ellen J. West | Dr. Tom West | Dr. Brian D. Wood

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Programs

Cal U's Department of Exercise Science and Sport Studies offers undergraduate programs in exercise science and sport management, including:

- B.S. in Exercise Science
- B.S. in Exercise Science: Professional Golf Management
- B.S. in Sport Management Studies
- B.S. in Sport Management Studies: Professional Golf Management

Facilities

The department is housed in both Hamer and Gallagher halls.

B.S. in Exercise Science

Program Description

The Bachelor of Science in Exercise Science degree prepares students for careers in wellness and fitness. Students pursuing the program will be prepared to sit for a certification in personal training offered by the National Academy of Sports Medicine (NASM).

Fall and spring semesters include two 8-week terms each. The summer includes two 5-week terms or one 10-week term.

Delivery Mode

Global Online (100% online)

Curriculum

The following sequence is one of three potential sequences for this program. The program has different matriculation dates, necessitating this need. Visit our website at <https://www.calu.edu/catalog/current/cohort-sequences.aspx> to determine which sequence best fits your situation.

Course	Credits
Year 1	
First Semester (Fall)	13
FIT 100 Intro to Fitness	3
FIT 125 Fundamentals of Speed Training	3
HSC 110 Anatomy and Physiology I	4
SPT 300 Psychology of Sport	3
Second Semester (Spring)	13
ATE 340 Sports Nutrition	3

Exercise Sciences and Sport Studies

Course	Credits
FIT 115 Applied Anatomy and Physiology in Wellness and Fitness	4
HSC 115 Current Health Issues	3
SPT 305 Ethics in Sport	3
Third Semester (Summer)	16
General Education or Electives	16
Year 2	
Fourth Semester (Fall)	12
FIT 300 Business Aspects of Fitness	3
FIT 305 Motivational Strategies in Wellness and Fitness	3
HSC 275 Functional Kinesiology	3
SPT 400 Legal Aspects of Sport	3
Fifth Semester (Spring)	12
FIT 250 Current Topics and Strategies for Youth Fitness	3
FIT 325 Integrated Personal Fitness Training	3
FIT 335 Integrated Personal Fitness Program Design	3
HSC 325 Physiology of Exercise	3
Sixth Semester (Summer)	15
General Education or Electives	15
Year 3	
Seventh Semester (Fall)	12
FIT 380 Wellness and Fitness for the Aging Population	3
FIT 405 Wellness Seminar I	3
FIT 425 Evaluating Research in Fitness and Wellness	3

Exercise Sciences and Sport Studies

Course	Credits
FIT 430 Applications of Research in Fitness and Wellness	3
Eighth Semester (Spring)	12
FIT 350 Fitness and Special Populations	3
FIT 401 Leadership Concepts and Actions in Wellness and Fitness	3
FIT 410 Wellness Seminar II	3
FIT 420 Contemporary Issues in Wellness and Fitness	3
Ninth Semester (Summer)	15
General Education or Electives	15
Total	120

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/exercise-science/index.aspx>

B.S. in Exercise Science: Professional Golf Management Concentration

Program Description

The Professional Golf Management concentration of the Bachelor of Science in Exercise Science is designed for students who plan to teach or coach golf athletes.

Delivery Mode

Traditional (on campus)

Curriculum

The following schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I**	3
PGM 100 Introduction to Professional Golf Management*	3
PGM 200 Intermediate Topics in Professional Golf Management*	3
UNI 100 First-Year Seminar**	1

Exercise Sciences and Sport Studies

Course	Credits
General Education/Elective Courses	6
Second Semester	15
PGM 150 Teaching of Golf I*	3
PGM 250 Golf Operations Management*	3
PGM 260 Golf Performance Coaching and Tech.*	3
General Education/Elective Courses	6
Third Semester	3
PGM 125 PGM Internship I*	3
Sophomore Year	
Fourth Semester	15
PGM 210 Golf Shop Management*	3
PGM 300 Advanced Topics in Professional Golf Management*	3
PGM 310 Turfgrass Management*	3
General Education/Elective Courses	6
Fifth Semester	15
PGM 350 Food and Beverage Management*	3
PGM 410 Teaching of Golf II*	3
General Education/Elective Courses	9
Sixth Semester	3
PGM 225 Professional Golf Management Internship II*	3
Junior Year	
Seventh Semester	12
FIT 100 Introduction to Fitness*	3

Exercise Sciences and Sport Studies

Course	Credits
General Education/Elective Courses	9
Eighth Semester	15
FIT 250 Topics and Strat. for Youth Fit.*	3
SPT 305 Ethics in Sport*	3
General Education/Elective Courses	9
Ninth Semester	3
PGM 325 Professional Golf Management Internship III*	3
Senior Year	
Tenth Semester	12
PGM 405 Expanded Golf Operations*	3
PGM 425 Senior Internship*	3
General Education/Elective Courses	6
Eleventh Semester	12
FIT 325 Integrated Personal Fit. Train*	3
PGM 415 Trends and Issues in the Golf Industry*	3
PGM 435 Capstone Internship*	3
General Education/Elective Courses	3
Total	120

*Required major or related courses

**Required or recommended General Education courses

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/professional-golf-management/index.aspx>

B.S. in Sport Management Studies

Program Description

The Bachelor of Science in Sport Management Studies develops knowledge and skills used by managers, marketers and other professionals within the sport industry.

Exercise Sciences and Sport Studies

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	14
ENG 101 English Composition I	3
SPT 100 Introduction to Sport Management	3
SPT 101 Practica in Sport Management	1
UNI 100 First-Year Seminar	1
General Education/Elective Courses	6
Second Semester	18
SPT 300 Psychology of Sport	3
SPT 325 Sport and Society OR SOC 309 Sociology of Sport	3
General Education/Elective Courses	12
Sophomore Year	
Third Semester	15
SPT 305 Ethics in Sport	3
SPT 320 Administration of Intercollegiate Athletic Programs	3
SPT 330 Global and International Sport	3
General Education/Elective Courses	6
Fourth Semester	16
SPT 310 Sport Marketing	3
SPT 315 Facility and Event Management	3
SPT 316 Practica in Facility and Event Management	1
SPT 360 Sports Communication OR CDC 305 Sport Communication and Media	3

Exercise Sciences and Sport Studies

Course	Credits
General Education/Elective Courses	6
Junior Year	
Fifth Semester	16
SPT 311 Sales Techniques in Sport Ind.	3
SPT 312 Prac. in Sport Sales	1
SPT 340 History of Sport OR HIS 348 History of American Sport	3
SPT 400 Legal Aspects of Sport	3
General Education/Elective Courses	6
Sixth Semester	15
SPT 410 Governance in Sport	3
SPT 425 Organization and Administration of Sport	3
General Education/Elective Courses	9
Senior Year	
Seventh Semester	15
SPT 405 Finance and Economics of Sport	3
SPT 430 Sport Management Senior Seminar	3
General Education/Elective Courses	9
Eighth Semester	12
SPT 499 Internship in Sport Management	12

Program Notes

- Dev. Math and Eng. courses do NOT count toward graduation.
- Once a student matriculates into the program, they may not transfer major courses into Cal U.
- Students must have a 2.0 GPA prior to enrolling in SPT 499.
- A business minor is strongly encouraged.

Additional Requirements

Admission to the sport management studies program is open to any student who has been admitted to California University of Pennsylvania. Once a student has requested to be a sport management studies major, a practicum class of observation/work in an approved sport management environment is required. The practicum class is a work experience in a major sport management setting (Heinz Field, PNC Park, community clubs and game day

Exercise Sciences and Sport Studies

activities) to experience behind-the-scenes operations of sporting events. As a culminating activity in the program, students are required to complete a supervised 400- hour internship. The internship is the student's capstone experience. Students, in conjunction with the program faculty and Internship Office, will secure an internship site based on their unique educational needs and experience.

Candidates for admission to the sport management studies program leading to the Bachelor of Science in Sport Management Studies are required to:

- Maintain a minimum 2.0 cumulative grade-point average; students earning a grade below a D in any sport management course(s) (SPT) must repeat the course(s).
- Follow the predetermined sequence of courses; failure to follow the sequence may result in delayed graduation.
- Complete all didactic coursework prior to the capstone internship experience, SPT 499.
- Enroll in the Internship Intent during the preregistration process the semester prior to completing the internship.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/sport-management/index.aspx>

B.S. in Sport Management Studies: Professional Golf Management Concentration

Program Description

The Professional Golf Management concentration of the Bachelor of Science in Sport Management Studies is designed for students interested in golf operations and executive management.

Delivery Mode

Traditional (on campus)

Curriculum

The following schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
BUS 100 Intro to Business**	3
ENG 101 English Composition I**	3
PGM 100 Introduction to Professional Golf Management*	3
UNI 100 First-Year Seminar**	1
General Education/Elective Courses	6
Second Semester	15
ECO 100 Elements of Economics**	3
PGM 150 Teaching of Golf I*	3
General Education/Elective Courses	9

Exercise Sciences and Sport Studies

Course	Credits
Third Semester	3
PGM 125 PGM Internship I*	3
Sophomore Year	
Fourth Semester	15
PGM 200 Intermediate Topics in Professional Golf Management*	3
PGM 210 Golf Shop Management*	3
General Education/Elective Courses	9
Fifth Semester	15
PGM 250 Golf Operations Management*	3
PGM 260 Golf Performance Coaching and Technology*	3
General Education/Elective Courses	9
Sixth Semester	3
PGM 225 Professional Golf Management Internship II*	3
Junior Year	
Seventh Semester	15
PGM 300 Advanced Topics in Professional Golf Management*	3
PGM 310 Turfgrass Management*	3
SPT 400 Legal Aspects of Sport*	3
General Education/Elective Courses	6
Eighth Semester	12
PGM 350 Food and Beverage Management*	3
PGM 410 Teaching of Golf II*	3

Exercise Sciences and Sport Studies

Course	Credits
SPT 310 Sport Marketing*	3
General Education/Elective Courses	3
Ninth Semester	3
PGM 325 Professional Golf Management Internship III*	3
Senior Year	
Tenth Semester	12
PGM 405 Expanded Golf Operations*	3
PGM 425 Senior Internship*	3
General Education/Elective Courses	6
Eleventh Semester	12
PGM 415 Trends and Issues in the Golf Industry*	3
PGM 435 Capstone Internship*	3
SPT 305 Ethics in Sport**	3
SPT 405 Finance and Economics of Sport*	3
Total	120

*Required major or related courses

**Required or recommended General Education courses

Additional Requirements

Students in this program must maintain a minimum 2.00 cumulative grade point average.

Students complete a total of 16 months of internship through five separate internships. For these internships, they are required to work under a Class A PGA professional at a minimum of three different types of facilities ranging from public, private, municipal and military golf facilities to organizations such as a PGA section office, an amateur or professional tournament series, or a golf equipment manufacturer.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/professional-golf-management/index.aspx>

Health and Human Service Professions

Department of Health and Human Service Professions Faculty

Communication Disorders: Dr. Ralph Belsterling | Nancy Carlino | Dr. Joseph Constantine | Dr. Denise Joseph | Dr. Robert Skwarecki | April Wright

Social Work: Ann Bergamasco | Dr. Azadeh Block | Ashley Barr Soske | Dr. Sheri Boyle | Erica Maloney | Dr. Marta S. McClintock-Comeaux | Dr. Pamela Twiss | Dr. Carolyn Wass | Dr. Bonnie Young Laing | Jane Zupancic

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Programs

Cal U's Department of Health and Human Service Professions includes undergraduate programs in communication disorders and social work.

- B.S. in Communication Disorders
- BSW in Social Work
- Minor in Social Work
- Minor in Women's Studies

B.S. in Communication Disorders

Program Description

The Bachelor of Science in Communication Disorders (CMD) is a pre-professional program designed for students seeking to eventually become speech-language pathologists. The program prepares students for future graduate training, which is needed before employment as a speech-language pathologist is possible. It is important to maintain a GPA of 3.00 or higher because few graduate schools will accept less.

At the undergraduate level, students gain a broad understanding of the scientific bases of normal speech and hearing processes and the diagnostic and rehabilitation procedures necessary to work with individuals who have communication problems.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. This schedule is only an example and may change based on departmental course rotation and other factors.

Course	Credits
Freshman Year	
First Semester	14 to 15
CMD 220 Communication Across the Lifespan	4
CMD 350 Sign Language and Braille	3
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
General Education/Biology***	3 to 4
Second Semester	15

Health and Human Service Professions

Course	Credits
CMD 105 Language and Speech Development	3
CMD 108 Nature of Language	3
CMD 203 Phonetics	3
MAT 181 College Algebra	3
General Education/Health and Wellness	3
Sophomore Year	
Third Semester	15 to 18
CMD 216 Articulation	3
CMD 221 Speech Science	3
CMD 400 OR 402 Clinical Practicum (first time)*	1 to 3
PSY 100 General Psychology	3
Free Elective	3
General Education/Fine Arts	3
Fourth Semester	15 to 18
CMD 310 Anatomy and Physiology	3
CMD 300 Fundamentals of Language Disorders in Children	3
CMD 400 Clinical Practicum: Video OR CDM 402 Clinical Practicum: Learn/Lang Ctr (first time)*	1 to 3
ESP 210 Special Education Foundations and Collaboration	3
PSY 208 Educational Psychology	3
Free Elective	3
Junior Year	
Fifth Semester	15 to 19
CMD 301 Fundamentals of Language Disorders in Adults	3
CMD 305 Introduction to Audiology	3
CMD 400, 401 OR 402 Clinical Practicum (second time)*	1 to 3

Health and Human Service Professions

Course	Credits
Ethics Course	3
General Education/Chemistry or Physics***	3 to 4
General Education Rec II Course**	3
Sixth Semester	15 to 18
CMD 306 Acoustics/Psychoacoustics	3
CMD 322 Technical Writing in Health and Education	3
CMD 400, 401 OR 402 Clinical Practicum (second time)*	1 to 3
EDU 333 Technology for Teaching and Learning	3
General Education/American-English Literature	3
General Education Rec II Course**	3
Senior Year	
Seventh Semester	12 to 15
CMD 320 Assessment of Speech and Language	3
CMD 400, 401 OR 402 Clinical Practicum (third time)*	1 to 3
CMD 450 Intro to Clinic Procedures	3
EDU 310 Teaching in a Multicultural Society	3
Free Elective	3
Eighth Semester	12 to 15
CMD 321 Common Organic Disorders	3
CMD 400, 401 OR 402 Clinical Practicum (third time)*	1 or 3
EDU 350 Supporting English Language Learners	3
Free Elective	3
Statistics Course (recommended: MAT 205)	3
Total	120

* Taken in the fall or spring semester each time

** Any ANT, BIO, CHE, ESP, Foreign Language, GTY, Linguistics, PHI course taken in addition to other courses and approved by adviser

Health and Human Service Professions

*** Two science courses are required, one biology course and one physical science course that addresses either chemistry or physics and meets current ASHA requirements. One of these courses should satisfy the Gen Ed - Natural Science requirement and one should satisfy the Gen Ed - Laboratory course requirement.

Program Notes

- Above is a typical sequence of classes. Variations are permissible, but approval should be obtained from your adviser. Note that changes to course sequencing and offerings may occur.
- Student must submit current clearances/checks/etc. prior to academic term in which clinical experiences/observations are obtained, such as CMD Clinical Practicum Series. These include but are not limited to: ACT 24 (Arrest/Conviction), ACT 31 (Mandated Report Training), Act 34 (Criminal Hx), ACT 114 (FBI Fingerprinting), ACT 151 (Child Abuse Hx), HIPAA Compliance & Hand Hygiene Training.
- Four credits of the Clinical Practicum Series are required (6 credit max) for this degree. Rec: CMD 400 (1 credit), CMD 401 (1 credit), and CMD 402 (2-3 credits).
- Freshmen and students without an overall GPA less than 2.0 are not permitted to enroll in the CMD Clinical Practicum Series.
- Graduate school acceptance is competitive and the completion of this undergraduate program does not guarantee acceptance into this University's graduate program in Communication Disorders.

Additional Requirements

Students will complete clinical work via the CMD 400 series.

The American Speech-Language-Hearing Association (ASHA) requires all CMD majors to successfully complete one biology course, one physics or chemistry course, one statistics course and a social science course outside of this department. Students register for these courses through the General Education portion of the curriculum.

Clinical Experience

Faculty believe that students should experience hands-on clinical contact early in their program of study. The communication disorders program provides contact with clients by having undergraduate students assist in:

- the department's Learning and Language Center, a preschool program;
- the University Speech and Hearing Clinic; and
- the University Audiology Clinic.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/communication-disorders/index.aspx>

BSW in Social Work

Program Description

The Bachelor of Social Work (BSW) in Social Work degree builds knowledge and skills related to the delivery of social services to individuals, families and groups. Students complete 480 hours of practicum with a social services agency or organization as part of this program.

Delivery Mode

Traditional (on campus)

Accreditation

This BSW program is accredited by the Council on Social Work Education.

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Health and Human Service Professions

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I**	3
PSY 100 General Psychology* OR SOC 100 Principles of Sociology**	3
SOW 150 Introduction to Social Work*	3
UNI 100 First-Year Seminar**	1
General Education Courses	6
Second Semester	15
ENG 102 English Composition II**	3
SOC 100 Principles of Sociology** OR PSY 100 General Psychology*	3
General Education Courses	9
Sophomore Year	
Third Semester	15
SOW 201 Interviewing for the Human Services*	3
SOW 208 Diversity in a Changing World*	3
SOW 215 Human Behavior and the Social Environment I: Life Course*	3
General Education Courses	6
Fourth Semester	15
SOW 302 Social Work Practice with Individuals*	3
SOW 316 Human Behavior and the Social Environment II: Groups, Organizations and Communities*	3
General Education/Elective Courses	9
Junior Year	
Fifth Semester	15
SOW 304 Social Work Practice with Families*	3

Health and Human Service Professions

Course	Credits
SOW 360 Social Welfare History, Policy Analysis and Social Service Delivery*	3
Social Work Special Interest Course*	3
General Education/Elective Courses	6
Sixth Semester	15
SOW 303 Human Sexuality and Society**	3
SOW 345 Social Work Practice with Groups*	3
SOW 370 Policy Practice in Social Work*	3
Social Work Special Interest Course*	3
General Education/Elective Course	3
Senior Year	
Seventh Semester	15
SOW 405 Social Work Research Methods*	3
SOW 349 Social Work Practice with Organizations and Communities*	3
Pre-Practicum Orientation	0
General Education/Elective Courses	9
Eighth Semester	15
SOW 425 Field Education*	12
SOW 435 Field Education Seminar*	3
Total	120

* Required major and related courses

** Required and recommended General Education courses

Special Interest Courses

- **SOW 306** Social Work in the Rural Environment
- **SOW 330** Child Welfare
- **SOW 340** Poverty and Related Social Problems
- **SOW 350** Social Work with the Aging
- **SOW 364** Juvenile Delinquency
- **SOW 410** Social Work in Mental Health
- **SOW 495** Seminar in Special Topics

Health and Human Service Professions

Additional Requirements

Full admission into the upper-division skills classes of the social work program requires that the student apply for degree candidacy prior to entering SOW 302. By the start of this class (SOW 302), students must have:

1. completed a minimum of 45 credit-hours;
2. completed SOW 150, 201, 208 and 215 and ENG 101 and 102 with a minimum grade of C; and
3. achieved an overall GPA of 2.00.

Social work majors also need to complete Social Work Pre-Practicum Orientation the semester before they enroll in SOW 425 and 435.

Students need to maintain a 2.50 GPA in the major to remain in good standing and to graduate from the program.

Related Courses/Electives

To earn the BSW degree, students must take the following courses as related courses and related electives:

- PSY 100 General Psychology
- Any two ANT, ECO, GTY, POS, PSY, SOC, SOW or WST courses, one 200 level or above, one 300 level or above

General Education Requirements and Recommendations

To earn the BSW degree, students are required to take the following courses to complete their General Education requirements:

- ENG 101 and 102 (with grades of C or better)
- **SOC 100** Principles of Sociology (social sciences menu)
- Any PHI (ethics preferred), ENG literature or foreign language (humanities menu)
- Any natural science (anatomy/physiology or BIO preferred) (natural sciences menu)
- Any HIS course (U.S. history recommended) (General Education options)
- Any POS course (American government recommended) (General Education options)

The Department of Social Work recommends that students in the major choose from the following courses for other General Education requirements or for free electives:

- **BIO 103** Contemporary Issues in Biology
- **BIO 112** Biology of Sexually Transmitted Diseases
- **CSC 101** Personal Productivity Software (technological literacy menu)
- **ECO 100** Elements of Economics
- **GIS 311** Geographic Information Systems
- **GTY 100** Introduction to Gerontology
- **MAT 215** Statistics (math menu)
- **PSY 400** Abnormal Psychology
- **SOC 205** Contemporary Social Problems
- **SOW 303** Human Sex and Society (health and wellness menu)

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/social-work/index.aspx>

Minor in Social Work Curriculum

Course	Credits
Social Work Program Requirements	18

Health and Human Service Professions

Course	Credits
SOW 150 Introduction to Social Work	3
SOW 201 Interviewing for the Human Services	3
SOW 208 Diversity in a Changing World	3
SOW 215 Human Behavior and the Social Environment I: Life Course	3
SOW 316 Human Behavior and the Social Environment II: Groups, Organizations and Communities	3
SOW 360 Social Welfare History, Policy Analysis and Social Service Delivery	3
General Education (Health and Wellness)	3
SOW 303 Human Sex and Society	3
Total	21

Minor in Women's Studies

Program Description

The minor in Women's Studies promotes critical-thinking and self-reflection while enabling students to better understand other perspectives. Students develop a keen awareness of how gender and diversity affect perspectives and experiences as they examine gender and social justice issues within individual, familial, national and global systems. Analysis of the complex intersections of individual and cultural factors and how they relate to power and social justice are integrated throughout the program. Coursework challenges students to reconsider assumptions about the similarities and differences between and among women, men and all genders.

The minor complements a wide range of fields, such as social work, psychology, anthropology, sociology, history, criminal justice, education, business, nursing, counseling, law, art, journalism, political science, athletics, English and medicine, to name a few.

Curriculum

Course	Credits
Required Courses	6
WST 200 Intro to Women's Studies	3
WST 400 Capstone: Advanced Women's Studies	3
Women's Experience Electives (select two courses)	6
ANT 300 Cultural Views of Women	3
ENG 127 Woman as Hero	3
ENG 315 Survey American Women Writers	3

Health and Human Service Professions

Course	Credits
HIS 309 Gender in Latin America	3
HIS 312 Women in Europe	3
HIS 325 History of American Women	3
NUR 101 Women's Health Issues	3
PSY 311 Psychology of Gender Roles	3
SOC 290 Gender and Work	3
SOC 320 International Women's Movement	3
WST 300 Selected Topics	3
WST 320 Lesbian, Gay, Bisexual, Transgender, Queer Studies	3
WST 330 Exam Gender, Race, Sexuality and Class in Visual Media	3
WST 340 International Violence: Focused on Women	3
WST 430 Women's Studies Internship	3
Women's Studies Electives (select three courses)	9
ANT 300 Cultural Views of Women	3
ANT 329 Anthropology Internship	3
ECE 319 Parent and Community Involvement in Education	3
ECE 405 Early Childhood Education Seminar	3
EDU 310 Teaching Multicultural Society	3
ENG 112 Myth, Magic and Mysticism	3
ENG 127 Woman as Hero	3
ENG 315 Survey of American Women Writers	3
GTY 200 Aging in American Society	3
GTY 300 Aging Policies and Services	3
GTY 310 Aging in the Family	3
GTY 330 Dying, Death and Bereavement	3
GTY 340 Diversity in Aging	3
HIS 309 Gender in Latin America	3
HIS 312 Women in Europe	3

Health and Human Service Professions

Course	Credits
HIS 317 African-American History to 1877	3
HIS 318 African-American History since 1877	3
HIS 325 Women in U.S. History	3
HIS 347 Race and Ethnicity in U.S.	3
HIS 352 Native American History to 1850	3
HIS 353 Native American History from 1850	3
HIS 366 History of Modern Latin America	3
HIS 422 History of the Antebellum South	3
HIS 445 Social History	3
JUS 215 Victimology	3
JUS 399 Selected Topics (with WST director's approval)	3
PHI 225 Social/Political Philosophy	3
POS 322 Politics of the Middle East	3
POS 323 Politics of Latin America	3
POS 325 Politics of Asia	3
POS 326 Politics of Africa	3
PSY 311 Psychology of Gender Roles	3
PSY 424 Capstone (with WST director's approval)	3
PSY 425 Project (with WST director's approval)	3
SOC 205 Contemporary Social Problems	3
SOC 210 Social Stratification	3
SOC 290 Gender and Work	3
SOC 315 Social Minorities	3
SOC 320 International Women's Movements	3
SOC 325 The Family	3
SOC 377 Modern Freedom Movements	3
SOC 410 Social Theory and Society	3
SOW 303 Human Sex and Society	3
SOW 308 Diversity in a Changing World	3
SOW 340 Poverty/Related Social Problems	3

Health and Human Service Professions

Course	Credits
SOW 495 Seminar in Special Topics (with WST director's approval)	3
WST 300 Selected Topics in Women's Studies	3
WST 320 Lesbian, Gay, Bisexual, Transgender and Queer Studies	3
WST 330 Examining Gender, Race, Sexuality and Class in Visual Media	3
WST 340 International Violence: Focused on Women	3
WST 430 Internship in Women's Studies	3
Total	21

Program Notes

9 credits must be in 300- and 400-level courses.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/womens-studies/index.aspx>

Humanities

Department of Humanities

Faculty

Dr. Abdullah Alsaffar | Maggy D. Aston | James B. Bové | Dr. Andrea Cencich | Dr. Clarissa W. Confer | Dr. Paul Crawford | Laura DeFazio | Dr. Kelton Edmonds | Dr. Arcides Gonzalez | Dr. Joseph C. Heim | Dr. Elizabeth A. Larsen | Dr. Sean Madden | Dr. Suzan Mohny | Todd Pinkham | Dr. Michael Slaven | Dr. Craig A. Smith | Dr. Razak Surrey | Dr. Emily M. Sweitzer | Dr. Christina A. Toras | Dr. Laura Tuennerman

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Programs

Cal U's Department of Humanities includes undergraduate programs in art, history, global studies, jurisprudence, languages, political science and sociology.

Associate and Bachelor's Degree Programs

Degrees offered through this department include:

- A.A. in Liberal Studies
- B.A. in Arabic Language and Culture
- B.A. in Art
- B.F.A. in Art Studio
- B.A. in Global Studies
- B.A. in History
- B.A. in Jurisprudence: Legal Studies
- B.A. in Liberal Studies
- B.A. in Political Science
- B.A. in Political Science: Pre-Law
- B.A. in Political Science: Public Affairs
- B.A. in Social Sciences
- B.A. in Sociology
- B.A. in Sociology: Social Deviance

Note: Cal U also offers B.S.Ed. degrees in secondary education for Art (K-12) and Social Studies through its Department of Education.

Certificate Programs

The department also offers sub-baccalaureate certificates in:

- Arabic Language and Culture
- History of War, Service and the American Experience
- Spanish for Business
- Spanish for Law Enforcement
- Studio Art
- Violence and Incidence Collaboration Evaluation in Schools

Minors

The following minors are also available through the Department of Humanities:

- African American Studies
- Arabic
- French
- History
- Political Science
- Pre-Law
- Sociology
- Spanish
- Studio Art

Humanities

Note: Additional art-related minors offered under other departments include:

- Arts Administration, through the Department of Business, Economics and Enterprise Sciences
- Art History, through the Department of Culture, Media, and Performance

Honor Societies

- **History** students who meet the academic requirements are eligible for membership in Phi Alpha Theta, national honor society in history.
- **Political science** students who meet the academic requirements are eligible for membership in Pi Sigma Alpha, the national political science honor society.
- Students in the **sociology** program are eligible for membership in Pi Gamma Mu, the social science honor society, and Alpha Kappa Delta, the honor society for sociology.

A.A. in Liberal Studies

Program Description

The Associate of Arts in Liberal Studies degree offers students a flexible, customized curriculum. Students are able to select courses from a wide range of liberal arts topics in the humanities, social sciences and natural sciences. This enables them to tailor their degree to their personal and professional interests.

Delivery Modes

- Traditional (on campus)
- Global Online (100% online)

Curriculum

On Campus

Course	Credits
General Education	
COM XX Any Public Speaking Course	3
ENG 101 Composition I	3
ENG 102 Composition II	3
Fine Arts Course	3
General Education Course	3
Health and Wellness	3
Humanities Course	3
Mathematics and Quantitative Literacy Course	3
Natural Sciences Course	3
Social Sciences Course	3
Program Requirements	
Lower and/or Upper Division Electives (Humanities, Natural Sciences and Social Sciences)	15
Upper Division Electives (Humanities, Natural Sciences and Social Sciences)	9

Humanities

Course	Credits
Additional Electives	6
Total	60

Program Notes

- Additional Requirements: One course must be a laboratory course.
- Required **Major Courses** must be selected from the following disciplines: ANT, ARB, ART, BIO, CHE, CMD, COM, CSC, EAS, ECO, EDE, EDU, ELC, ELE, ELM, ENG, ENS, ESP, FRE, GEO, HIS, JUS, LEA, MAT, MUS, PHI, PHS, PHY, POS, PSY, SEC, SOC, SOW, SPN, TED, THE, WFD, WST
- A maximum of 24 credits can be used with the same course prefix.
- 12 credits (4 courses) of upper-division (300 or 400 level courses are REQUIRED).
- Developmental courses do not count toward the 60 credits necessary for graduation, but are calculated in your overall GPA.
- For assistance, please contact the College of Liberal Arts - Library 450, Department of History, Politics, Society and Law.

Online

Course	Credits
General Education	
COM XX Any Public Speaking Course	3
ENG 101 Composition I	3
ENG 102 Composition II	3
Fine Arts Course	3
General Education Course	3
Health and Wellness	3
Humanities Course	3
Mathematics and Quantitative Literacy Course	3
Natural Sciences Course	3
Social Sciences Course	3
Program Requirements	
Lower and/or Upper Division Electives (Humanities, Natural Sciences and Social Sciences)	15
Upper Division Electives (Humanities, Natural Sciences and Social Sciences)	9
Additional Electives	6
Total	60

Humanities

Program Notes

- Additional Requirements: One course must be a laboratory course.
- Required **Major Courses** must be selected from the following disciplines: ANT, ARB, ART, BIO, CHE, CMD, COM, CSC, EAS, ECO, EDE, EDU, ELC, ELE, ELM, ENG, ENS, ESP, FRE, GEO, HIS, JUS, LEA, MAT, MUS, PHI, PHS, PHY, POS, PSY, SEC, SOC, SOW, SPN, TED, THE, WFD, WST
- A maximum of 24 credits can be used with the same course prefix.
- 12 credits (4 courses) of upper-division (300 or 400 level courses are REQUIRED).
- Developmental courses do not count toward the 60 credits necessary for graduation, but are calculated in your overall GPA.
- For assistance, please contact the College of Liberal Arts - Library 450, Department of History, Politics, Society and Law.

Program Webpages

<https://www.calu.edu/academics/undergraduate/associate/liberal-studies/index.aspx>

<https://www.calu.edu/academics/undergraduate/associate/liberal-studies-online/>

B.A. in Arabic Language and Culture

Program Description

The Bachelor of Arts in Arabic Language and Culture degree prepares students to read, write and speak Modern Standard Arabic and to gain deep insights into Arabic people, society and customs.

Delivery Mode

Global Online (100% online)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ARB 101 Elementary Arabic I	3
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
General Education, Minor OR Elective Courses	9
Second Semester	15
ARB 102 Elementary Arabic II	3
ENG 102 English Composition II	3
General Education Courses	9
Sophomore Year	
Third Semester	15

Humanities

Course	Credits
ARB 203 Intermediate Arabic I	3
General Education, Minor OR Elective Courses	12
Fourth Semester	15
ARB 204 Intermediate Arabic II	3
General Education, Minor OR Elective Courses	12
Junior Year	
Fifth Semester	15
ARB 350 Advanced Arabic I	3
ARB Required Related Course*	3
General Education, Minor OR Elective Courses	9
Sixth Semester	15
ARB 351 Advanced Arabic II	3
ARB Required Related Course*	3
General Education, Minor OR Elective Courses	9
Senior Year	
Seventh Semester	15
ARB Required Related Course*	3
General Education, Minor OR Elective Courses	12
Eighth Semester	15
ARB Required Related Course*	3
General Education, Minor OR Elective Courses	12
Total	120

*ARB Required Related Courses	Credits
Choose 12 credits from the following:	
ARB 311 Arabic Conversation	3

Humanities

*ARB Required Related Courses	Credits
ARB 341 Contemporary Arabic Culture	3
ARB 342 The Culture of Islam	3
ARB 343 Images of Islam	3
ARB 401 Introduction to Arabic Linguistics	3
ARB 402 Arabic Translation	3
ARB 421 Arabic Literature in Translation	3
ARB 480 Selected Topics in Arabic	3 to 12
MFL 460 Modern Languages and Cultural Internship	3 to 12
MFL 479 Modern Languages and Field Studies	3 to 12
MFL 481 Modern Languages Internship	3 to 12

42 credits of the required 120 credits must include advanced standing courses (defined as any course numbered 200 or above with at least one prerequisite course). However, any course numbered 200-299 must have at least one prerequisite course to be counted as upper division. 300 level and above is counted automatically as upper division.

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's Arabic program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/arabic-language-and-culture/index.aspx>

B.A. in Art

Program Description

The Bachelor of Art (B.A.) in Art degree allows students to study a broad range of studio areas. As a result, this degree can be easily combined with a minor or second major.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ART 110 Drawing I	3
ART 119 Design 2-D	3
ENG 101 English Composition I or HON 150	3

Humanities

Course	Credits
UNI 100 First-Year Seminar	1
General Education Courses	6
Second Semester	15
ART 120 Design 3-D	3
Art History Course	3
Free Elective	3
General Education Courses	6
Sophomore Year	
Third Semester	15
Art Studio Courses	6
General Education Courses	9
Fourth Semester	15
Art Studio Course	3
Art History Course	3
Laboratory Component Course	3
General Education Courses	6
Junior Year	
Fifth Semester	15
Art Studio Courses	6
Free Elective	3
General Education Courses	6
Sixth Semester	15
ART 388 Critical Writing in Art	3
Art Studio Course	3
Free Elective	3

Humanities

Course	Credits
General Education Courses	6
Senior Year	
Seventh Semester	15
ART 490 Senior Studio Thesis	3
Free Electives	12
Eighth Semester	15
Free Electives	15
Total	120

Program Notes:

35 percent of the required 120 credits must include upper division course (300-400 level).

All art studio courses 300 level and above are repeatable.

Required Major Courses (33 credits)

- **ART 110** Drawing I (3 credits)
- **ART 119** Design 2-D (3 credits)
- **ART 120** Design 3-D (3 credits)
- **ART 310** Advanced Drawing OR **ART 438** Figure Drawing (3 credits)
- **ART 376** Jewelry/Metals: Casting OR **ART 377** Jewelry/Metals: Fabrication (3 credits)
- **ART 382** Ceramics Studio (3 credits)
- **ART 383** Painting Studio (3 credits)
- **ART 385** Sculpture Studio (3 credits)
- **ART 388** Critical Writing in Art (3 credits)
- **ART 490** Senior Studio Thesis (3 credits)

Choose one from the following list (3 credits):

- **ART 350** Printmaking: Relief
- **ART 351** Printmaking: Intaglio
- **ART 295** Surface Design
- **ART 352** Printmaking Processes

Required Art History Courses (6 credits)

Choose one from the following list (3 credits):

- **ART 212** Art History I
- **ART 214** Art History II
- **ART 106** Art Appreciation
- **ART 109** Landmarks of World Art

Choose one from the following list (3 credits):

- **ART 109** Landmarks of World Art

Humanities

- **ART 118** History of Making
- **ART 212** Art History I
- **ART 214** Art History II
- **ART 243** Introduction to Asian Art
- **ART 308** Art History: Ancient to Medieval
- **ART 311** Medieval Art and Architecture
- **ART 316** Art History: Renaissance Through Rococo
- **ART 317** Art History: Neoclassicism Through the Present
- **ART 319** Ancient Greek and Roman Art
- **ART 323** Women in Art
- **ART 324** Modern Art
- **ART 326** Contemporary Art
- **ART 328** Italian Renaissance Art
- **ART 333** American Art: European Settlement through 1918
- **ART 345** Methods of Art History
- **ART 420** Contemporary Issues in Art
- **ART 422** Art History: The Art World After Modernism
- **ARB 343** Images of Islam: From Spain to Iran

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/art/index.aspx>

B.A. in Global Studies

Program Description

The Bachelor of Arts in Global Studies (formerly International Studies) degree increases students' global awareness while allowing them to select a focus area of study that aligns with their career goals and interests.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Comp. I	3
UNI 100 First-Year Seminar	1
FRE/SPN/ARB Elementary I	3
General Education Courses	9
Second Semester	15
FRE/SPN/ARB Elementary II	3
Area of Study Course*	3
General Education Courses	9

Humanities

Course	Credits
Sophomore Year	
Third Semester	15
FRE/SPN/ARB Intermediate I	3
Area of Study Course*	3
General Education Courses	9
Fourth Semester	15
FRE/SPN/ARB Intermediate II	3
Area of Study Course*	3
Area of Study Course*	3
General Education Courses	6
Junior Year	
Fifth Semester	15
FRE/SPN/ARB Conv/Comp/Phonetics	3
Area of Study Course*	3
Area of Study Course*	3
General Education Courses	6
Sixth Semester	15
General Education Course	3
Laboratory Course	3
Minor or Elective Course	3
Cultural/International Experience Requirement	6
Senior Year	
Seventh Semester	15
Upper-Division Writing Intensive Course	3
Minor or Elective Courses	12

Humanities

Course	Credits
Eighth Semester	15
Special Experience Course	3
Upper-Division Writing Intensive Course	3
Minor or Elective Course	9
Total	120

Program Notes

Minimum GPA 2.0

Required Major Courses

INT 200 Intro to International Studies

Language Proficiency (15 credits)

Additional languages by approval.

- Elementary I: SPN 101, FRE 101 or ARB 101
- Elementary II: SPN 102, FRE 102 or ARB 102
- Intermediate I: SPN 203, FRE 203 or ARB 203
- Intermediate II: SPN 204, FRE 204 or ARB 204
- Advanced Course: SPN 311, FRE 345 or ARB 350

Cultural/International Experience (6 credits)

- SPN 345, SPN 346, SPN 348, SPN 349, SPN 350, FRE 341, FRE 343, FRE 344, FRE 346, ARB 351, ARB 480, MFL 479, MFL 481, ENS 480

* Focus Areas (18 credits)

Business and Economics Focus (6 courses, 18 credits)

- ACC 200, ECO 201, ECO 202, FIN 301, MGT 300, MGT 431, MKT 300

History and Political Science Focus (6 courses, 18 credits)

- HIS 106, HIS 112, HIS 240, HIS 309, HIS 316, HIS 323, HIS 348, HIS 366, HIS 370, HIS 379, HIS 425, HIS 430, POS 210, POS 312, POS 320, POS 322, POS 323, POS 325, POS 326, POS 336

Biology and Environment Focus (6 courses, 18 credits***)

- BIO 327, BIO 337, BIO 400, BIO 414, BIO 433, BIO 435, BIO 441, BIO 445, BIO 478, BIO 488, ENS 399, ENS 425, ENS 440, ENS 475, ENS 480, ENS 495

***Also requires a minor in Biology 21 credits in BIO or ENS

- Required: BIO 120, BIO 125, BIO 215 (12 credits)
- Suggested additional courses: BIO 232, BIO 248, BIO 318, ENS 101

Geography Focus (6 courses, 18 credits)

- GEO 100, GEO 150, GEO 205, GEO 217, GEO 220, GEO 325, GEO 352, GEO 426

Humanities

Global Issues Focus (6 courses, 18 credits)

- ACC 200, ANT 100, ANT 255, ANT 232, ANT 300, ART 316, ART 317, BIO 103, BIO 232, CHE 381, EAS 230, EAS 300, ECO 201, ECO 202, ENS 101, FIN 301, GEO 100, GEO 150, GEO 205, GEO 217, GEO 220, GEO 325, GEO 352, GEO 426, HIS 106, HIS 112, HIS 240, HIS 309, HIS 316, HIS 323, HIS 348, HIS 366, HIS 370, HIS 379, HIS 425, HIS 430, JUS 305, JUS 400, JUS 470, MAT 304, MGT 300, MGT 431, MKT 300, PHS 137, PHI 200, PHI 220, PHI 225, POS 210, POS 312, POS 320, POS 322, POS 323, POS 325, POS 326, POS 336, SOC 210, SOC 320, SOC 330, SOC 377, SOW 340

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/international-studies/index.aspx>

B.A. in History

Program Description

The Bachelor of Arts in History degree develops students' historical knowledge and critical thinking skills.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
History Survey Courses	6
General Education Courses	6
Second Semester	15
ENG 102 English Composition II	3
History Survey Courses	6
General Education Courses	6
Sophomore Year	
Third Semester	15
HIS 295 The Craft of History	3
History Elective	3

Humanities

Course	Credits
General Education Courses	9
Fourth Semester	15
History Elective	3
General Education Courses	9
Minor OR Free Elective Course	3
Junior Year	
Fifth Semester	15
History Electives	6
General Education Course	3
Minor OR Elective Courses	6
Sixth Semester	15
History Elective	3
Minor OR Elective Courses	12
Senior Year	
Seventh Semester	15
HIS 491 Readings in History	3
History Elective	3
Minor OR Free Elective Courses	9
Eighth Semester	15
HIS 495 Seminar in History	3
Minor OR Free Elective Courses	12
Total	120

Program Notes

Minimum GPA 2.0, Minimum Credits 120

Program Requirements

Required Major Courses

Humanities

- **HIS 295** Craft of History
- **HIS 491** Readings in History
- **HIS 495** Seminar in History

History Survey Courses

- Pick two from: HIS 101, 104, 111
- Pick two from: HIS 102, 106, 112

Non-western History Courses

- Pick two from: HIS 309, 310, 317, 323, 324, 345, 352, 353, 366, 367, 370, 410, 425, 430; POS 322,325, 326

History Electives

- Pick five (at least three at the 300-400 level)

Free Electives

- 37-38 credits, with at least 20 credits at the 300-400 level

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/history/index.aspx>

B.A. in Jurisprudence: Legal Studies Concentration

Program Description

The Legal Studies concentration of the Bachelor of Arts in Jurisprudence degree provides students with a strong foundation in legal reasoning, legal analysis and the historical development of legal principles. Special emphasis is given to the practical application of law in today's workplace through a comprehensive study of a wide range of legal practice areas. Discipline-related elective courses enable students to tailor this program to suit specific career aspirations.

Program Coordinator

Dr. Christina A. Toras

Delivery Mode

Global Online (100% online)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
LAW 300 The Paralegal Profession	3
UNI 100 First-Year Seminar	1
Free Elective	3

Humanities

Course	Credits
General Education Courses	6
Second Semester	15
LAW 400 Constitutional Law for Paralegals	3
Free Elective	6
General Education Courses	6
Sophomore Year	
Third Semester	15
LAW 310 Legal Research and Writing	3
Free Electives	6
General Education Courses	6
Fourth Semester	15
JUR 300 Classical Jurisprudence	3
Free Electives	6
General Education Courses	6
Junior Year	
Fifth Semester	15
JUR 310 Medieval Jurisprudence	3
LAW 320 Litigation and Trial Evidence	3
Free Elective	3
General Education Courses	6
Sixth Semester	15
JUR 320 Anglo-American Jurisprudence	3
LAW 330 Criminal Law for Paralegals	3
LAW 340 Family Law	3
Free Elective	3

Humanities

Course	Credits
General Education Course	3
Senior Year	
Seventh Semester	15
LAW 350 Real Estate Law	3
LAW 360 Law, Business and the Workplace	3
LAW 380 Estates and Trusts	3
Free Electives	6
Eighth Semester	15
LAW 370 Administrative Law	3
LAW 410 Law and Ethics	3
Free Electives	6
General Education Course	3
Total	120

Program Notes

- For Free Electives (37-38 credits): LAW electives are recommended below.
 - **LAW 390** Bankruptcy
 - **LAW 420** Law and Conflict Resolution
 - **LAW 430** Elder Law
 - **LAW 440** Immigration Law
 - **LAW 450** Labor and Employment Law
 - **LAW 460** School Law
- 42 credits of advanced coursework are required (that is, any 300- or 400-level course or a 200-level course with at least one pre-requisite).

Note: Transfer students entering this program will have at least 40 semester-credit-hours of college credits; first-year students are also accepted. Students entering with an associate degree will need fewer electives.

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (B.A. in Jurisprudence to M.S. in Legal Studies) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/jurisprudence/legal-studies/index.aspx>

Humanities

B.A. in Liberal Studies

Program Description

The Bachelor of Arts in Liberal Studies degree provides students with flexible, customizable curriculum options. Courses from the humanities, natural sciences and social sciences are used to fulfill the major requirements. They include the following:

- **Humanities:** art, communication studies, English, foreign languages, literature, music, philosophy and theatre
- **Natural Sciences:** biology, chemistry, computer science, earth science, environmental science, mathematics, physical science and physics
- **Social Sciences:** anthropology, criminal justice, economics, geography, history, political sciences, psychology, sociology, social work, leadership and women's studies

Delivery Modes

- Traditional (on campus)
- Global Online (100% online)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
Free Electives	6
General Education Course	3
Required Lower Division Course	3
Second Semester	15
ENG 102 Composition II	3
Free Electives	6
Required Lower Division Courses	6
Sophomore Year	
Third Semester	15
Any COM Public Speaking Gen Ed Course	3
Free Elective	3
General Education Course	3
Required Lower Division Courses	6

Humanities

Course	Credits
Fourth Semester	15
Any Math and Quantitative Literacy Course	3
Free Electives	6
Required Lower Division Course	3
Required Upper Division Course	3
Junior Year	
Fifth Semester	15
Any Health and Wellness Course	3
Any Technological Literacy Course	3
Free Elective	3
Required Upper Division Courses	6
Sixth Semester	15
Any Fine Arts Course	3
Any Humanities Course	3
Free Elective	3
Required Upper Division Courses	6
Senior Year	
Seventh Semester	15
Any Natural Science Course	3
Free Electives	9
Required Upper Division Course	3
Eighth Semester	14
LST 490 Seminar in Liberal Studies	3
Any Social Science Course	3
Free Electives	8

Humanities

Course	Credits
Total	120

Program Notes

- Required Major Courses must be selected from the following Disciplines: ANT, ARB, ART, BIO, CHE, COM, CSC, EAS, ECO, ELC, ENG, ENS, FRE, GEO, HIS, JUS, LEA, MAT, MUS, PHI, PHS, PHY, POS, PSY, SOC, SOW, SPN, THE, WFD, WST.
- 42 credits (or 14 courses) of upper-division (any course numbered 200 or above with at least one prerequisite course) courses are REQUIRED.
- No more than 30 credits may be earned via PLA.
- Advisers are located in the Department of History, Politics and Society.
- Developmental courses do not count toward graduation, but are calculated in the overall GPA.

Program Webpages

<https://www.calu.edu/academics/undergraduate/bachelors/liberal-studies/index.aspx>

<https://www.calu.edu/academics/undergraduate/bachelors/liberal-studies/online.aspx>

B.A. in Political Science

Program Description

The Bachelor of Arts in Political Science degree explores the American political system, public administration and policy, political theories, international relations and comparative political systems.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First-Semester	16
ENG 101 English Composition I	3
POS 100 Introduction to Political Science	3
UNI 100 First-Year Seminar	1
General Education Courses	9
Second Semester	15
ENG 102 English Composition II OR ENG 211 Business Writing I OR ENG 217 Scientific and Technical Writing I OR HON 250 Honors Composition II	3
POS 105 American Politics	3

Humanities

Course	Credits
General Education Courses	9
Sophomore Year	
Third Semester	15
Political Science Electives	6
General Education Courses	9
Fourth Semester	15
Political Science Electives	6
General Education Courses	6
Minor OR Elective Course	3
Junior Year	
Fifth Semester	15
POS 301 Research Methods in Political Science	3
Political Science Elective	3
Minor OR Elective Course	9
Sixth Semester	15
Political Science Electives	6
Minor OR Elective Courses	9
Senior Year	
Seventh Semester	15
Political Science Electives	6
Minor OR Elective Courses	9
Eighth Semester	15
POS 450 Seminar in American Politics	3
Political Science Elective	3

Humanities

Course	Credits
Minor OR Elective Courses	9
Total	120

Program Requirements

Required Major Courses

- **POS 100** Introduction to Political Science
- **POS 105** American Politics
- **POS 301** Research Methods in Political Science
- **POS 450** Seminar in Politics

Select one from each list (12 credits total):

- **American Politics:** POS 303, 306, 310, 311, 314, 315, 316, 317, 318, 319, 329, 344, 415
- **International Relations/Comparative Politics:** POS 210, 312, 320, 323, 325, 326, 336, 340, 346, 360, 381
- **Political Theory:** POS 307, 327, 330, 347, 348
- **Public Administration/Public Policy:** POS 300, 308, 317, 335, 344, 355, 365, 370, 375

Political Science Electives

- Six courses (18 credits)

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/political-science/index.aspx>

B.A. in Political Science: Pre-Law Concentration

Program Description

The Pre-Law concentration of the Bachelor of Arts in Political Science is designed for students who plan to go on to law school or pursue other graduate studies. The program hones students' analytical reading, writing and critical thinking skills as well as their ability to make a persuasive argument.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First-Semester	16
ENG 101 English Composition I	3
POS 100 Introduction to Political Science	3
UNI 100 First-Year Seminar	1
General Education Courses	9

Humanities

Course	Credits
Second Semester	15
ENG 102 English Composition II OR ENG 211 Business Writing I OR ENG 217 Scientific and Technical Writing I OR HON 250 Honors Composition II	3
POS 105 American Politics	3
General Education Courses	9
Sophomore Year	
Third Semester	15
PHI 115 Logic and Language OR PHI 211 Formal Logic	3
Political Science Elective	3
General Education Courses	9
Fourth Semester	15
CDC 201 Argumentation and Advocacy OR CDC 302 Persuasion	3
Political Science Elective	3
General Education Courses	6
Minor OR Elective Course	3
Junior Year	
Fifth Semester	15
POS 301 Research Methods in Political Science	3
HIS 435 History of Law OR HIS 322 History of Religious Persecution in the U.S.	3
Minor OR Elective Courses	9
Sixth Semester	15
Political Science Electives	6
Minor OR Elective Courses	9

Humanities

Course	Credits
Senior Year	
Seventh Semester	15
Political Science Electives	6
Minor OR Elective Courses	9
Eighth Semester	15
POS 450 Seminar in American Politics	3
Political Science Elective	3
Minor OR Elective Courses	9
Total	120

Program Requirements

Required Major Courses (12 credits)

- **POS 100** Introduction to Political Science
- **POS 105** American Politics
- **POS 301** Research Methods in Political Science
- **POS 450** Seminar in Politics

Required Related Courses (30 credits)

- **CDC 201** Argumentation and Advocacy OR **CDC 302** Persuasion
- **HIS 435** History of Law OR **HIS 322** History of Religious Persecution
- **PHI 115** Logic and Language OR **PHI 211** Formal Logic
- **POS 316** Judicial Policy OR **LAW 370** Administrative Law
- **POS 327** Contemporary Political Thought OR **POS 330** American Political Ideas
- Political Science Elective

Select one from each list (12 credits total):

- **U.S. Constitution:** POS 314, POS 315, HIS 308
- **Political Theory:** POS 327, 330, 347, 348
- **International Politics:** POS 307, 312, 320, 346
- **U.S. Government:** POS 300, 306, 310, 318

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/pre-law/index.aspx>

B.A. in Political Science: Public Affairs Concentration

Program Description

The Public Affairs concentration of the Bachelor of Arts in Political Science degree explores various aspects of policy and administration. Students hone their decision-making skills and learn how to craft policy in the public sector.

Humanities

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First-Semester	16
ENG 101 English Composition I	3
POS 100 Introduction to Political Science	3
UNI 100 First-Year Seminar	1
General Education Courses	9
Second Semester	15
ENG 102 English Composition II OR ENG 211 Business Writing I OR ENG 217 Scientific and Technical Writing I OR HON 250 Honors Composition II	3
POS 105 American Politics	3
General Education Courses	9
Sophomore Year	
Third Semester	15
POS American Politics Course	3
POS Public Affairs Course	3
General Education Courses	9
Fourth Semester	15
COM 230 Argumentation and Debate OR COM 350 Persuasion	3
POS International Relations/Comparative Politics Course	3
POS Public Affairs Course	3
General Education Courses	6

Humanities

Course	Credits
Junior Year	
Fifth Semester	15
POS 301 Research Methods in Political Science	3
POS Public Affairs Course	3
POS Theory Course	3
Minor OR Elective Courses	6
Sixth Semester	15
POS Public Affairs Courses	6
Minor OR Elective Courses	9
Senior Year	
Seventh Semester	15
POS Public Affairs Course	3
Minor OR Elective Courses	12
Eighth Semester	15
POS 450 Seminar in American Politics	3
POS Public Affairs Course	3
Minor OR Elective Courses	9
Total	120

Program Requirements

Required Major Courses (12 credits)

- **POS 100** Introduction to Political Science
- **POS 105** American Politics
- **POS 301** Research Methods in Political Science
- **POS 450** Seminar in Politics

Select one from each list (9 credits total):

- **American Politics:** POS 303, 306, 310, 311, 314, 315, 316, 317, 318, 319, 329, 344, 415
- **International Relations/Comparative Politics:** POS 210, 312, 320, 323, 325, 326, 336, 340, 346, 360, 381
- **Political Theory:** POS 307, 327, 330, 347, 348

Public Affairs Concentration (21 credits)

Humanities

- **LAW 370** Administrative Law
- **POS 300** Public Policy
- **POS 344** Intergovernmental Relations
- **POS 355** Public Administration
- **POS 365** Public Sector Organizational Theory and Behavior
- **POS 370** Public Sector Personnel Management
- **POS 375** Public and Nonprofit Strategic Planning

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/public-affairs/index.aspx>

B.A. in Social Sciences

Program Description

The Bachelor of Arts in Social Sciences degree explores multidisciplinary perspectives of human behavior, relationships and modern society.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
Required Lower Division Course*	3
Free Electives	6
General Education Course	3
Second Semester	15
Required Lower Division Course*	3
Required Lower Division Course*	3
Free Electives	3
Free Elective	3
General Education Course	3
Sophomore Year	
Third Semester	15

Humanities

Course	Credits
Required Lower Division Course*	3
Required Lower Division Course*	3
Laboratory Course	3
Free Elective	3
General Education Course	3
Fourth Semester	15
Required Lower Division Course*	3
Free Elective	3
Free Elective	3
General Education Course	3
General Education Course	3
Junior Year	
Fifth Semester	15
Required Upper Division Course**	3
Required Upper Division Course**	3
Free Elective	3
General Education Course	3
General Education Course	3
Sixth Semester	15
Required Upper Division Course**	3
Free Elective	3
Free Elective	3
General Education Course	3
General Education Course	3
Senior Year	
Seventh Semester	15

Humanities

Course	Credits
Required Upper Division Course**	3
Required Upper Division Course**	3
Free Elective	3
Free Elective	3
General Education Course	3
Eighth Semester	15
Required Upper Division Course**	3
Free Elective	3
Free Elective	3
General Education Course	3
General Education Course	3
Total	120

* Lower Division: Select a 100-200 level course from ANT, ECO, GEO, HIS, POS, PSY, SOC

** Upper Division: Select a 300-400 level course from ANT, ECO, GEO, HIS, POS, PSY, SOC

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/sociology/social-science.aspx>

B.A. in Sociology

Program Description

The Bachelor of Arts in Sociology degree is designed for students who plan to pursue a career in research in applied settings and who are seeking practical experience using sociological concepts, methods and theory.

Students can take 12 credits in social research methods, plus statistics and a 3-credit internship in the second semester of their senior year.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3

Humanities

Course	Credits
SOC 100 Principles of Sociology	3
UNI 100 First-Year Seminar	1
Free Elective	3
General Education Courses	6
Second Semester	15
Related Elective*	3
Free Electives	6
General Education Courses	6
Sophomore Year	
Third Semester	15
MAT 215 Statistics OR MAT 205 Statistics for the Health and Social Sciences OR PSY 220 Descriptive Statistics	3
Related Elective*	3
Free Elective	3
General Education Courses	6
Fourth Semester	15
Related Elective*	3
Free Electives	6
General Education Courses	6
Junior Year	
Fifth Semester	15
SOC 410 Sociological Theory and Society	3
Related Elective*	3
Free Elective	3
General Education Courses	6

Humanities

Course	Credits
Sixth Semester	15
SOC 415 Social Research Methods	3
Related Electives*	6
Free Elective	3
General Education Course	3
Senior Year	
Seventh Semester	15
Related Electives*	6
Free Electives	9
Eighth Semester	15
SOC 429 Sociology Internship OR SOC 495 Seminar in Sociology OR SOC 379 Special Problems in Sociology	3
Free Electives	9
General Education Course	3
Total	120

*Related Electives	Credits
SOC 211 Collective Behavior	3
SOC 225 Sociology of Aging	3
SOC 240 Social Institutions	3
SOC 290 Gender and Work	3
SOC 309 Sociology of Sport	3
SOC 315 Social Minorities	3
SOC 316 Urban Sociology	3
SOC 317 Substance Use and Abuse	3
SOC 320 International Women's Movement	3
SOC 325 Sociology of the Family	3
SOC 378 Charismatic Leaders	3
Any One SOC Deviance OR SOC Applied Elective	3

Humanities

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/sociology/index.aspx>

B.A. in Sociology: Social Deviance Concentration

Program Description

The Social Deviance concentration of the Bachelor of Arts in Sociology degree integrates concepts from various academic disciplines to examine and tackle the real-world issues of deviance as it relates to the aberrant, the diverse, the different and the ever-evolving values and norms of our society and broader culture. Students develop an in-depth understanding of the societal variables (values, norms, ideologies, sanctions, mores) that exist, influence and change with social, cultural and political influences.

Delivery Modes

- Traditional (on campus)
- Global Online (100% online)

Curriculum

On Campus

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
SOC 100 Principles of Sociology	3
UNI 100 First-Year Seminar	1
Free Elective	3
General Education Courses	6
Second Semester	15
Related Elective*	3
Free Electives	6
General Education Courses	6
Sophomore Year	
Third Semester	15
Related Electives*	6
Free Elective	3
General Education Courses	6
Fourth Semester	15

Humanities

Course	Credits
Related Elective*	3
Free Electives	6
General Education Courses	6
Junior Year	
Fifth Semester	15
SOC 410 Sociological Theory and Society	3
Related Elective*	3
Free Elective	3
General Education Courses	6
Sixth Semester	15
SOC 415 Social Research Methods	3
Related Electives*	6
Free Elective	3
General Education Course	3
Senior Year	
Seventh Semester	15
Related Electives*	6
Free Electives	9
Eighth Semester	15
SOC 429 Sociology Internship OR SOC 495 Seminar in Sociology OR SOC 379 Special Problems in Sociology	3
Free Electives	9
General Education Course	3
Total	120

***Related Electives**

SOC 300 Sociology of Deviance

Humanities

*Related Electives
SOC 311 Sociology of Crime
SOC 318 Sociology of Addiction, Excess and Exploitation
SOC 319 Sociology of Technology
SOC 324 Child Abuse and Neglect: A Societal Perspective
SOC 380 Society and the Sociopath
SOC 395 Sociology of Elite Deviance
SOC 400 Structural and Institutional Violence
SOC 405 Re-socializing the Deviant and the Marginalized

Online

Course	Credits
Year 1	
Fall Semester	15
SOC 100 Principles of Sociology*	3
SOC 300 Sociology of Deviance	3
SOC 311 Sociology of Crime	3
SOC 410 Social Theory and Society	3
General Education Courses/Electives	3
Winter Semester	9
SOC 380 Society and the Sociopath	3
SOC 405 Resocializing the Deviant and the Marginalized	3
General Education Course/Elective	3
Spring Semester	15
SOC 318 Sociology of Addiction, Excess, and Exploitation	3
SOC 319 Sociology of Technology	3
SOC 395 Sociology of Elite Deviance	3
General Education Courses/Electives	6

Humanities

Course	Credits
Summer Semester	15
SOC 324 Child Abuse and Neglect: A Societal Perspective	3
SOC 400 Structural and Institutional Violence: School, Workplace and Eldercare	3
SOC 415 Social Science Research Methods	3
General Education Courses/Electives	6
Year 2	
Fall Semester	12
General Education Courses/Electives	12
Winter Semester	12
General Education Courses/Electives	12
Spring Semester	15
SOC 410 Social Theory and Society	3
General Education Courses/Electives	12
Summer Semester	15
General Education Courses/Electives	15
Year 3	
Fall Semester	15
SOC 429 Sociology Internship**	3
General Education Courses/Electives	9
Total	120

Note: All sociology classes are offered at least once during each academic rotation.

* SOC 100 can be taken during the fall, spring or summer semester.

** SOC 429 can be taken during the fall, spring or summer semester. Students must have earned at least 90 credits to take this course.

Humanities

Accelerated Bachelor's-to-Master's Program

Accelerated bachelor's-to-master's programs are also available to undergraduate students who qualify, including:

- B.A. Sociology: Social Deviance to M.S. in Clinical Mental Health Counseling
- B.A. Sociology: Social Deviance to M.Ed. in School Counseling

Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpages

<https://www.calu.edu/academics/undergraduate/bachelors/sociology/deviance-campus.aspx>

<https://www.calu.edu/academics/undergraduate/bachelors/sociology/online.aspx>

B.F.A. in Art Studio

Program Description

The Bachelor of Fine Arts (B.F.A.) in Art Studio is a professional degree that allows students to develop a concentration of 18 advanced-level credits in any of the following areas:

- 2-dimensional media
- 3-dimensional media
- Digital media
- Graphic design
- Painting
- Printmaking
- Drawing
- Ceramics
- Jewelry
- Sculpture

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ART 110 Drawing I	3
ART 119 Design 2-D	3
ART 120 Design 3-D	3
ENG 101 English Composition I OR HON 150	3
UNI 100 First-Year Seminar	1
General Education Course	3
Second Semester	15

Humanities

Course	Credits
Art History Course	3
Art Studio Course	3
General Education Courses	9
Sophomore Year	
Third Semester	15
Art History Course	3
Art Studio Courses	6
General Education Courses	6
Fourth Semester	15
Art History Course	3
Art Studio Courses	6
General Education Courses	6
Junior Year	
Fifth Semester	15
Art Studio Courses	9
Laboratory Component Course	3
General Education Course	3
Sixth Semester	15
ART 388 Critical Writing in Art	3
Art History Course	3
Art Studio Course	3
General Education Courses	6
Senior Year	
Seventh Semester	15
ART 490 Senior Studio Thesis	3

Humanities

Course	Credits
Art Studio Courses	9
General Education Course	3
Eighth Semester	15
Art Studio Courses	9
Free Elective	3
General Education Course	3
Total	120

Program Notes

- 35% of the required 120 credits must include upper division courses (300-400 level).
- All art studios 300 level and above are repeatable.
- Requirements in Major: Students must complete 18 credits in one of the four listed concentrations as an area of emphasis (single studio area, 2-dimensional, 3-dimensional or digital media).

Note: One Laboratory Component course must be completed as part of the General Education requirements.

Required Major Courses (33 credits)

- **ART 110** Drawing I (3 credits)
- **ART 119** Design 2-D (3 credits)
- **ART 120** Design 3-D (3 credits)
- **ART 310** Advanced Drawing OR **ART 438** Figure Drawing (3 credits)
- **ART 376** Jewelry/Metals: Casting OR **ART 377** Jewelry/Metals: Fabrication (3 credits)
- **ART 382** Ceramics Studio (3 credits)
- **ART 383** Painting Studio (3 credits)
- **ART 385** Sculpture Studio (3 credits)
- **ART 388** Critical Writing in Art (3 credits)
- **ART 490** Senior Studio Thesis (3 credits)

Choose one from the following list (3 credits):

- **ART 350** Printmaking: Relief
- **ART 351** Printmaking: Intaglio
- **ART 295** Surface Design
- **ART 352** Printmaking Processes

Required Art History Courses (12 credits)

Choose from (3 or 6 credits):

- **ART 212** Art History I and **ART 214** Art History II
- **ART 106** Art Appreciation
- **ART 109** Landmarks of World Art

Choose two to three courses from the following list (6 or 9 credits):

- **ART 109** Landmarks of World Art
- **ART 118** History of Making
- **ART 212** Art History I

Humanities

- **ART 214** Art History II
- **ART 243** Introduction to Asian Art
- **ART 308** Art History: Ancient to Medieval
- **ART 311** Medieval Art and Architecture
- **ART 316** Art History: Renaissance Through Rococo
- **ART 317** Art History: Neoclassicism Through the Present
- **ART 319** Ancient Greek and Roman Art
- **ART 323** Women in Art
- **ART 324** Modern Art
- **ART 326** Contemporary Art
- **ART 328** Italian Renaissance Art
- **ART 333** American Art: European Settlement through 1918
- **ART 345** Methods of Art History
- **ART 420** Contemporary Issues in Art OR ART 422 Art History: The Art World After Modernism
- **ARB 343** Images of Islam: From Spain to Iran

Areas of Emphasis (18 credits)

Students must complete 18 credits in one of the four listed concentrations as an area of emphasis.

Single Studio Area Concentration

Students complete 18 upper-level credits in any single ART studio area, including ART 329 and 490.

2-Dimensional Concentration

- **ART 112** Introduction to New and Emerging Art Media
- **ART 130** Biological Illustration: Form and Function
- **ART 215** Digital Painting I
- **ART 227** Graphic Design Studio 1
- **ART 233** Natural Science Drawing
- **ART 262** Color Theory
- **ART 266** Selected Topics
- **ART 295** Surface Design
- **ART 310** Advanced Drawing
- **ART 329** Art Internship
- **ART 350** Printmaking: Relief
- **ART 351** Printmaking: Intaglio
- **ART 352** Printmaking Processes
- **ART 383** Painting Studio
- **ART 438** Figure Drawing
- **ART 458** Figure Drawing and Modeling
- **ART 490** Senior Studio Thesis
- **ART 496** Advanced Painting

3-Dimensional Concentration

- **ART 118** History of Making
- **ART 266** Selected Topics
- **ART 329** Art Internship
- **ART 376** Jewelry-Metals: Casting
- **ART 377** Jewelry/Metals: Fabrication
- **ART 382** Ceramics Studio
- **ART 385** Sculpture Studio
- **ART 448** Figure Modeling
- **ART 458** Figure Drawing and Modeling
- **ART 490** Senior Studio Thesis
- **ART 493** Advanced Ceramics
- **ART 498** Advanced Sculpture

Humanities

Digital Media Concentration

- **ART 127** Introduction to Graphic Design
- **ART 215** Digital Painting I
- **ART 227** Graphic Design Studio 1*
- **ART 261** Typography
- **ART 262** Color Theory
- **ART 266** Selected Topics
- **ART 329** Art Internship
- **ART 427** Graphic Design Studio 3
- **ART 428** Graphic Design Studio 4
- **ART 490** Senior Studio Thesis
- **CDC 120** Visual Communications 1
- **CDC 252** The Art of Film
- **CIS 120** Application Programming I
- **DMT 101** TimeBased Media
- **DMT 180** Multimedia Foundations
- **DMT 225** Digital Layout and Design
- **DMT 240** Electronic Desktop Publishing
- **DMT 300** Digital Photography
- **DMT 320** Digital Video
- **DMT 331** Web Publishing
- **DMT 340** Computer Animation and 3-D Imaging
- **DMT 365** Color Imaging
- **DMT 410** Digital Portfolio
- **DMT 945** Graphic Communications Internship
- **GET 130** Introduction to Engineering Technology

* Pre-requisites of ART 227 include ART 120, CDC 120, ART 261 and ART 262, and students must pass a Portfolio Review in February of their sophomore year, which admits only selected students to the two-year junior and senior year cohort of Graphic Design Studios 1, 2, 3 and 4.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/fine-arts/index.aspx>

Certificate in Arabic Language and Culture

Program Description

The certificate in Arabic Language and Culture helps students develop reading, writing and speaking skills in Modern Standard Arabic.

Delivery Mode

Global Online (100% online)

Curriculum

Course	Credits
ARB 101 Elementary Arabic I	3
ARB 102 Elementary Arabic II	3
ARB 203 Intermediate Arabic I	3
Select three credits from the following:	
ARB 204 Intermediate Arabic II	3

Humanities

Course	Credits
ARB 480 Selected Topics in Arabic	3
ARB 341 Contemporary Arabic Culture	3
ARB 342 Culture of Islam	3
ARB 401 Intro to Linguistics	3
ARB 402 Arabic Translation	3
ARB 421 Arabic Literature in Translation	3
Total	12

Program Webpage

<https://www.calu.edu/academics/undergraduate/certificate/arabic-language-culture/index.aspx>

Certificate in History of War, Service and the American Experience Curriculum

Course	Credits
Required Courses	3
HIS 305 Contemporary U.S. History	3
Select one of the following:	3
INT 300 Special Topics Section: Individual Military Experience in Context	3
SOC 379 Special Topics Section: Individual Military Experience in Context	3
Select one of the following:	3
HIS 240 History of the Cold War	3
HIS 379 Special Topics Section: Vietnam	3
Select one of the following:	3
HIS 303 Military History through Wargaming	3
HIS 441 U.S. at War: 20th Century	3
HIS 445 Social History of the U.S.	3
Total	12

Humanities

Program Webpage

<https://www.calu.edu/academics/undergraduate/certificate/war-service-american-experience/index.aspx>

Certificate in Spanish for Business

Program Description

The certificate in Spanish for Business is designed to meet the needs of business majors, business professionals and others seeking to pursue business opportunities or international trade in Spanish-speaking countries or U.S. communities with Spanish-speaking customers and clients. Students learn practical language skills that are specifically designed to address business situations, such as serving Spanish-speaking customers, understanding the economic realities in relevant countries, and successfully undertaking financial and commercial aspects in domestic or international Spanish-speaking communities. Emphasis is placed on everyday spoken Spanish and business terminology.

Delivery Mode

Global Online (100% online)

Curriculum

Course	Credits
SPN 101 Elementary Spanish I	3
SPN 102 Elementary Spanish II	3
SPN 203 Intermediate Spanish I	3
SPN 305 Spanish for Business	3
Total	12

To successfully complete the certificate program, students must take all four courses: SPN 101, 102, 203 and 305, regardless of their pre-existing level of Spanish.

Program Webpage

<https://www.calu.edu/academics/undergraduate/certificate/spanish-business/index.aspx>

Certificate in Spanish for Law Enforcement

Program Description

The certificate in Spanish for Law Enforcement is designed to meet the needs of law enforcement officers, correctional officers and public and private security personnel, and for those students seeking employment in a related field. Students learn basic practical language skills that will assist them as criminal justice practitioners in a number of situations, such as law enforcement commands and dealing with suspects, victims and witnesses; prison populations; and border and immigration issues. Students will also learn about Hispanic culture and customs so they can better understand the needs of members of their communities.

Delivery Mode

Global Online (100% online)

Curriculum

Course	Credits
SPN 101 Elementary Spanish I	3
SPN 102 Elementary Spanish II	3
SPN 203 Intermediate Spanish I	3

Humanities

Course	Credits
SPN 304 Spanish for Law Enforcement	3
Total	12

To successfully complete the certificate program, students must take all four courses: SPN 101, 102, 203 and 304, regardless of their pre-existing level of Spanish.

Program Webpage

<https://www.calu.edu/academics/undergraduate/certificate/spanish-law-enforcement/index.aspx>

Certificate in Studio Art

Program Description

The certificate in Studio Art allows students to take multiple approaches to their study of studio art. They may:

- Take courses in multiple studio areas.
- Focus on a single studio concentration area (ceramics, digital art, drawing, jewelry/metals, painting or printmaking) or on one of the following: 2-dimensional, 3-dimensional or digital art areas.

This certificate includes course options from other related disciplines, such as digital media technology or graphic design.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
Choose One of the Following Concentrations:	
General Studio Art Concentration	12
Complete any four ART studio* courses	
Single Studio Area Concentration	12
Complete four courses in any single ART studio area*, including ART 329 and 490	
2-D Concentration Area	12
<i>Complete four courses from the following:</i>	
ART 130 Biological Illustration: Form and Function	
ART 227 Graphic Design Studio I	
ART 233 Natural Science Drawing	
ART 262 Color Theory	

Humanities

Course	Credits
ART 266 Selected Topics	
ART 295 Surface Design	
ART 310 Advanced Drawing	
ART 312 Introduction to New and Emerging Art Media	
ART 315 Digital Painting I	
ART 329 Art Internship	
ART 350 Printmaking: Relief	
ART 351 Printmaking: Intaglio	
ART 352 Printmaking Processes	
ART 383 Painting Studio	
ART 438 Figure Drawing	
ART 458 Figure Drawing and Modeling	
ART 490 Senior Studio Thesis	
ART 496 Advanced Painting	
3-D Concentration Area	12
<i>Complete four courses from the following:</i>	
ART 118 History of Making	
ART 266 Selected Topics	
ART 329 Art Internship	
ART 376 Jewelry/Metals: Casting	
ART 377 Jewelry/Metals: Fabrication	
ART 382 Ceramics Studio	
ART 385 Sculpture Studio	
ART 448 Figure Modeling	
ART 458 Figure Drawing and Modeling	
ART 490 Senior Studio Thesis	
ART 493 Advanced Ceramics	
ART 498 Advanced Sculpture	

Humanities

Course	Credits
Digital Art Area Concentration	12
<i>Complete four courses from the following:</i>	
ART 127 Introduction to Graphic Design	
ART 215 Digital Painting I	
ART 227 Graphic Design Studio I	
ART 261 Typography	
ART 262 Color Theory	
ART 266 Selected Topics	
ART 329 Art Internship	
ART 427 Graphic Design Studio III	
ART 428 Graphic Design Studio IV	
ART 490 Senior Studio Thesis	
CDC 252 The Art of Film	
GCM 101 Time-Based Media	
GCM 180 Multimedia Foundations	
GCM 225 Digital Layout	
GCM 240 Electronic Desktop Publishing	
GCM 300 Digital Photography	
GCM 320 Digital Video	
GCM 331 Web Publishing	
GCM 340 Animation and 3-D Imaging	
GCM 365 Color Imaging	
GCM 410 Digital Portfolio	
GCM 495 Graphic Communications Internship	
GET 130 Introduction to Engineering Technology	
Total	12

*Studio areas include:

- Ceramics
- Digital Art
- Drawing

Humanities

- Jewelry/Metals
- Painting
- Printmaking

Program Webpage

<https://www.calu.edu/academics/undergraduate/certificate/studio-art/index.aspx>

Certificate: Violence and Incidence Collaborative Evaluation in Schools

Program Description

The Violence and Incidence Collaborative Evaluation in Schools (VICES) sub-baccalaureate certificate provides students with a system-based, comprehensive view of school violence, critical incidence identification, response and prevention. Students examine specific case law as it pertains to the school environment and operational procedures; become familiar with special education classifications (IDEA, PL-94-142, 504 plans and functional behavioral assessment procedures); and examine the socio-educational system and institutional variables that contribute to violence, incidence intervention and collaboration within the school and community.

Program Coordinator

Dr. Christina A. Toras

Delivery Mode

Global Online (100% online)

Curriculum

Course	Credits
ESP 210 Special Education Foundations and Collaboration	3
LAW 460 School Law*	3
SOC 400 Structural and Institutional Violence: School, Workplace and Eldercare	3
SOC 405 Resocializing the Deviant and Marginalized	3
Total	12

* Note: LAW 410 will be the substitute for LAW 460 when LAW 460 is not available.

Program Webpage

<https://www.calu.edu/academics/undergraduate/certificate/violence-incidence-collaboration/index.aspx>

Minor in African American Studies

Curriculum

Course	Credits
Required Courses	9
HIS 317 African American History to 1877	3
HIS 318 African American History since 1877	3
HIS 380 Readings in African American Studies	3

Humanities

Course	Credits
African American Studies Electives (select four courses)	12
ENG 155 African American Literature	3
HIS 347 Race and Ethnicity	3
HIS 370 Topics in Atlantic History	3
MUS 305 African American Gospel and Caribbean Music: History, Form and Analysis	3
POS 326 The Politics of Africa	3
PSY 320 Black Psychology	3
SOC 210 Social Inequality	3
SOC 315 Social Minorities	3
WST 330 Gender, Race and Media	3
Total	21

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/african-american-studies/index.aspx>

Minor in Arabic Curriculum

Course	Credits
ARB 101 Elementary Arabic I	3
ARB 102 Elementary Arabic II	3
ARB 203 Intermediate Arabic I	3
ARB 204 Intermediate Arabic II	3
ARB 350 Advanced Arabic I	3
ARB 351 Advanced Arabic II	3
Total	18

Minor in French Curriculum

Course	Credits
Required Courses	12
FRE 101 Elementary French I	3
FRE 102 Elementary French II	3

Humanities

Course	Credits
FRE 203 Intermediate French I	3
FRE 204 Intermediate French II	3
Electives (choose six credits)	6
FRE 341 The 17th Century and the Classical Age	3
FRE 343 The Age of Romanticism: From the Napoleonic Empire to the Revolution of 1848	3
FRE 344 The Age of French Realism: The Second Empire to the Aftermath of the Franco-Prussian War	3
FRE 345 The Birth of the Modern French Culture in Arts: The 1990s - WWII	3
FRE 346 Contemporary French Culture in the Arts Since World War II	3
FRE 347 Francophone Africa	3
FRE 348 Francophone Canada	3
Total	18

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/french/index.aspx>

Minor in History

Curriculum

Course	Credits
Required Courses	12
<i>Select two from the following:</i>	
HIS 101 United States History to 1877	3
HIS 104 History of Western Society to 1500	3
HIS 111 World Civilization to 1500	3
<i>Select two from the following:</i>	
HIS 102 United States History since 1877	3
HIS 106 History of Western Society since 1500	3
HIS 112 World Civilization since 1500	3

Humanities

Course	Credits
History Electives	9
Select any three HIS courses at the 300 level or higher	9
Total	21

Minor in Political Science Curriculum

Course	Credits
Required Courses	6
POS 100 Introduction to Political Science	3
POS 105 American Politics	3
Political Science Electives*	15
Two lower- or upper-level electives	6
Three 300- to 400-level electives	9
Total	21

* Select at least one course from each category below:

- **American Politics:** POS 303, 306, 310, 311, 314, 315, 316, 318, 319, 329, 344, 379, 415, 450
- **Comparative Politics/International Relations:** POS 210, 312, 320, 322, 323, 325, 326, 336, 340, 346, 360, 381
- **Political Theory:** POS 307, 327, 330, 347, 348
- **Public Administration/Public Policy:** POS 300, 301, 308, 335, 344, 355

Minor in Pre-Law Curriculum

Course	Credits
<i>Select one course from each of the following categories:</i>	
Political Science	3
POS 314 Constitutional Law: Governmental	3
POS 315 Constitutional Law: Civil Liberties	3
POS 316 Judicial Policy and Politics	3
History	3

Humanities

Course	Credits
HIS 308 American Constitution	3
HIS 322 Religious Persecution	3
HIS 435 History of Law	3
Philosophy	3
PHI 115 Logic and Language	3
PHI 225 Social and Political	3
PHI 370 Philosophy of Law	3
Criminal Justice	3
JUS 361 Court Systems	3
JUS 365 Mock Trial Concepts	3
JUS 397 Law and Evidence	3
English	3
ENG 306 Press Law and Ethics	3
ENG 308 Research for Writers	3
ENG 345 English Grammar and Usage	3
Communication	3
COM 230 Argumentation and Debate	3
COM 350 Persuasion	3
COM 351 Rhetoric	3
Business and Economics	3
BUS 342 Business, Society and Government	3
BUS 345 Business Ethics	3
ECO 304 Money and Banking	3
ECO 308 Public Finance	3
Total	21

Humanities

Minor in Sociology Curriculum

Course	Credits
Required Courses	9
SOC 100 Principles of Sociology	3
SOC 410 Social Theory/Society	3
SOC 415 Social Research Methods	3
Sociology Electives	12
Select four SOC courses (at least one must be at the 300+ level)	12
Total	21

Minor in Spanish Curriculum

Course	Credits
SPN 101 Elementary Spanish I	3
SPN 102 Elementary Spanish II	3
SPN 203 Intermediate Spanish I	3
SPN 204 Intermediate Spanish II	3
SPN 311 Spanish Conv/Comp/Phonetics I	3
SPN 312 Spanish Conv/Comp/Phonetics II	3
Total	18

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/spanish/index.aspx>

Minor in Studio Art Curriculum

Course	Credits
Required Courses	6
ART 110 Drawing I	3
ART 119 Design 2-D OR ART 120 Design 3-D	3
Art History Elective (choose one)	3
ART 106 Art Appreciation	3

Humanities

Course	Credits
ART 109 Landmarks of World Art	3
ART 118 History of Making	3
ART 212 Art History I	3
ART 214 Art History II	3
ART 243 Introduction to Asian Art	3
ART 422 Art History: The Art World after Modernism	3
ARB 343 Images of Islam: From Spain to Iran	3
Studio Electives (choose four)*	12
ART 112 New and Emerging Media	3
ART 251 Digital Painting	3
ART 295 Surface Design	3
ART 350 Printmaking: Relief	3
ART 351 Printmaking: Intaglio	3
ART 352 Printmaking Processes	3
ART 376 Jewelry: Casting	3
ART 377 Jewelry: Fabrication	3
ART 382 Ceramics Studio	3
ART 383 Painting Studio	3
ART 385 Sculpture Studio	3
ART 438 Figure Drawing	3
ART 448 Figure Modeling	3
ART 458 Figure Drawing/Modeling	3
ART 493 Advanced Ceramics	3
ART 496 Advanced Painting	3
ART 498 Advanced Sculpture	3
Total	21

* All art studios 300 level and above are repeatable. Choose any combination of four of the listed studio courses OR four courses in the same studio area. (Studio areas include: ceramics, drawing, jewelry/metals, painting, printmaking and sculpture.)

Mathematics and Physical Sciences

Department of Mathematics and Physical Sciences

Faculty

Dr. Mohamed Benbourenane | Dr. Kaddour Boukaabar | Dr. Swarndeeep Gill | Dr. Gregg Gould | Dr. Maggie Habeeb | Dr. Olaniyi Iyiola | Dr. Leandro Junes | Dr. Chad Kauffman | Dr. Min Li | Dr. Mario Majcen | Dr. Bismark Oduro | Dr. Matthew J. Price | Dr. Ali Sezer | Dr. Melissa Sovak | Dr. Thomas Weisgarber | Dr. Kimberly Woznack

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Programs

Cal U's Department of Mathematics and Physical Sciences includes undergraduate programs in chemistry, earth sciences, mathematics, physics, statistics and data science.

Bachelor's Degree Programs

Degrees offered through this department include:

- B.S. in Chemistry
- B.S. in Earth Science: Climate Science
- B.S. in Earth Science: Environmental Geosciences
- B.S. in Earth Science: Meteorology
- B.A. in Mathematics
- B.A. in Physics
- B.S. in Statistics and Data Science

Note: Cal U also offers B.S.Ed. degrees for secondary education in Chemistry, Earth and Space Science, Math and Physics.

Certificates

The department offers a sub-baccalaureate certificate program in:

- Data Science

Minors

Minors available through this department include:

- Chemistry
- Environmental Geosciences
- Mathematics
- Meteorology
- Physics
- Statistics

Facilities

The chemistry and physics programs are located in New Science Hall.

Students studying earth science have access to facilities for research, coursework and service-learning projects in crime mapping, meteorology and watershed analysis. Housed in Eberly Hall, these facilities include:

- Broadcast Meteorology Studio
- Earth Materials Laboratory
- Geosciences Laboratory
- Operational Meteorology Laboratory
- Peter J. Daley Geotechnology Institute
- Watershed Analysis Laboratory

Mathematics and Physical Sciences

Honors

The national earth science honor society, Sigma Gamma Epsilon, has a chapter (Zeta Alpha) on campus. Students recognized for their academic and professional achievements are elected to it.

Accreditation

Cal U's B.S. in Chemistry degree is accredited by the American Chemical Society (ACS).

B.A. in Mathematics

Program Description

The Bachelor of Arts in Mathematics degree hones students' analytical and problem-solving skills while building their understanding of mathematical theories and applications.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
MAT 272 Discrete Mathematics	3
MAT 281 Calculus I	3
UNI 100 First-Year Seminar	1
General Education, Minor OR Free Elective Courses	6
Second Semester	15
MAT 282 Calculus II	3
MAT 341 Linear Algebra I	3
General Education, Minor OR Free Elective Courses	9
Sophomore Year	
Third Semester	16
MAT 381 Calculus III	3
MAT 461 Statistical Analysis I	3
CHE 101 General Chemistry I OR PHY 101 College Physics I	4
General Education, Minor OR Free Elective Courses	6

Mathematics and Physical Sciences

Course	Credits
Fourth Semester	16
MAT 351 Abstract Algebra I	3
MAT 382 Calculus IV	3
CHE 102 General Chemistry II OR PHY 102 College Physics II	4
General Education, Minor OR Free Elective Courses	6
Junior Year	
Fifth Semester	15
MAT Category I*	3
General Education, Minor OR Free Elective Courses	12
Sixth Semester	15
MAT 406 Differential Equations	3
MAT Category II*	3
General Education, Minor OR Free Elective Courses	9
Senior Year	
Seventh Semester	15
MAT 400 Mathematical Modeling	3
General Education, Minor OR Free Elective Courses	9
Eighth Semester	12
MAT Category III*	3
MAT Category II*	3
General Education, Minor OR Free Elective Courses	6
Total	120

*MAT Categories	Credits
CATEGORY I (Choose One Course)	

Mathematics and Physical Sciences

*MAT Categories	Credits
MAT 451 Abstract Algebra II	3
MAT 481 Real Analysis	3
MAT 474 Complex Analysis	3
CATEGORY II (Choose Two Courses)	
CSC 424 Numerical Analysis	3
MAT 441 Linear Algebra II	3
MAT 462 Statistical Analysis II	3
CATEGORY III (Choose One Course)	
CSC 475 Theory of Languages	3
MAT 304 History of Math	3
MAT 419 Math Internship	3
MAT 468 Field Experience in Math	3
MAT 496 Senior Research Project	3
PHY 341 Math Methods of Physics I	3

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (B.A. in Mathematics to PSM in Applied Math) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/mathematics/index.aspx>

B.A. in Physics

Program Description

The Bachelor of Arts in Physics degree program at Cal U creates a strong foundation in physics; stimulates intellectual growth; promotes critical thinking and leadership skills; and builds character in students. A foundational natural science degree, this program is designed to assist students in developing a deep understanding of concepts and problem-solving skills, preparing them for a broad range of career opportunities. The Physics program encourages and leads students in outreach service and aims to produce graduates who can:

- Acquire factual and theoretical knowledge of physics.
- Develop laboratory knowledge and skills while sustaining a commitment to safety.
- Employ technology to obtain and utilize physics principles and current discoveries.
- Communicate effectively.

Mathematics and Physical Sciences

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First-Semester	17
CHE 101 General Chemistry I	4
ENG 101 English Composition I	3
MAT 281 Calculus I	3
UNI 100 First-Year Seminar	1
General Education Courses	6
Second Semester	17
CHE 102 General Chemistry II	4
PHY 101 College Physics I	4
MAT 282 Calculus II	3
General Education Courses	6
Sophomore Year	
Third Semester	16
CSC 120 Problem Solving and Programming Constructs	3
MAT 381 Calculus III	3
PHY 202 College Physics II	4
General Education Courses	6
Fourth Semester	16
MAT 382 Calculus IV	3
PHY 203 College Physics III	4
Free Electives	6
General Education Course	3

Mathematics and Physical Sciences

Course	Credits
Junior Year	
Fifth Semester	16
MAT 406 Differential Equations	3
PHY 301 Intermediate Electricity and Magnetism	4
PHY 331 Modern Physics	3
Free Elective	3
General Education Course	3
Sixth Semester	12
Adviser-approved PHY Elective	3
Free Electives	9
Senior Year	
Seventh Semester	15
PHY 321 Intermediate Mechanics	4
PHY 495 Physics Seminar	1
Special Experience Course	3
Free Electives	6
Eighth Semester	12
Free Electives	12
Total	120

Program Notes: 42 total credits must be at the 300 level or above. At least 18 credits of General Education and free electives must be at the 300 level and above to meet this requirement.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/physics/index.aspx>

B.S. in Chemistry

Program Description

The Bachelor of Science in Chemistry is a foundational natural science degree that incorporates knowledge bases in chemistry, physics, mathematics and other related subjects, allowing students to develop the necessary theoretical and practical skills for a successful career in the private or public sectors as well as professional and graduate study. The program creates an educational environment that encourages independent and critical

Mathematics and Physical Sciences

thinking; collegial exchange of ideas; effective reasoning; and communication skills and high ethical standards. The program aims to produce graduates who can:

- Acquire factual and theoretical knowledge of chemistry.
- Develop laboratory knowledge and skills while sustaining a commitment to safety.
- Employ technology to obtain and utilize chemical information.
- Communicate effectively.

Delivery Mode

Traditional (on campus)

Accreditation

The B.S. in Chemistry degree is accredited by the American Chemical Society (ACS).

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	17
CHE 101 General Chemistry I	4
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
Free Elective (mathematics course, if needed, to prepare for Calculus I)	3
General Education Courses	6
Second Semester	17
CHE 102 General Chemistry II	4
CHE 331 Organic Chemistry I	4
ENG 102 English Composition II	3
MAT 281 Calculus I	3
General Education Course	3
Sophomore Year	
Third Semester	15
CHE 104 Introduction to Experimental Chemistry	3
CHE 306 Inorganic Chemistry	3
CHE 341 Organic Chemistry II	3

Mathematics and Physical Sciences

Course	Credits
MAT 282 Calculus II	3
General Education Course	3
Fourth Semester	14
CHE 320 Analytical/Instrumental Methods	3
CHE 371 Intermediate Laboratory I	1
PHY 101 College Physics I	4
MAT 381 Calculus II	3
General Education Course	3
Junior Year	
Fifth Semester	15
CHE 372 Intermediate Laboratory II	1
CHE 415 Biochemistry	4
PHY 202 College Physics II	4
Free Elective	3
General Education Course	3
Sixth Semester	13
CHE 461 Physical Chemistry I	3
CHE 471 Advanced Laboratory I	1
Free Elective	3
General Education Courses	6
Senior Year	
Seventh Semester	15 or 16
CHE 462 Physical Chemistry II	3
CHE 472 Advanced Laboratory II	1
CHE 491 Research I	2
Chemistry Required Related Course	3 or 4

Mathematics and Physical Sciences

Course	Credits
Free Electives	6
Eighth Semester	14 or 15
CHE 492 Research II	2
Chemistry Required Related Course	3 or 4
Free Electives	6
General Education Course	3
Total	120

Program Notes: 42 total credits must be 300 level and above. At least one elective course (3 credits) must be 300 level and above.

Related Courses (select two; 6 or 7 credits)

- **CHE 381** Environ Chemistry (4 credits)
- **CHE 420** Adv. Analytical Chemistry (3 credits)
- **CHE 421** Adv. Inorganic Chemistry (3 credits)
- **CHE 433** Adv. Organic Chemistry (3 credits)
- **CHE 497** Special Topics (3 credits)

Free Electives (20 or 21 credits)

- Chemistry coursework is strengthened by taking additional courses in science and technology. Students are encouraged to enroll in additional courses in biology (BIO), chemistry (CHE), computer science (CSC), earth science (EAS), electrical engineering technology (EET), environmental science (ENS), industrial technology (ITE), mathematics (MAT) or physics (PHY). Students should work with their assigned advisers to explore possible options for a minor.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/chemistry/index.aspx>

B.S. in Earth Science: Climate Science Concentration

Program Description

The Climate Science concentration of the Bachelor of Science in Earth Science degree builds skills and knowledge related to collecting, analyzing and interpreting climate data and understanding long-term trends. Through this program, students explore atmospheric processes, climate change issues and factors that influence climate systems.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Mathematics and Physical Sciences

Course	Credits
Freshman Year	
First Semester	17
CIS 120 Problem Solving and Programming	3
EAS 104 Intro to Meteorology	4
ENG 101 English Composition I	3
MAT 281 Calculus I	3
UNI 100 First-Year Seminar	1
General Education OR Free Elective Course	3
Second Semester	16
COM 101 Oral Communication	3
EAS 142 Introduction to Climate Science	3
EAS 163 Intro to Oceans and Climate	3
PHY 101 College Physics I	4
MAT 282 Calculus II	3
Sophomore Year	
Third Semester	16
EAS 245 Weather Analysis and Forecasting I	4
GEO 220 Geography of North America	3
MAT 215 Statistics	3
PHY 202 College Physics II	4
General Education OR Free Elective Course	3
Fourth Semester	17
EAS 150 Introduction to Geology	4
EAS 300 Natural Hazards	3
GIS 311 Geographic Information Systems	3
PHS 137 Envi Chemistry	4
Any Recommended OR Free Elective Course	3

Mathematics and Physical Sciences

Course	Credits
Junior Year	
Fifth Semester	15
EAS 323 Atmos Instrument and Measurement	3
EAS 369 Climate Dynamics	3
EAS 419 Applied Climatology	3
Any Recommended OR Free Elective Courses	6
Sixth Semester	
EAS 414 Synoptic Climatology	3
EAS 431 Digital Media for Weather and Climate	3
Any Recommended OR Free Elective Courses	9
Senior Year	
Seventh Semester	15
EAS 452 Atmos Thermodynamics and Radiation	3
EAS 469 Global Climate Change	3
Any Recommended OR Free Elective Courses	9
Eighth Semester	
EAS 465 Seminar in Atmospheric Science	3
Any Recommended OR Free Elective Courses	9
Total	120

Program Notes

- 42 credits of advanced coursework at the 300- or 400-level are required.

Recommended Electives (at least 12 credits)

- **BIO 248** General Ecology (3 credits)
- **EAS 200** Historical Geology (3 credits)
- **EAS 303** Hydrology (3 credits)
- **EAS 316** Subsurface Geology Land Mgmt (3 credits)
- **EAS 323** Atmos Instrument and Measurement (3 credits)
- **EAS 342** Dynamic Meteorology I (3 credits)
- **EAS 346** Tropical Meteorology & Climate (3 credits)

Mathematics and Physical Sciences

- **EAS 442** Dynamic Meteorology II (3 credits)
- **EAS 453** Cloud Physics (3 credits)
- **ENS 101** Introduction to Environ Science (3 credits)
- **ENS 399** Conservation Biology (3 credits)
- **ENS 440** Environ Pollution Control (3 credits)
- **GIS 350** Remote Sensing of Environment (3 credits)
- **GIS 413** Environmental Applications GIS (3 credits)
- **MAT 360** Non-Parametric Statistics (3 credits)

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/climate-science/index.aspx>

B.S. in Earth Science: Environmental Geosciences Concentration

Program Description

The Environmental Geosciences concentration of the Bachelor of Science in Earth Science degree explores resource management, environmental stewardship and sustainable development.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	18
EAS 150 Intro to Geology	4
ENG 101 English Composition I	3
PHY 121 General Physics I	4
UNI 100 First-Year Seminar	1
Any Humanities Course	3
General Education Course	3
Second Semester	17
EAS 200 Historical Geology	4
PHY 122 General Physics II	4
Any Health and Wellness Course	3
Any Public Speaking Course	3
Any Social Sciences Course	3

Mathematics and Physical Sciences

Course	Credits
Sophomore Year	
Third Semester	15
CHE 101 Chemistry	4
EAS 104 Meteorology	4
EAS 230 Earth Resources	3
EAS 301 Prof. Dev. for Geologists	1
MAT 281 Calculus I	3
Fourth Semester	16
CHE 102 Chemistry II	4
EAS 142 Climatology	3
EAS 343 Geomorphology	3
ENG XXX Second Writing Gen Ed	3
MAT 282 Calculus II	3
Junior Year	
Fifth Semester	15
EAS 303 Hydrology	3
GIS 311 Geographic Information Systems	3
MAT XXX Math Related Elective	3
Any Fine Arts Course	3
General Education Course	3
Sixth Semester	15
EAS 210 Intro to Soils	3
EAS XXX Recommended Free Electives	6
GIS 413 Env Applications in GIS	3
Free Elective	3
Senior Year	

Mathematics and Physical Sciences

Course	Credits
Seventh Semester	15
EAS 333 Geochemistry	3
EAS 441 Advanced Env Geology	3
EAS XXX Recommended Free Elective	3
Any Special Experience Course	3
Free Elective	3
Eighth Semester	15
EAS 402 Groundwater Hydrology	3
EAS 469 Global Climate Change	3
EAS XXX EAS Writing Intensive Course	3
Ethics and Multicultural Awareness	3
Free Elective	3
Total	120

Recommended Free Electives (25-26 credits)

- **EAS 245** Weather Analysis and Forecasting (3 credits)
- **EAS 300** Natural Hazards (3 credits)
- **EAS 331** Mineralogy (4 credits)
- **EAS 332** Petrology (4 credits)
- **EAS 342** Dynamic Meteorology (3 credits)
- **EAS 355** Geophysics (3 credits)
- **EAS 369** Climate Dynamics and Modeling (3 credits)
- **EAS 423** Sed/Strat (4 credits)
- **EAS 425** Structural Geology (4 credits)
- **EAS 429** Petroleum Geology (3 credits)
- **EAS 438** Computer Applications in EAS (3 credits)
- **EAS 448** Watershed Evaluation (3 credits)
- **EAS 542** Applied Climatology (3 credits)
- **GIS 350** Remote Sensing of the Environment (3 credits)
- **CHE 381** Environmental Chemistry (4 credits)
- Other Adviser-approved courses

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/environmental-geoscience/index.aspx>

B.S. in Earth Science: Meteorology Concentration

Program Description

The Meteorology concentration of the Bachelor of Science in Earth Science builds weather analysis and forecasting skills. Concentration courses comply with recommendations from the American Meteorological Society (AMS) and the National Weather Association.

Mathematics and Physical Sciences

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	14
EAS 104 Introduction to Meteorology	4
ENG 101 English Composition I	3
CSC 120 Problem-Solving and Programming	3
MAT 281 Calculus I	3
UNI 100 First-Year Seminar	1
Second Semester	16
CSC 124 Computer Programming I	3
EAS 105 Extreme Weather	3
MAT 282 Calculus II	3
PHY 101 College Physics I	4
General Education or Free Elective Course	3
Sophomore Year	
Third Semester	16
EAS 245 Weather Analysis and Forecasting I	3
EAS 365 Radar and Satellite Meteorology	3
ENG 217 Science and Technical Writing	3
MAT 381 Calculus III	3
PHY 202 College Physics II	4
Fourth Semester	16
CHE 101 Chemistry	4
COM 101 Oral Communication	3

Mathematics and Physical Sciences

Course	Credits
MAT 215 Statistics	3
MAT 382 Calculus IV	3
General Education or Free Elective Course	3
Junior Year	
Fifth Semester	15
EAS 142 Introduction to Climate Science	3
EAS 323 Atmospheric Instrumentation and Measurement	3
EAS 431 Digital Media Meteorology	3
EAS 452 Atmospheric Thermodynamics and Radiation	3
General Education or Free Elective Course	3
Sixth Semester	15
EAS 453 Cloud Physics	3
EAS 469 Climate Change	3
MAT 406 Differential Equations	3
General Education or Free Elective Courses	6
Senior Year	
Seventh Semester	15
EAS 342 Dynamic Meteorology I	3
General Education or Free Elective Courses	12
Eighth Semester	16
EAS 369 Climate Dynamics and Modeling	3
EAS 442 Dynamic Meteorology II	3
EAS 445 Weather Analysis and Forecasting II	3
EAS 449 Mesoscale Meteorology	4
EAS 465 Seminar in Atmos. Sciences	3

Mathematics and Physical Sciences

Course	Credits
Total	120

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/meteorology/index.aspx>

B.S. in Statistics and Data Science

Program Description

The Bachelor of Science in Statistics and Data Science degree prepares students to analyze, manage and present data. Through coursework, students learn how to use statistical software and programming languages.

Delivery Mode

Traditional (on campus program with some online courses)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
CSC 120 Problem Solving and Programming Constructs	3
ENG 101 English Composition I	3
MAT 215 Statistics OR MAT 225 Business Statistics	3
UNI 100 First-Year Seminar	1
General Education OR Free Elective Courses	6
Second Semester	15
CSC 124 Computer Programming	3
ENG 217 Science and Technical Writing	3
MAT 207 Data Preparation and Cleaning	3
General Education OR Free Elective Courses	6
Sophomore Year	
Third Semester	15
CSC 265 Object-Oriented Programming	3
MAT 251 Big Data Tools	3

Mathematics and Physical Sciences

Course	Credits
MAT 272 Discrete Mathematics	3
MAT 281 Calculus I	3
MAT 353 Intermediate Mathematical Statistics	3
Fourth Semester	15
CIS 322 Database Application Development	3
CSC 328 Data Structures	3
MAT 213 Data Visualization	3
MAT 282 Calculus II	3
MAT 341 Linear Algebra	3
Junior Year	
Fifth Semester	15
MAT 261 Big Data Analytics	3
MAT 376 Applied Regression	3
MAT 391 Statistical Packages I	3
General Education OR Free Elective Courses	6
Sixth Semester	15
CSC 308 Python	3
MAT 491 Statistical Packages II	3
General Education OR Free Elective Courses	9
Senior Year	
Seventh Semester	15
Major Elective	3
General Education OR Free Elective Courses	12
Eighth Semester	14
MAT 401 Data Analysis Capstone Project	3

Mathematics and Physical Sciences

Course	Credits
Major Elective	3
General Education OR Free Elective Courses	8
Total	120

Electives (select two):

- **MAT 361** Nonparametric Statistics (3 credits)
- **MAT 371** Applied Categorical Data Analysis (3 credits)
- **MAT 373** Time Series and Stochastic Processes (3 credits)
- **MAT 471** Applied Multivariate Statistics (3 credits)

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/data-science/index.aspx>

Certificate in Data Science

Program Description

This Data Science undergraduate certificate program was created in partnership with SAS. Coursework hones students' data analysis skills.

Delivery Mode

Global Online (100% online)

Curriculum

Course	Credits
MAT 207 Data Preparation and Cleaning	3
MAT 213 Data Visualization	3
MAT 251 Big Data Tools	3
MAT 261 Big Data Analytics	3
MAT 401 Data Analytics Capstone Project	3
Total	15

Program Webpage

<https://www.calu.edu/academics/undergraduate/certificate/sas-data-certificate/index.aspx>

Minor in Chemistry

Curriculum

Course	Credits
Required Courses	12
CHE 101 General Chemistry I	4
CHE 102 General Chemistry II	4
CHE 331 Organic Chemistry I	4

Mathematics and Physical Sciences

Course	Credits
Chemistry Electives*	8
CHE 306 Inorganic Chemistry	3
CHE 320 Analytical/Instrumental Methods	3
CHE 341 Organic Chemistry II	3
CHE 342 Organic Chemistry II (lab)	1
CHE 381 Environmental Chemistry	4
CHE 415 Biochemistry	4
CHE 433 Advanced Organic Chemistry	3
CHE 461 Physical Chemistry I	3
CHE 462 Physical Chemistry II	3
Total	20

* Selected through consultation with adviser.

Note: A minimum of 6 credits must be taken at California University of Pennsylvania.

Minor in Environmental Geosciences Curriculum

Course	Credits
Required Courses	11
EAS 150 Introduction to Geology	4
EAS 200 Historical Geology	4
EAS 303 Hydrology	3
Electives	12
<i>Select two courses from the following:</i>	
EAS 210 Introduction to Soils	3
EAS 230 Earth Resources	3
EAS 333 Geochemistry	3
EAS 343 Geomorphology	3
EAS 423 Sedimentology/Stratigraphy	3
EAS 425 Structural Geology	3

Mathematics and Physical Sciences

Course	Credits
<i>Select two courses from the following:</i>	
EAS 402 Groundwater Hydrology	3
EAS 437 Geological Field Methods	3
ENS 438 Computer Applications in EAS	3
ENS 441 Adv. Environmental Geology	3
ENS 448 Watershed Evaluation	3
Any Geological Field Course from: EAS 391, 392, 393, 492 or 496	3
Total	23

Minor in Mathematics Curriculum

Course	Credits
Required Courses	15
MAT 272 Discrete Mathematics	3
MAT 281 Calculus I	3
MAT 282 Calculus II	3
MAT 341 Linear Algebra I	3
MAT 381 Calculus III	3
Electives (select two, maintaining pre-requisite structure)	6
MAT 290 Technology for Mathematics	3
MAT 303 Geometry	3
MAT 351 Abstract Algebra I	3
MAT 382 Calculus IV	3
MAT 400 Mathematical Modeling	3
MAT 406 Differential Equations	3
MAT 441 Linear Algebra II	3
MAT 461 Statistical Analysis I	3

Mathematics and Physical Sciences

Course	Credits
Total	21

Minor in Meteorology Curriculum

Course	Credits
Required Courses	14
EAS 104 Introduction to Meteorology	4
EAS 105 Extreme Weather	3
EAS 142 Climatology	3
EAS 245 Weather Analysis and Forecasting I	4
Electives (choose six credits)	6
EAS 323 Atmospheric Instruments and Measurements	3
EAS 342 Dynamic Meteorology I	3
EAS 369 Climate Dynamics and Modeling	3
EAS 469 Global Climate Change	3
Total	20

Minor in Physics Curriculum

Course	Credits
Required Courses	15
PHY 101 College Physics I (prerequisite: MAT 281)	4
PHY 202 College Physics II (prerequisites: PHY 101, MAT 282)	4
PHY 203 College Physics III (prerequisite: PHY 202)	4
MAT 381 Calculus III (prerequisite: MAT 282)	3
Suggested Electives*	6
PHY 301 Intermediate Electricity and Magnetism (prerequisites: PHY 203, MAT 381)	4
PHY 321 Intermediate Mechanics (prerequisite: PHY 202 / co-requisite: MAT 381)	4

Mathematics and Physical Sciences

Course	Credits
PHY 331 Modern Physics (prerequisites: PHY 203, MAT 381)	3
PHY 341 Mathematical Methods of Physics (prerequisites: PHY 203, MAT 381)	3
PHY 405 Quantum Mechanics (prerequisites: PHY 331 and/or MAT 406)	3
PHY 455 Solid State Physics (prerequisites: PHY 202, MAT 282)	3
Total (minimum)	21

* Remaining two courses must be 300 or above level PHY courses.

Note: A minimum of 6 credits must be taken at California University of Pennsylvania.

Minor in Statistics Curriculum

Course	Credits
Required Courses	15
MAT 215 Statistics OR MAT 225 Business Statistics	3
MAT 281 Calculus I	3
MAT 282 Calculus II	3
MAT 376 Applied Regression	3
MAT 461 Statistical Analysis I	3
Electives (select two)	6
MAT 360 Nonparametric Statistics	3
MAT 371 Applied Categorical Data Analysis	3
MAT 373 Time Series and Stochastic Processes	3
MAT 391 Statistical Packages	3
MAT 462 Statistical Analysis II	3
MAT 471 Applied Multivariate Statistics	3
Total	21

Military Science (ROTC)

Military Science (ROTC)

Leadership That Lasts a Lifetime

Army Reserve Officers' Training Corps (ROTC) is an elective curriculum you take along with your required college classes. It gives you the tools, training and experiences that will help you succeed in any competitive environment.

Along with great leadership training, Army ROTC can pay for your college tuition. (Because Army ROTC is an elective, you can participate your freshman and sophomore years without any obligation to join the Army.) You will have a normal college student experience like everyone else on campus, but when you graduate, you will be commissioned as an Officer in the Army, Army National Guard or Army Reserve. At that point, you will have a wide range of interest areas you can specialize in called branches.

ROTC is traditionally a four-year program consisting of basic and advanced programs. The basic program is usually taken in the freshman and sophomore years. The student incurs no military obligation. Students may discontinue the basic program at any time. It consists of four semesters of training and instruction on areas of national defense, land navigation, small-unit leadership, military history and leadership development. Uniform, necessary textbooks and equipment are furnished without cost to the student.

To be eligible for the basic program, a student must be enrolled as a full-time student at California University of Pennsylvania and not be a conscientious objector. Students who have taken Junior ROTC or have military experience (Active Duty, National Guard or Reserve) may receive advanced placement credit for the basic program.

Who We're Looking For

Those who succeed in the Army ROTC program are students who excel and want something more out of the college experience. Generally, these students are scholars who keep their grades up, athletes who are physically fit and leaders who have a great desire to learn.

Your Commitment

Army ROTC students who receive an Army ROTC scholarship or enter the Army ROTC Advanced Course must agree to complete a period of service with the Army.

You can serve full time in the Army or those who qualify may choose to serve part time as a member of the Army National Guard or Army Reserve while pursuing a civilian career.

It's an experience that you can't get anywhere else. Your leadership skills will be challenged every day. Contact your campus Military Science department for more specific details on your Army ROTC service commitment.

The Army ROTC program at California University of Pennsylvania is a satellite program delegated by the University of Pittsburgh Military Science Program; classes take place on the California University of Pennsylvania campus.

For additional information not covered above, contact the Military Science Department at 724-884-3727 or 724-938-1679, or visit our office located in The Military and Veterans Center or Excellence, Residence Hall E, rooms 146 and 157.

* Enrolling in the Army ROTC Basic Course does NOT involve a commitment of service to the Army unless you have received an Army ROTC Scholarship.

The Basic Program

ROTC is traditionally a four-year program consisting of a basic and an advanced program.

The basic program is usually taken in the freshman and sophomore years. The student incurs no military obligation. Students may discontinue the basic program at any time. It consists of four semesters of training and instruction on areas of national defense, land navigation, small-unit leadership, military history and leadership development. Uniform, necessary textbooks and equipment are furnished without cost to the student.

Military Science (ROTC)

To be eligible for the basic program, a student must be enrolled as a full-time student at California University of Pennsylvania and not be a conscientious objector. Students who have taken Junior ROTC or have military experience (active duty, guard or reserves) may receive advanced placement credit for the basic program.

Nursing and Health Sciences

Department of Nursing and Health Sciences

Faculty

Kelli Alexander | Jordan Blair | Dr. Donna Caruthers | Dr. Jodi Dusi | Dr. Shelly Fetchen DiCesaro | Dr. Nicole Evanick | Lisa Finnegan | Jeff Giovannucci | Dr. Scott Hargraves | Dr. Chris T. Harman | Dr. Mindi Hilborn | Mercedes Himmons | Dr. Karen Hjerpe | James Hoover | Aimee Maruniak | Dr. Kathleen Morouse | Jenni Morrison | Barbara O'Savage | Suzanne M. Palko | Dr. Linda Pina | Larry Pollock | Tami Sealy | Dr. Ayanna (Lyles) Walker | Dr. Jamie Weary | Dr. Robin Weaver | M. Scott Zema

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Program

Cal U's Department of Nursing and Health Sciences offers undergraduate programs in gerontology, health sciences, physical therapy assistant, radiologic technology and nursing.

Associate and Bachelor's Degree Programs

Degrees offered through this department include:

- A.A.S. in Physical Therapist Assistant
- A.S. in Technical Studies: Radiologic Technology/Science
- B.S. in Gerontology
- B.S. in Health Science
- B.S. in Health Science: Pre-Athletic Training
- BSN in Nursing (RN-to-BSN program)

Certificates

The department offers a sub-baccalaureate certificate in:

- Aging Specialist

Minors

Minors available through this department include:

- Gerontology
- Health Science

Accreditation

The nursing program is accredited by the Commission on Collegiate Nursing Education.



The baccalaureate degree program in nursing and master's degree program in nursing at California University of Pennsylvania is accredited by the Commission on Collegiate Nursing Education (<http://www.ccneaccreditation.org>).

Nursing and Health Sciences

A.A.S. in Physical Therapist Assistant

Program Description

The Associate of Applied Science in Physical Therapist Assistant degree prepares students for the National Physical Therapy Examination (NPTE) and PTA licensure.

Delivery Mode

Traditional (on campus)

Accreditation

Cal U's PTA program is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE).

Curriculum

The following five-semester schedule of courses provides a recommended framework for completing this program of study in 21 months.

Course	Credits
PRE-TECHNICAL PHASE	
Fall Semester - Year One***	15
CDC 101 Public Speaking**	3
HSC 110 Human Anatomy and Physiology I**	4
PSY 100 General Psychology**	3
PTA 100 Introduction to Physical Therapist Assistant*	3
PTA 101 Basic Physical Therapy Procedures*	1
UNI 100 First-Year Seminar**	1
TECHNICAL PHASE	
Spring Semester - Year One	17
ENG 101 English Composition I**	3
GTY 100 Intro to Gerontology OR SOC 100 Principles of Sociology**	3
HSC 120 Human Anatomy and Physiology II**	4
HSC 290 Therapeutic Modalities*	4
PTA 230 Physical Therapy Across the Lifespan*	3
Summer Semester - Year One	9
HSC 275 Functional Kinesiology*	3
PTA 110 Introduction to Pathology*	2
PTA 150 Physical Therapy Clinical Internship I*	4

Nursing and Health Sciences

Course	Credits
Fall Semester - Year Two	
PTA 205 Interventions in Cardiopulmonary Impairments*	3
PTA 210 Interventions in Neurologic Impairments*	4
PTA 225 Interventions in Orthopedic Impairments*	4
PTA 240 PTA Special Topics*	3
PTA 260 Pharmacology and Imaging*	2
Spring Semester - Year Two	
PTA 200 Professional Issues in Physical Therapy*	2
PTA 250 Physical Therapy Clinical Internship II*	12
Total	71

* Required major and related courses

** Required and recommended General Education courses

*** This semester is designed to be a rigorous test of the student's academic abilities. The student's performance during the fall semester of the first year will largely determine if the student is admitted to the technical phase of the program.

Program Webpage

<https://www.calu.edu/academics/undergraduate/associate/physical-therapist-assistant/index.aspx>

A.S. in Radiologic Technology/Science

Program Description

The Associate of Science in Radiological Technology/Science degree covers anatomy, patient positioning, examination techniques, equipment protocols, radiation safety, radiation protection and basic patient care. Upon successful completion of the program, graduates are eligible to apply for the national certification examination of the American Registry of Radiologic Technologists. Graduates passing the certification examination are recognized as registered technologists.

Delivery Mode

Traditional

The clinical education is competency-based and utilizes the Radiology Department, offsite facilities, evenings, weekends and specialty areas of CT, MRI and Interventional Radiology for achievement of the skills and proficiency that are required in the profession of radiography.

Accreditation

This program is accredited by the Joint Review Committee on Education in Radiologic Technology (www.jrcert.org).

Nursing and Health Sciences

Curriculum

Course	Credits
First Semester (Summer Session 1)	4
HSC 110 Anatomy & Physiology I*	4
Second Semester (Summer Session 2)	4
HSC 120 Human Anatomy & Physiology II*	4
Third Semester	17
HSC 115 Current Health Issues	3
RAD 100 Radiography Theory and Lab I	5
RAD 110 Radiography Clinical I	6
Social Science or Psychology Elective	3
Fourth Semester	17
RAD 101 Radiography Theory and Lab II	5
RAD 120 Radiography Clinical II	6
Composition and Public Speaking General Education Course	3
Humanities or Fine Arts General Education Course	3
Fifth Semester (Summer Session 1)	4
RAD 130 Radiography Clinical III	4
Sixth Semester (Summer Session 2)	4
RAD 140 Radiography Clinical IV	4
Seventh Semester	17
MAT 181 College Algebra	3
RAD 200 Radiography Theory and Lab III	5
RAD 210 Radiography Clinical V	6
Technological Literacy General Education Course	3

Nursing and Health Sciences

Course	Credits
Eighth Semester	12
RAD 201 Radiography Theory and Lab IV	5
RAD 220 Radiography Clinical VI	6
UNI 200 Career Readiness	1
Ninth Semester (Summer Session 1)	4
RAD 230 Radiography Clinical VII	4
Tenth Semester (Summer Session 2)	4
RAD 240 Radiography Clinical VIII	4
Total	87

* Required pre-requisite courses

Program Notes: This program has a handbook, which can be obtained from the department chair. RAD courses are taught at Washington Hospital.

Program Webpage

<https://www.calu.edu/academics/undergraduate/associate/radiologic-technology/index.aspx>

B.S. in Gerontology

Program Description

The Bachelor of Science in Gerontology degree builds students' understanding of various aspects of aging. Practicum and internship requirements provide opportunities for students to gain hands-on experience working with senior citizens.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	15
ENG 101 English Composition I	3
GTY 100 Introduction to Gerontology	3
UNI 100 First-Year Seminar	1

Nursing and Health Sciences

Course	Credits
General Education Courses	8
Second Semester	15
GTY 200 Aging in American Society	3
General Education Courses	12
Sophomore Year	
Third Semester	15
GTY 300 Aging Policies and Services	3
MAT 215 Statistics OR MAT 205 Statistics for the Health and Social Sciences	3
General Education OR Elective Courses	9
Fourth Semester	15
GTY 305 Biology of Aging	3
GTY 310 Aging in the Family	3
Related Elective	3
General Education OR Elective Courses	6
Junior Year	
Fifth Semester	15
GTY 340 Diversity and Aging	3
GTY 350 Ethical Issues in Aging	3
Related Elective	3
General Education OR Elective Courses	6
Sixth Semester	15
GTY 315 Practicum in Gerontology	3
GTY 330 Dying, Death and Bereavement	3
GTY 380 Wellness in Aging	3

Nursing and Health Sciences

Course	Credits
300- or 400-level General Education OR Elective Courses	6
Senior Year	
Seventh Semester	15
GTY 320 Alternatives in Long-Term Care	3
GTY 400 Adult Development and Aging	3
GTY 410 Research Methods Gerontology	3
300- or 400-level Related Electives	6
Eighth Semester	15
GTY 430 Seminar in Gerontology	3
GTY 440 Internship	6 to 12
Related Electives	0 to 6
Total	120

Additional Requirements

Students perform 6 to 12 credits of internship work in an agency or facility serving older adults.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/gerontology/index.aspx>

B.S. in Health Science

Program Description

The Bachelor of Science in Health Science degree explores a variety of healthcare-related concepts, including: anatomy and physiology, nutrition and exercise, holistic healthcare, basic sciences, complementary medicine and care for seniors.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
BIO 117 Introduction to Human Biology	3

Nursing and Health Sciences

Course	Credits
HSC 101 Foundations of Health Science	2
HSC 110 Anatomy and Physiology I	4
HSC 115 Current Health Issues	3
MAT 181 College Algebra	3
UNI 100 First-Year Seminar	1
Second Semester	17
BIO 120 General Zoology	4
CDC 101 Oral Communication	3
ENG 101 Composition I	3
HSC 120 Anatomy and Physiology II	4
GTY 100 Introduction to Gerontology	3
Sophomore Year	
Third Semester	15
CHE 101 General Chemistry I	4
HSC 275 Functional Kinesiology	3
HSC 225 Medical Terminology	2
HSC 250 Nutrition for Health/Wellness	3
PSY 100 General Psychology	3
Fourth Semester	16
CHE 102 General Chemistry II	4
GTY 200 Aging in American Society	3
MAT 205 Stats for Health Science	3
General Education Courses	6
Junior Year	
Fifth Semester	13
GTY 305 Biology of Aging	3

Nursing and Health Sciences

Course	Credits
HSC 210 Culturally Competent Community Health	3
PHY 121 General Physics	4
Free Elective	3
Sixth Semester	16
HSC 310 Special Populations and Pathology of Disease	3
HSC 325 Physiology of Exercise	3
PHY 122 General Physics II	4
General Education Courses	6
Senior Year	
Seventh Semester	12
PHI 307 Medical Ethics	3
Free Electives	9
Eighth Semester	12
HSC 360 Holistic Medicine and Healthcare	2
HSC 425 Health Science Capstone	4
Free Electives	9
Total	120

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/health-science/index.aspx>

B.S. in Health Science: Pre-Athletic Training Concentration

Program Description

The Pre-Athletic Training concentration of the Bachelor of Science in Health Science degree is designed to prepare students for graduate-level study in Athletic Training.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Nursing and Health Sciences

Course	Credits
Freshman Year	
First Semester	17
BIO 117 Introduction to Human Biology	3
ENG 101 Composition I	3
HSC 101 Foundations of Health Science	3
HSC 110 Anatomy and Physiology I	4
HSC 115 Current Health Issues	3
UNI 100 First-Year Seminar	1
Second Semester	16
CDC 101 Oral Communication	3
ENG 102 Composition II	3
HSC 120 Anatomy and Physiology II	4
MAT 181 College Algebra OR Elective	3
PSY 100 General Psychology	3
Sophomore Year	
Third Semester	15
CHE 101 General Chemistry I	4
HSC 210 Culturally Competent Comm Health	3
HSC 225 Medical Terminology	2
HSC 250 Nutrition for Health/Wellness	3
HSC 275 Functional Kinesiology	3
Fourth Semester	16
ATE 150 Introduction to Athletic Training	4
GTY 200 Aging in American Society	3
HSC 325 Physiology of Exercise	3
Fine Arts Gen Ed Elective	3
MAT 205 Stats for Health Science	3

Nursing and Health Sciences

Course	Credits
Junior Year	
Fifth Semester	16
ATE 340 Sports Nutrition	3
PHI 307 Medical Ethics	3
PHY 121 General Physics	4
Tech Lit Gen Ed	3
Humanities Gen Ed Elective	3
Sixth Semester	16
ATE 745 Contemporary Issues in AT	3
HSC 310 Special Populations and Pathology of Disease	3
HSC 315 First Aid and Personal Safety	3
HSC 425 Health Science Capstone	4
HSC 360 Holistic Medicine and Healthcare	3
Senior Year	
Seventh Semester	12
Free Electives	12
Eighth Semester	12
Free Electives	12
Total	120

BSN in Nursing (RN to BSN)

Program Description

The Bachelor of Science in Nursing degree is a RN-to-BSN program.

Delivery Mode

Global Online (100% online)

Academic Passport, Portfolio Evaluation and Transfer Credits

Upon admission, the following will be accepted as the Academic Passport: 30 credits from the RN's basic nursing program lower-division coursework, along with 30 credits (as appropriate) for completed General Education courses such as English Composition I and II, the natural sciences (e.g., Anatomy and Physiology I and II,

Nursing and Health Sciences

Microbiology), social sciences, etc. An additional 12 credits will be awarded through completion of an entry-level portfolio evaluation to be completed during the first semester in the program.

Students with more General Education credits completed may transfer the additional coursework per the University's transfer credit policy to meet the RN-BSN program requirements. Students who already have another bachelor's degree are exempt from meeting the General Education requirements, with the exception of public speaking and statistics, which are required by the nursing program.

Curriculum

Students must consult with an academic adviser to determine courses needed for graduation. It is recommended that all General Education courses be completed prior to entering the nursing courses due to the accelerated nature of the program.

Course	Credits
General Education	40
BIO 226 Basic Microbiology	4
ENG 101 Composition I	3
ENG 102 Composition II	3
Entry-Level Portfolio	12
Computer Science Course	3
Fine Arts Course	3
Humanities Course	3
Public Speaking Course	3
Social Sciences Course	3
Statistics Course (Recommended: MAT 205 Statistics for Health Sciences, MAT 215 or MAT 225)	3
Required Major Courses	33
NUR 330 Philosophy of Professional Nursing	3
NUR 361 Nursing Research	3
NUR 375 Leadership and Change in Nursing	6
NUR 420 Nursing Informatics	3
NUR 430 Evidence-Based Practice in Nursing	3
NUR 450 Trends and Issues in Nursing	3
NUR 465 Nursing Assessment and Health Promotion of Individuals and Families	6
NUR 475 Community Health Nursing	6

Nursing and Health Sciences

Course	Credits
Required Related Courses	8
BIO 230 Anatomy and Physiology I	4
BIO 260 Anatomy and Physiology II	4
Transfer Credits	30*
Free Electives	9
Total	120

* 30 transfer credits are allowed for lower-division nursing courses, and additional credits may transfer per University policy. 12 credits are awarded through a required entry-level portfolio evaluation.

Program Notes

- This professional BSN program is for RNs who are graduates of diploma or associate degree basic nursing programs.
- A pre-requisite of NUR 361 is required for NUR 430.

Progression Plans

Full-time online students will take three nursing courses during each of three consecutive semesters (yet only two courses at one time). Part-time online students will take two nursing courses during each of four consecutive semesters.

The following are sample progression plans according to the order in which the nursing courses are offered for full-time and part-time online students.

Sample Progression Plan: Full-Time First Semester

COURSE	CREDITS
NUR 330 Philosophy of Professional Nursing	3 crs.
NUR 361 Nursing Research	3 crs.
NUR 465 Nursing Assessment and Health Promotion of Families and Individuals	6 crs.

Second Semester

COURSE	CREDITS
NUR 420 Nursing Informatics	3 crs.
NUR 430 Evidence-Based Practice in Nursing	3 crs.
NUR 375 Leadership and Change in Nursing	6 crs.

Nursing and Health Sciences

Third Semester

COURSE	CREDITS
NUR 450 Trends and Issues in Nursing	3 crs.
NUR 475 Community Health Nursing	6 crs.

Sample Progression Plan Part-Time

First Semester

COURSE	CREDITS
NUR 330 Philosophy of Professional Nursing	3 crs.
NUR 465 Nursing Assessment and Health Promotion of Individuals and Families	6 crs.

Second Semester

COURSE	CREDITS
NUR 361 Nursing Research	3 crs.
NUR 430 Evidence-Based Practice in Nursing	3 crs.

Third Semester

COURSE	CREDITS
NUR 420 Nursing Informatics	3 crs.
NUR 375 Leadership and Change in Nursing	6 crs.

Fourth Semester

COURSE	CREDITS
NUR 450 Trends and Issues in Nursing	3 crs.
NUR 475 Community Health Nursing	6 crs.

Additional Requirements

A minimum grade of C is required for completion of each nursing course. Additionally, all of the University's graduation requirements apply to the RN-to-BSN program.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/nursing-rn-bsn/index.aspx>

Certificate: Aging Specialist

Program Description

The aging specialist certificate provides students from a wide variety of majors with the knowledge and skills necessary to work with older populations.

Curriculum

Course	Credits
Required Courses	15

Nursing and Health Sciences

Course	Credits
GTY 100 Intro to Gerontology	3
GTY 200 Aging in American Society OR GTY 300 Aging Policies and Services	3
GTY 305 Biology of Aging OR GTY 380 Wellness and Aging	3
GTY 315 Practicum	3
GTY 400 Adult Development and Aging	3
Gerontology Elective (choose one course not previously taken)	3
GTY 200 Aging in American Society	3
GTY 300 Aging Policies and Services	3
GTY 305 Biology of Aging	3
GTY 310 Aging and the Family	3
GTY 320 Alternatives in Long-Term Care	3
GTY 330 Dying, Death, and Bereavement	3
GTY 340 Diversity in Aging	3
GTY 350 Ethical Issues in Aging	3
GTY 380 Wellness and Aging	3
GTY 410 Research Methods in Gerontology	3
GTY 430 Seminar in Gerontology	3
Total	18

Program Webpage

<https://www.calu.edu/academics/undergraduate/certificate/aging-specialist/index.aspx>

Minor in Gerontology

Curriculum

Course	Credits
Required Courses	3
GTY 100 Intro to Gerontology	3
Social Aspects of Aging (choose one course)	3
GTY 200 Aging in American Society	3

Nursing and Health Sciences

Course	Credits
GTY 300 Aging Policies and Services	3
GTY 320 Alternatives in Long-Term Care	3
GTY 340 Diversity in Aging	3
GTY 350 Ethical Issues in Aging	3
Psychological Aspects of Aging (choose one course)	3
GTY 330 Dying, Death, and Bereavement	3
GTY 400 Adult Development and Aging	3
Biological/Health Aspects of Aging (choose one course)	3
GTY 305 Biology of Aging	3
GTY 380 Wellness and Aging	3
Practicum (choose one)	3 to 6
GTY 315 Practicum	3
GTY 440 Internship	6
Integrating Course (choose one course)	3
GTY 310 Aging and the Family	3
GTY 350 Ethical Issues in Aging	3
GTY 430 Seminar in Gerontology	3
Gerontology Elective	3
Any GTY course not previously taken above	3
Total	21 to 24

Minor in Health Science Curriculum

Course	Credits
Required Courses	

Nursing and Health Sciences

Course	Credits
HSC 101 Foundations of Health Science	2
HSC 210 Culturally Competent Community Health	3
HSC 225 Medical Terminology	2
HSC 250 Nutrition for Health / Wellness	3
HSC 310 Special Populations and Pathology of Disease	3
HSC 315 First Aid and Personal Safety	3
HSC 360 Holistic Medicine and Healthcare	3
Total	19

Suggested Additional Courses for Professional Development

- **HSC 110** Anatomy and Physiology 1 (4 cr)
- **HSC 120** Anatomy and Physiology 2 (4 cr)
- **HSC 275** Functional Kinesiology (3 cr)
- **HSC 325** Physiology of Exercise (3 cr)
- **HSC 425** Health Science Capstone (4 cr)

Social Sciences

Department of Social Sciences

Faculty

Criminal Justice: Dr. Aref M. Alkhattar | Dr. John R. Cencich (director of Criminal Justice graduate programs) | Dr. Raymond J. Hsieh | Dr. Michael Hummel | Dr. Nikolas Roberts | Dr. Beverly Ross (coordinator of the M.A. in Conflict Resolution Studies) | Dr. Mathilda Spencer | Dr. Julie Warnick | Dr. Christopher Wydra (coordinator of the M.A. in Criminal Justice: Applied Criminology concentration)

Psychology: Dr. Holiday Adair | Michael Baranski | Dr. Angela Bloomquist | Dr. Rueben Brock | Dr. Carrie Elkin | Dr. Justin Hackett | Dr. Dana Keener | Dr. Tamare Piersaint | Dr. Rebecca Regeth | Dr. Kristen Schaffner | Dr. Darla Timbo

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Programs

Cal U's Department of Social Sciences includes undergraduate programs in criminal justice and psychology.

Associate and Bachelor's Degree Programs

Degrees offered through this department include:

- A.S. in Technical Studies: Applied Policing and Technology
- B.S. in Criminal Justice
- B.S. in Criminal Justice: Criminology
- B.S. in Criminal Justice: Cyber Forensics
- B.S. in Criminal Justice: Forensic Investigation
- B.S. in Criminal Justice: Homeland and International Security
- B.S. in Criminal Justice: Law and Justice
- B.S. in Psychology

Certificates

The department also offers sub-baccalaureate certificate programs in:

- Diversity and Multicultural Competence
- Mental Health Technician

Minors

Minors available through this department include:

- Criminal Justice
- Forensic Science
- Leadership
- Psychology

Honor Societies

The criminal justice programs participate in the National Criminal Justice Honor Society (**Alpha Phi Sigma**) and **Pi Gamma Mu**, a social science honorary society.

Qualified psychology majors can join **Psi Chi**, the national honor society.

Activities

Criminal justice studies faculty and students involve themselves in numerous activities beyond the normal academic experience. The program is an active participant in myriad justice-related activities at the regional, national and international levels. There are opportunities for student internships and study abroad. Students can compete with the Mock Trial Team. Membership and leadership opportunities exist in the Law and Justice Society, Forensic Science Club and Criminal Justice Club.

Social Sciences

The department also sponsors a Psychology Club that hosts guest speakers, organizes trips to conferences of professional interest, and provides career and employment information.

A.S. in Technical Studies: Applied Policing and Technology Concentration

Program Description

The Applied Policing and Technology concentration of the Associate of Science in Technical Studies degree is designed for aspiring police officers and builds knowledge of high-tech tools used in modern police work.

Delivery Modes

- Traditional (on campus)
- Global Online (100% online)

Curriculum

On Campus

Course	Credits
Semester 1	15
ENG 101 English Composition I	3
JUS 101* Introduction to Criminal Justice Studies	3
JUS 103* Correctional Systems	3
MAT 100 Fundamentals of Math or Any Math	3
Related Elective**	3
Semester 2	15
COM 101 Oral Communications	3
JUS 102* Introduction to Law Enforcement	3
JUS 105* Introduction to Forensic Science	3
Related Elective**	3
Health and Wellness Course	3
Semester 3	15
JUS 201* Criminal Investigation	3
JUS 331 Juvenile Justice System	3
JUS 380 Crime Scene Imaging OR Any Approved Technological Literacy Course	3
Related Elective**	3
Natural Sciences Course	3
Semester 4	15

Social Sciences

Course	Credits
JUS 375 Criminal Law	3
JUS 376 Criminal Procedure	3
PSY 100 General Psychology	3
Related Elective**	3
Humanities Course	3
Total	60

*** Program Notes:**

1. If students have already completed these courses, then credits as work force development (WFD) may be applied up to a total of 15 credits.
2. Fifteen of the last 30 credits must be taken at Cal U.
3. After successful completion of the Police Academy, the student will be awarded 15 credits toward the degree.

**** Required Electives (complete 12 credits)**

- **JUS 211** Organized Crime
- **JUS 405** Cyber Security
- **JUS 487** Computer Forensics
- **JUS 488** Cyber Crime Investigation
- Any Approved JUS Course (requires prior approval from adviser)
- **WFD 199** MPOETC

In order to graduate, the student must complete a minimum of 48 credits of upper-level course work (300 level or higher).

Online

Course	Credits
Semester 1	15
ENG 101 English Composition I	3
JUS 101* Introduction to Criminal Justice Studies	3
JUS 103* Correctional Systems	3
MAT 100 Fundamentals of Math or Any Math	3
Related Elective**	3
Semester 2	15
COM 101 Oral Communications	3
JUS 102* Introduction to Law Enforcement	3

Social Sciences

Course	Credits
JUS 105* Introduction to Forensic Science	3
Related Elective**	3
Health and Wellness Course	3
Semester 3	15
JUS 201* Criminal Investigation	3
JUS 331 Juvenile Justice System	3
JUS 380 Crime Scene Imaging OR Any Approved Technological Literacy Course	3
Related Elective**	3
Natural Sciences Course	3
Semester 4	15
JUS 375 Criminal Law	3
JUS 376 Criminal Procedure	3
PSY 100 General Psychology	3
Related Elective**	3
Humanities Course	3
Total	60

*** Program Notes:**

1. If students have already completed these courses, then credits as work force development (WFD) may be applied up to a total of 15 credits.
2. Fifteen of the last 30 credits must be taken at Cal U.
3. After successful completion of the Police Academy, the student will be awarded 15 credits toward the degree.

**** Required Electives (complete 12 credits)**

- **JUS 211** Organized Crime
- **JUS 405** Cyber Security
- **JUS 487** Computer Forensics
- **JUS 488** Cyber Crime Investigation
- Any Approved JUS Course (requires prior approval from adviser)
- **WFD 199** MPOETC

Social Sciences

Police Academy

Graduates of the Pennsylvania Police Academy who earn the Pennsylvania Act 120 MPOETC certification, or its equivalent, can be awarded up to 15 credits, which will be applicable to the associate degree in Applied Policing and Technology. Act 120 MPTOETC police academy training and certification is offered at the University. Graduates of the Academy are awarded 15 credits, typically in the additional electives category.

Program Webpage

<https://www.calu.edu/academics/undergraduate/associate/policing-and-technology/index.aspx>

B.S. in Criminal Justice

Program Description

The Bachelor of Science in Criminal Justice degree explores broad concepts related to the field of criminal justice and allows students to select criminal justice electives that are tailored to their specific career goals and interests.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
JUS 101 Introduction to Criminal Justice Studies	3
JUS 103 Correctional Systems	3
UNI 100 First-Year Seminar	1
Related Elective	3
General Education Course	3
Second Semester	15
JUS 102 Introduction to Law Enforcement	3
Related Electives	6
Free Elective	3
General Education Course	3
Sophomore Year	
Third Semester	15
JUS 331 Juvenile Justice	3
Related Elective	3

Social Sciences

Course	Credits
Free Elective	3
Laboratory Course	3
General Education Course	3
Fourth Semester	15
JUS 361 Court Systems	3
Related Elective	3
Free Electives	6
General Education Course	3
Junior Year	
Fifth Semester	15
JUS 375 Criminal Law	3
Related Elective	3
Free Elective	3
General Education Courses	6
Sixth Semester	15
JUS 376 Criminal Procedure	3
Related Elective	3
Free Elective	3
General Education Courses	6
Senior Year	
Seventh Semester	15
JUS 466 Leadership and Ethics in Criminal Justice	3
JUS 496 Criminological Theory	3
Free Elective	3
General Education Courses	6

Social Sciences

Course	Credits
Eighth Semester	15
JUS 495 Research Methods in Criminal Justice	3
JUS 499 Seminar in Criminal Justice Studies	3
Free Elective	3
General Education Courses	6
Total	120

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (B.S. in Criminal Justice to M.A. in Criminal Justice: Applied Criminology) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/criminal-justice/index.aspx>

B.S. in Criminal Justice: Criminology Concentration

Program Description

The Criminology concentration of the Bachelor of Science in Criminal Justice degree explores classical, psychological, sociological, economic, biological and political theories of crime.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
JUS 101 Introduction to Criminal Justice Studies	3
JUS 103 Correctional Systems	3
UNI 100 First-Year Seminar	1
Related Elective	3
General Education Course	3
Second Semester	15
JUS 102 Introduction to Law Enforcement	3

Social Sciences

Course	Credits
Related Electives	6
Free Elective	3
General Education Course	3
Sophomore Year	
Third Semester	15
JUS 331 Juvenile Justice	3
JUS 361 Court Systems	3
Free Elective	3
Laboratory Course	3
General Education Course	3
Fourth Semester	15
JUS 375 Criminal Law	3
Related Elective	3
Free Electives	6
General Education Course	3
Junior Year	
Fifth Semester	15
JUS 376 Criminal Procedure	3
JUS 466 Leadership and Ethics	3
Free Elective	3
General Education Courses	6
Sixth Semester	15
JUS 495 Research Methods in Criminal Justice	3
Related Elective	3
Free Elective	3
General Education Courses	6

Social Sciences

Course	Credits
Senior Year	
Seventh Semester	15
JUS 496 Criminological Theory	3
Related Elective	3
Free Elective	3
General Education Courses	6
Eighth Semester	15
JUS 499 Seminar in Criminal Justice Studies	3
Related Elective	3
Free Elective	3
General Education Courses	6
Total	120

Required Concentration Courses (6 credits)

- **JUS 215** Victimology
- **JUS 459** Behavioral Analysis of Violent Crime

Related Electives (15 credits)

- **JUS 201** Criminal Investigation
- **JUS 211** Organized Crime
- **JUS 309** White Collar Crime
- **JUS 385** Violence and the Media
- **JUS 395** Death Penalty
- **JUS 399** Selected Topics (Criminology)
- **JUS 429** Terrorism
- **JUS 430** Criminal Intelligence Analysis
- **JUS 460** Sex Crimes and Predators
- **JUS 470** Crimes Against Children
- **JUS 498** Criminology Internship
- **GIS 303** Crime Mapping

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (B.S. in Criminal Justice to M.A. in Criminal Justice: Applied Criminology) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/criminal-justice/criminology.aspx>

Social Sciences

B.S. in Criminal Justice: Cyber Forensics Concentration

Program Description

The Cyber Forensics concentration of the Bachelor of Science in Criminal Justice degree explores techniques, tools and concepts relevant to identifying, collecting, preserving, analyzing and presenting digital forensic evidence.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
JUS 101 Introduction to Criminal Justice Studies	3
JUS 103 Correctional Systems	3
UNI 100 First-Year Seminar	1
Related Elective	3
General Education Course	3
Second Semester	15
JUS 102 Introduction to Law Enforcement	3
JUS 105 Introduction to Forensic Science	3
Related Elective	3
Free Elective	3
General Education Course	3
Sophomore Year	
Third Semester	15
JUS 331 Juvenile Justice	3
JUS 361 Court Systems	3
Free Elective	3
General Education Course	3
Laboratory Course	3

Social Sciences

Course	Credits
Fourth Semester	15
JUS 375 Criminal Law	3
JUS 376 Criminal Procedure	3
Free Electives	6
General Education Course	3
Junior Year	
Fifth Semester	15
JUS 466 Leadership and Ethics in Criminal Justice	3
JUS 485 Forensic Law	3
Free Elective	3
General Education Courses	6
Sixth Semester	15
JUS 495 Research Methods in Criminal Justice	3
Related Elective	3
Free Elective	3
General Education Courses	6
Senior Year	
Seventh Semester	15
JUS 496 Criminological Theory	3
Related Elective	3
Free Elective	3
General Education Courses	6
Eighth Semester	15
JUS 499 Seminar in Criminal Justice Studies	3
Related Elective	3

Social Sciences

Course	Credits
Free Elective	3
General Education Courses	6
Total	120

Concentration Courses (12 credits)

- **JUS 105** Introduction to Forensic Science
- **JUS 397** Law and Evidence
- **JUS 487** Computer Forensics
- **JUS 488** Cyber Crime Investigation

Related Electives (9 credits)

- **JUS 201** Criminal Investigation
- **JUS 220** High Tech Crime Investigation
- **JUS 380** Crime Scene Imaging
- **JUS 399** Selected Topics (Cyber Forensics)
- **JUS 405** Cyber Security
- **JUS 425** Advanced Criminal Investigation and Law
- **JUS 485** Forensic Law
- **JUS 498** Internship Cyber Forensics

Program Notes:

- 42 credits (or 14 courses) of upper-division (300- to 400-level) courses are required.
- Any related electives not listed must be approved by a Criminal Justice Adviser located in AZO 117 or 118.

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (B.S. in Criminal Justice to M.A. in Criminal Justice: Applied Criminology) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/criminal-justice/cyber-forensics.aspx>

B.S. in Criminal Justice: Forensic Investigation Concentration

Program Description

The Forensic Investigation concentration of the Bachelor of Science in Criminal Justice degree builds skills and knowledge related to collecting, categorizing, evaluating and interpreting evidence from crime scenes.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	

Social Sciences

Course	Credits
First Semester	16
ENG 101 English Composition I	3
JUS 101 Introduction to Criminal Justice Studies	3
JUS 103 Correctional Systems	3
UNI 100 First-Year Seminar	1
Related Elective	3
General Education Course	3
Second Semester	15
JUS 102 Introduction to Law Enforcement	3
JUS 105 Introduction to Forensic Science	3
Related Elective	3
Free Elective	3
General Education Course	3
Sophomore Year	
Third Semester	15
JUS 331 Juvenile Justice	3
JUS 361 Court Systems	3
Free Elective	3
General Education Course	3
Laboratory Course	3
Fourth Semester	15
JUS 375 Criminal Law	3
JUS 376 Criminal Procedure	3
Free Electives	6
General Education Course	3
Junior Year	

Social Sciences

Course	Credits
Fifth Semester	15
JUS 466 Leadership and Ethics in Criminal Justice	3
JUS 485 Forensic Law	3
Free Elective	3
General Education Courses	6
Sixth Semester	15
JUS 495 Research Methods in Criminal Justice	3
Related Elective	3
Free Elective	3
General Education Courses	6
Senior Year	
Seventh Semester	15
JUS 496 Criminological Theory	3
Related Elective	3
Free Elective	3
General Education Courses	6
Eighth Semester	15
JUS 499 Seminar in Criminal Justice Studies	3
Related Elective	3
Free Elective	3
General Education Courses	6
Total	120

Concentration Courses (12 credits)

- **JUS 105** Introduction to Forensic Science
- **JUS 201** Criminal Investigation
- **JUS 397** Law and Evidence
- **JUS 485** Forensic Law

Related Electives (9 credits)

Social Sciences

- **JUS 220** High Tech Crime Investigation
- **JUS 380** Crime Scene Imaging
- **JUS 399** Selected Topics
- **JUS 405** Cyber Security
- **JUS 425** Advanced Criminal Investigation and Law
- **JUS 487** Computer Forensics
- **JUS 488** Cyber Crime Investigation
- **JUS 498** Internship (3-9 credits)

Program Notes:

- 42 credits (or 14 courses) of upper-division (300- to 400-level) courses are required.
- Any related electives not listed must be approved by a Criminal Justice Adviser located in AZO 117 or 118.

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (B.S. in Criminal Justice to M.A. in Criminal Justice: Applied Criminology) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/criminal-justice/forensic-investigation.aspx>

B.S. in Criminal Justice: Homeland and International Security Concentration

Program Description

The Homeland and International Security concentration of the Bachelor of Science in Criminal Justice degree builds skills and knowledge related to establishing and organizing national security efforts and defending against foreign and domestic terrorism.

Delivery Modes

- Traditional (on campus)
- Global Online (100% online)

Curriculum

On Campus

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
JUS 101 Introduction to Criminal Justice Studies	3
JUS 102 Introduction to Law Enforcement	3
UNI 100 First-Year Seminar	1
Related Elective	3
General Education Course	3

Social Sciences

Course	Credits
Second Semester	15
JUS 103 Correctional Systems	3
Related Electives	6
Free Elective	3
General Education Course	3
Sophomore Year	
Third Semester	15
JUS 331 Juvenile Justice	3
JUS 361 Court Systems	3
Free Elective	3
Laboratory Course	3
General Education Course	3
Fourth Semester	15
JUS 375 Criminal Law	3
Related Elective	3
Free Electives	6
General Education Course	3
Junior Year	
Fifth Semester	15
JUS 466 Leadership and Ethics in Criminal Justice	3
Related Elective	3
Free Elective	3
General Education Courses	6
Sixth Semester	15
JUS 376 Criminal Procedure	3
Related Elective	3

Social Sciences

Course	Credits
Free Elective	3
General Education Courses	6
Senior Year	
Seventh Semester	15
JUS 495 Research Methods in Criminal Justice	3
Related Elective	3
Free Elective	3
General Education Courses	6
Eighth Semester	15
JUS 496 Criminological Theory	3
JUS 499 Seminar in Criminal Justice Studies	3
Free Elective	3
General Education Courses	6
Total	120

Concentration Courses

- **JUS 104** Introduction to Security
- **JUS 205** Principles of Homeland Security

Related Electives

- **JUS 305** International Criminal Justice
- **JUS 335** Corporate Security Law
- **JUS 338** Executive Protection
- **JUS 399** Selected Topics (Repeatable)
- **JUS 405** Cyber Security
- **JUS 410** International Security
- **JUS 415** Multiculturalism in Criminal Justice
- **JUS 429** Terrorism
- **JUS 430** Criminal intelligence Analysis
- **JUS 435** Countering Terrorism
- **JUS 498** Criminal Justice Internship

Online

Course	Credits
Required Major Courses	33

Social Sciences

Course	Credits
JUS 101 Introduction to Criminal Justice Studies	3
JUS 102 Introduction to Law Enforcement	3
JUS 103 Correctional Systems	3
JUS 331 Juvenile Justice	3
JUS 361 Court Systems	3
JUS 375 Criminal Law	3
JUS 376 Criminal Procedure	3
JUS 466 Leadership and Ethics in Criminal Justice	3
JUS 495 Research Methods in Criminal Justice	3
JUS 496 Criminological Theory	3
JUS 499 Seminar in Criminal Justice Studies	3
Concentration Courses	9
JUS 104 Introduction to Security	3
JUS 205 Principles of Homeland Security	3
JUS 440 Military Criminal Justice	3
Related Electives	12
JUS 305 International Criminal Justice	3
JUS 335 Corporate Security Law	3
JUS 338 Executive Protection	3
JUS 399 Selected Topics (Repeatable)	3
JUS 405 Cybersecurity	3
JUS 410 International Security	3
JUS 415 Multiculturalism in Criminal Justice	3
JUS 429 Terrorism	3
JUS 430 Criminal Intelligence Analysis	3
JUS 435 Countering Terrorism	3
JUS 498 Criminal Justice Internship	3

Social Sciences

Course	Credits
General Education Courses	40
Additional Electives	26
Total	120

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (B.S. in Criminal Justice to M.A. in Criminal Justice: Applied Criminology) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpages

<https://www.calu.edu/academics/undergraduate/bachelors/criminal-justice/homeland-security.aspx>

<https://www.calu.edu/academics/undergraduate/bachelors/criminal-justice/homeland-security-online.aspx>

B.S. in Criminal Justice: Law and Justice Concentration

Program Description

The Law and Justice concentration of the Bachelor of Science in Criminal Justice degree equips students with a solid understanding of law and the criminal justice system. The concentration is designed to be particularly useful for students who plan to go on to law school or pursue law enforcement careers in local, state or federal employment.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
ENG 101 English Composition I	3
JUS 101 Introduction to Criminal Justice Studies	3
JUS 102 Introduction to Law Enforcement	3
UNI 100 First-Year Seminar	1
Related Elective	3
General Education Course	3
Second Semester	15

Social Sciences

Course	Credits
JUS 103 Correctional Systems	3
Related Electives	6
Free Elective	3
General Education Course	3
Sophomore Year	
Third Semester	15
JUS 331 Juvenile Justice	3
Related Elective	3
Free Elective	3
Laboratory Course	3
General Education Course	3
Fourth Semester	15
JUS 361 Court Systems	3
Required Related Course	3
Free Electives	6
General Education Course	3
Junior Year	
Fifth Semester	15
JUS 375 Criminal Law	3
JUS 376 Criminal Procedure	3
Free Elective	3
General Education Courses	6
Sixth Semester	15
JUS 466 Leadership and Ethics in Criminal Justice	3
Required Related Elective	3
Free Elective	3

Social Sciences

Course	Credits
General Education Courses	6
Senior Year	
Seventh Semester	15
JUS 495 Research Methods in Criminal Justice	3
Related Elective	3
Free Elective	3
General Education Courses	6
Eighth Semester	15
JUS 496 Criminological Theory	3
JUS 499 Seminar in Criminal Justice Studies	3
Free Elective	3
General Education Courses	6
Total	120

Concentration Courses

- **JUS 265** Report Writing for Criminal Justice Professionals
- **JUS 365** Mock Trial Concepts
- **JUS 397** Law and Evidence

Related Electives

- **JUS 105** Introduction to Forensic Science
- **JUS 201** Criminal Investigation
- **JUS 220** High Tech Crimes
- **JUS 305** International Criminal Justice
- **JUS 309** White Collar Crime
- **JUS 345** Probation and Parole
- **JUS 394** Problems in Policing
- **JUS 399** Selected Topics
- **JUS 465** Applied Mock Trial
- **JUS 485** Forensic Law
- **JUS 498** Criminal Justice Internship (Law)

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (B.S. in Criminal Justice to M.A. in Criminal Justice: Applied Criminology) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Social Sciences

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/criminal-justice/law-justice.aspx>

B.S. in Psychology

Program Description

The Bachelor of Science in Psychology degree is designed to provide students with a scientific foundation of psychology as well as in a variety of applied areas.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First-Semester	15
ENG 101 English Composition I	3
PSY 100 General Psychology	3
UNI 100 First-Year Seminar	1
General Education Courses	8 to 9
Second Semester	15
ENG 102 English Composition II	3
PSY 220 Descriptive Statistics in Psychology	3
General Education Courses	9
Sophomore Year	
Third Semester	15
PSY 331 Inferential Statistics in Psychology	3
Psychology Lab Course	3
Psychology Content Course	3
General Education OR Minor Courses	6
Fourth Semester	15
PSY 345 History and Systems of Psychology	3
Psychology Lab Course	3

Social Sciences

Course	Credits
Psychology Content Course	3
General Education OR Minor Courses	6
Junior Year	
Fifth Semester	15
PSY 365 Research Methods in Psychology	3
Psychology Lab Course	3
Psychology Content Course	3
General Education OR Minor Courses	6
Sixth Semester	15
Psychology Lab Course	3
Psychology Content Course	3
PSY OR Minor Courses	6
General Education OR Minor Course	3
Senior Year	
Seventh Semester	15
PSY 460 Senior Seminar: Special Topics OR PSY/ GEN ED/MINOR Course	3
PSY, General Education OR Minor Courses	9
PSY OR Minor Course	3
Eighth Semester	15
PSY 460 Senior Seminar: Special Topics OR PSY/ GEN ED/MINOR Course	3
PSY, General Education OR Minor Courses	12
Total	120

42 credits of upper-level courses are required.

Required Major Courses

- **PSY 100** General Psychology

Social Sciences

- **PSY 220** Descriptive Statistics in Psychology
- **PSY 331** Interferential Statistics in Psychology
- **PSY 345** History and Systems in Psychology
- **PSY 365** Research Methods in Psychology
- **PSY 460** Senior Seminar: Special Topics in Psychology

Research Competency (choose 12 credits)

- **PSY 301** Sensation and Perception Lab
- **PSY 306** Cognitive Psychology Lab
- **PSY 335** Advanced Learning Lab
- **PSY 340** Psychological Measurement Lab
- **PSY 350** Principles of Behavior Modification
- **PSY 415** Childhood Trauma: Theory, Research, Practice
- **PSY 420** Social Psychology Lab
- **PSY 425** Senior Project
- **PSY 430** Physiological Psychology
- **PSY 469** Internship (3 to 6 credits)

Psychology Electives (choose 15 credits)

Any PSY courses NOT used to complete the above requirements

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (B.A.in Psychology to M.A. in Conflict Resolution Studies) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/psychology/index.aspx>

Certificate in Diversity and Multicultural Competence

Curriculum

Course	Credits
PSY 100 General Psychology	3
PSY 211 Social Psychology	3
PSY 303 Cross Cultural Psychology	3
PSY 311 Psychology of Gender Roles	3
PSY 320 Black Psychology	3
Total	15

Certificate in Mental Health Technician

Curriculum

Course	Credits
PSY 305 Theories of Personality	3
PSY 375 Psychopathological Disorders of Childhood OR PSY 400 Psychopathological Disorders of Adulthood	3

Social Sciences

Course	Credits
PSY 410 Clinical Child Psychology OR PSY 421 Clinical Skills in Psychology	3
PSY 421 Theories of Psychotherapy	3
Total	12

Minor in Criminal Justice Curriculum

Course	Credits
Required Courses	6
JUS 101 Introduction to Criminal Justice Studies	3
JUS 375 Criminal Law	3
Criminal Justice Electives (select five)	15
Students may select any Justice course offered as part of the core required courses or related electives of any of the concentrations. A minimum of 6 credits must be at the 300 level or above.	15
Total	21

Minor in Forensic Science Curriculum

Course	Credits
Required Courses	12
JUS 105 Introduction to Forensic Science	3
JUS 220 High Tech Crime Investigation	3
JUS 375 Criminal Law	3
JUS 485 Forensic Law	3
Electives (select three)	9
JUS 201 Criminal Investigation	3
JUS 380 Crime Scene Imaging	3
JUS 397 Law and Evidence	3
JUS 405 Cyber Security	3
JUS 425 Advanced Criminal Investigation and Law	3

Social Sciences

Course	Credits
JUS 487 Computer Forensics	3
JUS 488 Cyber Crime Investigation	3
Total	21

Note: Students should select electives based on their interest in forensic investigation and/or cyber forensics.

Minor in Leadership

Program Description

The Leadership minor builds an understanding of, and an ability to demonstrate, leadership skills. It enhances and deepens an individual's ability to make sense of local, national and world events and the decisions made by individuals and groups with control over resources, and provides another set of conceptual tools for being a critical and responsible citizen of the world.

Curriculum

The minor in Leadership requires 21 credit hours, including an internship. Students must obtain permission prior to enrolling in the internship. The chair of the Department of Criminal Justice must approve course substitutions and internships.

Course	Credits
Required Courses	12
LEA 100 Introduction to Leadership	
LEA 397 Internship	
LEA 399 Selected Topics in Leadership	
LEA 400 Capstone: Seminar in Leadership	
Leadership Electives	9
Students must select one course from each of the designated areas below, with at least two courses at the 300- or 400-level. Two of the three courses below must be outside the student's major.	
<i>Theory and Institutions Area</i>	
BUS 342 Business/Society/Government	3
CDC 303 Organizational Com	3
CDC 330 Intro Public Relations	3
ECO 304 Money and Banking	3
FIN 311 Financial Markets and Institutions	3
GEO 360 Emergency Management	3

Social Sciences

Course	Credits
HIS 320 History of a Dictator	3
HON 201 Quant Problem Solving	3
HON 320 Topics in Culture and Soc	3
JUS 101 Intro to Criminal Justice	3
JUS 361 Court Systems	3
JUS 496 Criminological Theories	3
MGT 300 Principles of Management	3
MGT 301 Organizational Behavior	3
MGT 311 Organizational Theory/Design	3
POS 300 Public Policy	3
POS 306 Congress	3
POS 310 The American Presidency	3
POS 355 Public Administration	3
SOC 240 Social Institutions	3
SOC 410 Social Theory/Policy	3
WST 100 Intro to Women's Studies	3
<i>Applied Area</i>	
ARB 101/102 Elementary Arabic	3
ARB 203/204 Intermediate Arabic	3
CDC 201 Argument and Advocacy	3
CDC 230 Strategic and Prof Comm	3
CDC 320 International Comm	3
CSC 150 Intro to Database Comm	3
ECO 322 Managerial Economics	3
ECO 360 International Economics	3
FIN 301 Financial Management	3
FIN 302 Advanced Financial Management	3
GEO 330 Conv Oper for Dest Mgr	3
GEO 474 Developing Master Plan	3

Social Sciences

Course	Credits
GMS 201 General Military Science	3
JUS 305 International Criminal Justice	3
JUS 335 Corporate Security Law	3
JUS 365 Mock Trial Concepts	3
POS 318 Parties/Groups	3
POS 319 Campaign Management	3
PSY 208 Educational Psychology	3
PSY 211 Social Psychology	3
PSY 305 Psychology of Personality	3
REC 378 Recreation/Industry Management	3
SOC 378 Charismatic Leaders	3
SOC 400 Structural and Inst Violence	3
SPN 101/102 Elementary Spanish	3
SPN 203/204 Intermediate Spanish	3
<i>Ethics Area</i>	
BUS 343 Corporate Social Resp	3
EDU 310 Teaching Multicultural Society	3
ENG 306 Press Law and Media Ethics	3
HIS 379 Special Problems in History	3
JUS 394 Problems in Policing	3
JUS 415 Multiculturalism in CRJ	3
JUS 466 Leadership and Ethics	3
JUS 470 Crimes Against Children	3
PHI 220 Ethics	3
PHI 307 Medical Ethics	3
PHI 320 Ethical Theory	3
PSY 340 Psychological Measurements	3
SOC 315 Social Minorities	3
SPT 305 Ethics in Sport	3

Social Sciences

Course	Credits
WST 340 Violence Against Women	3
Total	21

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/leadership/index.aspx>

Minor in Psychology

Curriculum

Course	Credits
Required Courses	6
PSY 100 General Psychology	3
PSY 220 Descriptive Statistics in Psychology	3
Electives	6
<i>Select one from:</i>	
PSY 150 Lifespan Developmental Psychology	3
PSY 205 Developmental Psychology: Childhood	3
PSY 206 Developmental Psychology: Adolescence	3
PSY 207 Developmental Psychology: Adulthood	3
<i>Select one from:</i>	
PSY 208 Educational Psychology	3
PSY 209 Industrial Psychology	3
PSY 211 Social Psychology	3
PSY 222 Stress Management	3
Advanced Electives	9
Select three 300- or 400-level psychology content courses	9
Total	21

TRIO and Academic Services

TRIO and Academic Development Services

Faculty

Lisa Driscoll (chair) | Jeanne M. Fazekas | Laura A. Giachetti | Marnie L. Hall | Patricia Johnson | Nathan Knopp | Eron M. McMillen | Jennifer Ramsey

Purpose

The mission of the department is to foster students' academic, social, cultural and career success through programming, support and academic services. The department provides services to University and TRIO college students as well as eligible high school students from nine target high schools that participate in three federal TRIO grant-funded programs: Student Support Services and two Upward Bound Programs: Fayette and Monongahela Projects.

Services

TRIO Student Support Services (SSS)

Instruction

Faculty Course Offerings include:

- **EDU 210** Critical Thinking and Reading
- **XCP 194** Career Planning
- **UNI 100** First-Year Seminar
- **UNI 200** Career Readiness

Counseling and Supports

TRIO Counselors provide educational career counseling and academic advisement to students from freshman year until graduation. New program students are interviewed and receive an orientation and academic plan. Counselors help students select and register for courses; monitor each student's academic performance; and provide students with information concerning academic resources, policies, procedures and practices. Program students receive priority registration, financial literacy and planning (including scholarship), personal development workshops, tutoring, mentorship, learning communities, graduate school planning, and grant aid (for those that meet criteria). Students may also participate in cultural enrichment opportunities offered on/off campus. Any student interested in services should contact the TRIO SSS office at 724-938-4230.

Literacy and Academic Support

A certified Reading Specialist is available to:

- Work 1:1 with students in all aspects of literacy and support the development of reading at the college level.
- Assess students' reading needs, implement strategies and evaluate instruction.

TRIO SSS will provide linkage to the Vulcan Learning Commons (VLC), which offers face-to-face and online tutoring support, including:

- Supplemental instruction that improves student performance in historically difficult courses.
- Connect with a student who has been successful in the course.
- Teaches skills in a supportive environment for academic success.
- Reviews lecture notes, textbooks and other course materials.
- Teaches test-taking skills.

TRIO Club

The club is open to all students and has a focus on supporting TRIO-eligible students through both on- and off-campus events, providing students with an opportunity to stay connected and involved with their peers.

TRIO Mentor Program

Students can select from faculty, staff or administrative mentors on campus. The mentor program helps students build relationships with faculty/staff/administrators who share similar experiences. Student will have

TRIO and Academic Services

the opportunity to meet with their mentors regularly and participate in campus events, including the #IAMFIRST campaign.

TRIO Upward Bound (UB) Programs

Cal U is committed to community outreach for local students in the surrounding high schools. TRIO Upward Bound is a federally-funded TRIO program that helps to prepare eligible high school students for success in postsecondary education. The program is offered to those students meeting TRIO eligibility and is offered year-round support and services through Saturday, after-school and summer college preparatory activities.

Cal U hosts two TRIO Upward Bound programs, Fayette and Monongahela.

- The Fayette Project serves as many as 93 high school students per year in the [Albert Gallatin Area](#), [Brownsville Area](#), [Connellsville Area](#), [Laurel Highlands](#) and [Uniontown Area](#) school districts.
- The Monongahela Project serves up to 63 high school students per year in [Carmichaels Area](#), [Jefferson-Morgan](#), [Waynesburg Central](#) and [California Area](#) schools.

Upward Bound (UB) helps high school students prepare for and succeed in college after high school. The program offers a wide array of services that include academic and career guidance, college tours, exposure to college majors/careers, tutoring and study skills, applications for college and financial planning, fee waivers and college planning workshops, cultural exposure and field trips. Students can also earn up to nine college credits prior to high school graduation that will transfer to desire post-secondary institution.

Anyone interested in learning more about this opportunity should contact the TRIO Upward Bound office at 724-938-4470.

Undergraduate Catalog

Academic Policies and Procedures

Please visit <https://www.calu.edu/inside/policies/> to view the most current academic policies.

Academic Success

Academic Success

Office of Academic Success

The Mission of the Office of Academic Success is to foster and support students in all phases of their academic endeavors by providing comprehensive programs, resources and assistance. We support these endeavors through initiatives such as:

- First-Year Seminar
- Academic Scheduling and Placement Testing
- Four-Year Graduation Plan
- Learning Communities
- Starfish Early Alert System
- Peer Mentoring
- Academic Support Programs
- Mid-Term Grade Reports and Progress

For more information, call 724-938-1523 or visit the website at www.calu.edu and search Academic Success.

Academic Advising

The purpose of academic advising is to provide students with appropriate counsel in pursuing their academic degrees. The University has embraced developmental academic advising, which is a goal- and growth-oriented process helping students assess their strengths and weaknesses; set realistic academic and other goals; and monitor progress toward achievement of these goals.

In this process, seven elements are essential and are discussed with students. They are:

1. Advising is a continuous process with accumulation of personal contacts between adviser and student — these contacts have both direction and purpose.
2. Advising must concern itself with quality-of-life issues, and the adviser has a responsibility to attend to the quality of the student's experience in college.
3. Advising is goal related. The goals should be established and owned by the student and should encompass academic, career and personal development areas.
4. Advising requires the establishment of a caring human relationship, one in which the adviser must take primary responsibility for its initial development.
5. Advisers should be models for students to emulate, specifically demonstrating behaviors that lead to self-responsibility and self-directiveness.
6. Advising should seek to integrate the services and expertise of both academic and student affairs professionals.
7. Advisers should seek to utilize as many campus and community resources as possible.

Faculty advisers are available to assist students in planning their academic programs, but students have the responsibility for meeting all requirements for their degrees. Students are urged to take advantage of the advisory and consultation services available at the University. They should feel free to consult with professors, academic advisers, department chairpersons, academic deans, staff of the Scheduling Center in Noss Hall and the provost. All of these University representatives maintain regular office hours for student consultations.

Schedules for new students are developed based on preferred schedules approved by the academic departments. All schedules are reviewed by faculty and students before confirmation. Currently enrolled students are expected to seek the appropriate resources. All may register online and some departments place holds on registration until students have visited an adviser. Fulfillment of program requirements for a degree is ultimately the responsibility of the student.

Academic Scheduling and Placement Testing Center

Scheduling Center

The Scheduling Center, located in Noss 210/211, coordinates schedule development for all first-time and transfer students and registration in developmental courses and monitors successful completion of work. The Scheduling Center also serves students who have not declared a major. The Academic Scheduling Center does not replace

Academic Success

faculty advising, but helps to coordinate and supplement a student's academic experience. Students may contact the Scheduling Center by emailing schedulingcenter@calu.edu.

Placement Testing Center

The Placement Testing Center ensures that students begin with courses that meet their academic needs. Students' SAT or ACT scores (or transfer credits) will determine whether they are required to take a placement test. The Center serves to coordinate placement testing to determine students' level of ability in mathematics and writing. Students who do not submit SAT/ACT scores or transfer credits must take placement tests. The Center also provides retesting opportunities for students after waiting a period of time.

Students who do not achieve predetermined scores on these tests must enroll in appropriate developmental courses, such as ENG 100 (English Language Skills) and DMA 092 (Introductory Algebra). Because these developmental courses are preparatory to a university academic experience, the credits awarded do not count toward the fulfillment of the number of credits for graduation, nor may they be used in fulfillment of General Education requirements. However, the grades achieved in these courses are used in establishing a student's grade point average, class standing, eligibility for financial aid and eligibility for participation in co-curricular activities. Moreover, students who do well in preparatory courses also do well in college-level classes.

The University offers the opportunity to earn undergraduate credit through the College-Level Examination Program (CLEP) and DANTES Subject Standardized Tests (DSST). The CLEP Program includes General and Subject Examinations:

- The General Examinations are a series of tests in separate areas: English Composition, Natural Sciences, Mathematics, Humanities and Social Sciences/History.
- The Subject Examinations comprehensively test a single subject, such as General Psychology, Microeconomics, etc. A student who passes one of these examinations is awarded credit for a comparable course at the University.

The DSST Program offers over 30 different examinations on a single subject, such as Principles of Statistics and Fundamentals of College Algebra. A student who passes one of these examinations is awarded credit for a comparable course at the University.

The CLEP and DSST Programs are administered by the Placement Testing Center. A maximum of 30 credits can be earned through CLEP and/or DSST. In addition to the test fee, there is a one-time fee for evaluation and recording of the examination results on a student's transcript. For additional information, please call 724-938-5779.

Academic Support Programs and Services

Four-Year Graduation Plan

The Four-Year Graduation Plan (FYGP) is a commitment to help students stay on track and earn their undergraduate degree in four years. The no-cost program helps students set academic goals, create clear academic plans and stay on their path by following program guidelines and requirements. The plan provides eligible students with a unique combination of advising, priority course scheduling and individual attention, which helps students graduate in four years.

Eligible students will be automatically enrolled after attending a New Student Orientation. During the fall semester, students must attend one mandatory meeting, in which an FYGP contract is completed and signed. Exploratory Studies students must declare a major by the last day of their first semester to maintain eligibility and enrollment in the program. The Four-Year Graduation Plan reinforces Cal U's commitment to student success.

Starfish

Starfish is an online software tool that provides students with a central location to connect to the people and services that can help students stay on the path to success. Students can access the Starfish system via the Vulcan Information Portal (VIP) and click the Starfish link. Starfish will automatically provide students with connections to current instructors, advisers and campus services.

Academic Success

If students have a question or need help, they can “Raise your Hand” in Starfish. The mobile-friendly tool helps faculty, staff and other Cal U community members support students when help is needed. Examples include, but are not limited to, how to schedule classes, identifying an academic adviser, check faculty office hours and so much more.

Success Center in Noss Hall

The Success Center in Noss Hall is a centralized campus academic resource for all students, offering students the opportunity to be engaged and competent learners by providing a path to develop and strengthen academic skills for success. Cal U proudly provides a wide range of student support services, one-on-one training, workshops and academic resources that can be tailored to meet individual student needs.

Support for Success

Support for Success (S4S) is designed for new students identified as those who would benefit from academic support from the very start. Students are notified of their participation through their acceptance letter from Cal U. During the summer, students receive additional information about the program and meet with their Success Center leaders. Throughout the fall semester, students meet with their Success Center leaders and attend workshops to strengthen areas including, but not limited to, proper note taking, the development of study skills, and strengthening writing and speaking skills.

Peer Mentoring Program

The Peer Mentoring Program is designed to help new students with their transition into Cal U. The program assigns first-semester freshmen and transfer students with current students who have volunteered to be peer mentors. Students are often asked to complete a profile and are matched with current students based on hometown, interests, activities and primarily major of study. The peer mentor serves as a support and resource person who provides information, encouragement and guidance during the student's first year at Cal U. For more information on peer mentoring, contact mentoring@calu.edu.

Vulcan Learning Commons

The Vulcan Learning Commons (VLC) is available to all students. Even the highest-achieving students may need academic assistance at some time during college. The Writing Center, STEM Lab, Reading Clinic and Tutoring Center offer no-cost assistance designed to help students perform at their academic best. Trained peer tutors assist students in most curriculum areas. The VLC can be found on the first floor of Noss Hall.

Exploratory Studies

Exploratory Studies is a major for students who are investigating career options before selecting a major program of study. The Office of Academic Success and the Office of Career and Professional Development work collaboratively to assist students in discovering a career path that best fits their individual values and interests. Whether working with an academic counselor to identify courses that may align with a potential career or meeting with a career coach to discuss various occupations, students are supported through the decision process.

Additionally, students in First-Year Seminar explore career options through the use of the FOCUS 2 Career Assessment and the development of Career Advantage Plans offered by the CPDC. A special course, XCP 194 (Career Planning) is offered to assist students in confirming and/or clarifying career objectives.

Moreover, the Office of Career and Professional Development is an integral resource for students with questions about their majors, the types of careers in specific majors, the future availability of jobs in an area or simply what they want to do in life.

FERPA and Parent/Guest Portal

The Family Education Rights and Privacy Act (FERPA) is a federal law that protects students' education records and grants students the exclusive right to view and share their education records. Education records include, but are not limited to, transcripts, grades, class schedules, financial aid documents, billing statements and emergency contact information.

In VIP, students may register parents and/or other trusted individuals for the Parent/Guest Portal. The portal is Cal U's secure, online option for authorized parents and individuals to view student education records. Students

Academic Success

may add and remove Parent/Guest Portal users at any time (and decide which items can be accessed). For more information about FERPA and the Parent/Guest Portal, search "parent/guest portal" on our website. Students, parents and guests with questions about the Parent/Guest Portal may email family@calu.edu.

First-Year Experience

First-Year Seminar and Introduction to University Studies

First-Year Seminar and Introduction to University Studies provide the foundation for learning how to achieve academic success in college. These courses introduce topics that will enhance students' overall college experience, including time management, career exploration, library resources and extra-curricular opportunities. Students also learn to develop and apply essential academic success skills and enhance critical thinking and communication skills. Overall, these courses are the first steps to student academic success.

First-Year Seminar and Intro to University Studies are each one-credit courses that all first-year students are required to complete as a component of the General Education menu. Transfer students are not required to complete either of these courses if they transfer an equivalent course, or transfer a total of 24 or more credits. Transfer students wishing to enroll in either of these courses should contact the Office of Academic Success at 724-938-1523.

Learning Communities

Learning Communities provide a sense of unity for incoming students. First-semester students in academic learning communities are enrolled in several courses together as a cohort. Relationships and bonds are formed in these groups and help new students improve their academic performance and forge friendships.

To assist in the transition to Cal U, the Office of Academic Success will be offering a series of workshops and webinars. Students are encouraged to enroll in these programs so that their first year is successful.

Prior Learning Assessment

Prior Learning Assessment (PLA) allows students to receive academic credit for learning acquired through qualifying life experiences when they meet the goals of a particular Cal U course. Qualifying experiences may include:

- Work or military training.
- Personal educational growth.
- Volunteer work.
- Independent certifications and/or credentials.

Credit is awarded when a student is able to demonstrate transferable learning or knowledge that can be applied to new or different situations. Contact the Office of Academic Success at vadella@calu.edu for further information and forms.

Undergraduate Catalog

Accreditations

UNIVERSITY MEMBERSHIPS, RECOGNITIONS AND ACCREDITATIONS

MEMBER of the Pennsylvania State System of Higher Education

MEMBER of the American Association of State Colleges and Universities (AASCU)

1307 New York Ave. NW, Fifth Floor

Washington, DC 20005-4701

202-293-7070

Fax 202-296-5819

www.aascu.org

MEMBER of the American Association of Colleges of Teacher Education (AACTE)

1307 New York Ave. NW, Suite 300

Washington, DC 20005-4701

202-293-2450

Fax 202-457-8095

www.aacte.org

ACCREDITED by the Middle States Commission on Higher Education (MSCHE)

3624 Market St.

Philadelphia, PA 19104

267-284-5000

Fax 215-662-5501

www.msche.org

PROGRAM RECOGNITIONS and CERTIFICATIONS

Administrative Program for Principals (Embedded within the Master's Program) and Superintendent Letter of Eligibility (Post-Master's Certification)

Recognized by the Educational Leadership Constituent Council (ELCC)

1615 Duke St.

Alexandria, VA 22314-3483

703-518-6256

Fax 703-549-5568

<http://naesp.org>

BS Chemistry Program, Certified by the American Chemical Society (ACS)

1155 16th St.

Washington, DC 20036

www.acs.org/cpt

PROGRAM ACCREDITATIONS

B.A. Art, BFA Studio Art, and B.S.Ed. Art Education programs, accredited by the National Association of Schools of Art and Design (NASAD)

11250 Roger Bacon Dr. Suite 21

Reston, VA 20190

703-437-0700

Fax 703-437-6312

nasad.arts-accredit.org

B.S. Athletic Training program*, accredited by the Commission on Accreditation of Athletic Training Education (CAATE)

6850 Austin Center Blvd., Suite 100

Austin, TX 78731-3184

512-773-9700

Fax 512-773-9701

caate.net

Undergraduate Catalog

**The Athletic Training program is currently on probation by the Commission on Accreditation of Athletic Training Education (CAATE), 6850 Austin Center Blvd., Suite 100, Austin, TX 78731-3101. The program has chosen to Voluntarily Withdraw its Accreditation effective 5/9/21. The program will remain on probation until the Withdraw is effective and the program is closed.*

The program intends to apply for initial accreditation of the new Professional Master of Science in Athletic Training degree after the current bachelor's program is dissolved.

B.S. (Business Administration: Management Information Systems and Integrated Global Business concentrations), B.S.B.A. (Accounting, Economics, Finance, Human Resources Management, Interdisciplinary Studies, Management, Marketing), MBA (Accounting, Applied Economics, Business Analytics, Healthcare Management, Management, Nursing Administration, Social Work Administration), and M.Acc. (Accountancy) accredited by the Accreditation Council for Business Schools & Programs (ACBSP)

World Headquarters

11520 West 119th Street

Overland Park, KS 66213 913-339-9356

<https://www.acbsp.org/>

M.S. Communication Disorders program, accredited by the American Speech-Language-Hearing Association (ASHA)

2200 Research Blvd.

Rockville, MD 20850-3289

301-296-5700

Fax 301-296-8580

www.asha.org

B.S. Computer Engineering Technology program, accredited by the Engineering Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET)

111 Market Place, Suite 1050

Baltimore, MD 21202-4012

410-347-7700

Fax 410-625-2238

www.abet.org

B.S. Computer Information Systems program, accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET)

415 N. Charles St.

Baltimore, MD 21201

410-347-7700

www.abet.org

B.S. Computer Science program, accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET)

415 N. Charles St.

Baltimore, MD 21201

410-347-7700

www.abet.org

M.Ed. School Counseling and M.S. Clinical Mental Health Counseling programs, accredited by the Council for the Accreditation of Counseling and Related Educational Programs (CACREP)

500 Montgomery St, Suite 350

Alexandria, VA 22314

703-535-5990

Fax 703-739-6209

www.cacrep.org

Undergraduate Catalog

B.S. Electrical Engineering Technology program, accredited by the Engineering Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET)

111 Market Place, Suite 1050

Baltimore, MD 21202-4012

410-347-7700

Fax 410-625-2238

www.abet.org

A.S. and B.S. Digital Media programs, accredited by the Accrediting Council for Collegiate Graphic Communications, Inc. (ACCGC)

1034 W. 15th St.

Cedar Falls, IA 50613-3659

319-266-8432

www.accgc.org

B.S. Graphic Design program, accredited by the National Association of Schools of Art and Design (NASAD)

11250 Roger Bacon Dr., Suite 21

Reston, VA 20190

703-437-0700

Fax 703-437-6312

nasad.arts-accredit.org

B.S. Mechatronics Engineering Technology, accredited by the Engineering Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET)

111 Market Place, Suite 1050

Baltimore, MD 21202-4012

410-347-7700

Fax 410-625-2238

www.abet.org

BSN and MSN (Nursing) programs, accredited by the Commission on Collegiate Nursing Education (CCNE)

655 K Street, NW, Suite 750

Washington, DC 20001

202-887-6791 x249

Fax 202-887-8476

www.ccneaccreditation.org

B.A. Parks and Recreation Management program, accredited by the National Recreation and Park Association Council on Accreditation for Parks, Recreation, Tourism and Related Professions (COAPRT)

1401 Marvin Rd. NE

STE 307, #172

Lacey, WA 98516

360-205-2096

Fax 360-453-7893

<https://accreditationcouncil.org/>

A.A.S. Physical Therapist Assistant program, accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE)

1111 N. Fairfax St.

Alexandria, VA 22314-1488

703-684-2782

Fax 703-684-7343

www.capteonline.org

A.S. Radiologic Technology program, accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT)

Undergraduate Catalog

20 N. Wacker Dr., Suite 28050
Chicago, IL 60606-3182
312-704-5300
Fax 312-704-5304
www.jrcert.org

M.S. + Certification program School Psychology program, accredited by the National Association of School Psychologists (NASP)
4340 E. West Highway, Suite 402
Bethesda, MD 20814
301-657-0270
Fax 301-657-0275
www.nasponline.org

BSW and MSW (Social Work) programs, accredited by the Council on Social Work Education (CSWE)
1701 Duke St., Suite 200
Alexandria, VA 22314
703-683-8080
Fax 703-683-8099
www.cswe.org

Teacher Education programs, accredited by NCATE, now referred to as the Council for the Accreditation of Education Preparation (CAEP)
1140 19th St. NW, Suite 400
Washington, DC 20036
202-223-0077
www.caepnet.org

B.A. Theatre program (and concentrations in Musical Theatre and Design and Entertainment Technology), accredited by the National Association of Schools of Theatre (NAST)
11250 Roger Bacon Dr. Suite 21
Reston, VA 20190
703-437-0700
Fax 703-437-6312
Nast.arts-accredit.org

Admissions

Admissions

How to Apply to California University

Address inquiries to:

Admissions Office
California University of Pennsylvania
250 University Ave.
California, PA 15419-1394

Phone: 724-938-4404
Toll Free: 1-888-412-0479
Fax: 724-938-4564

Email address: admissions@calu.edu

Apply online at calu.edu/apply

We encourage applicants to schedule an appointment to visit the University at calu.edu/visit

General Admission Requirements

To be considered for admission as a degree-seeking student, applicants must submit the following:

1. Completed application form.
2. Non-refundable application fee.
3. Official high school transcript (or GED certificate/diploma **and** scores).
4. SAT or ACT scores (waived for transfer applicants and first-year applicants who have been out of high school for at least two years or have earned more than three post-secondary credits after high school graduation).
5. Transfer students must submit official transcripts from all colleges and universities attended.
6. International students should check international admission requirements.

NOTE: Some academic programs have additional requirements. Additionally, students in special categories of admission should check the section on Specific Admission Requirements for required application materials.

Evaluation of Applicants

All applications are individually evaluated. As soon as applications are complete, decisions are reached and applicants notified. Every attempt is made to complete this process within two weeks.

Admission standards have been established by the University to select those students who will be most likely to succeed in the various programs of the University.

1. Academics. An applicant must be a graduate of an approved or accredited secondary school or have an equivalent preparation as determined by any state's Department of Education.
2. Assessment and Ability Standards. An ability to do work in higher education should be evident from an assessment examination such as the SAT or ACT. Cumulative grade-point average is considered in evaluation of the application. In certain instances, other kinds of evidence may be used to determine the ability to do such work.
3. Character and Personality. Applicants must be able to demonstrate that they possess the personality traits, interests, attitudes and personal characteristics necessary for higher education.
4. Admission to Special Curricula. A student seeking admission to a special curriculum may be required to complete additional requirements or have earned specific credentials.

The Office of Admissions considers as many variables as possible in making admission decisions: class rank, GPA, type of curriculum completed in relation to proposed major, school counselor or other recommendations, personal essay, on-campus interview, standardized test scores, activities and maturity. Each of the variables contributes to the overall assessment of applicants.

Admissions

Student Credentials

All credentials presented in support of an application for admission become the property of the University and cannot be returned to the student. The complete file will be retained according to the provision of University policy and the Family Rights and Privacy Act of 1974, as amended.

All information filed in support of the application must be complete and authentic. Any false information may be grounds for denial or dismissal.

Pennsylvania Residency

Residency is determined at the time of admission. Change of residency may only occur by appealing to the residency appeals committee. For more information, contact the Office of the Provost and vice president for academic affairs at 724-938-4407 after admission and prior to registration.

Advanced Placement Credit

A student who has taken advanced placement examinations under the auspices of the Educational Testing Service may receive credit for them at California, provided the score is 3.00 or higher. Some courses require minimum scores of 4.00.

Specific Admission Requirements

Freshmen

Students attending a postsecondary institution for the first time beyond high school graduation are considered first-year (new freshmen) students. All students in this classification must submit the materials listed for General Admissions Requirements:

1. Completed application form.
2. Non-refundable application fee.
3. Official high school transcript (or GED certificate/diploma **and** scores).
4. SAT or ACT scores (may be waived for applicants who have been out of high school for at least two years or have earned more than three post-secondary credits after high school graduation).

Transfers

Transfer Students are defined as students seeking admission to California University of Pennsylvania (Cal U) who have earned university credit following high school graduation.

Transfer students seeking admission to Cal U must submit:

1. Completed application form.
2. Non-refundable application fee.
3. Official transcripts from all post-secondary institutions previously attended.
 - Students will not be granted transfer credits from prior institutions after matriculation to the university.
4. Submit a high school transcript if there are fewer than 12 transferrable credits from a regionally accredited institution. (Transferrable credits are a grade of D or higher and non-developmental.)

Early Admission for High School Students

High school students may be eligible for early admission to Cal U through the Office of Admissions, provided the following requirements have been met:

1. The student must submit a completed application and pay the application fee.
2. The applicant must have completed the sophomore year of high school and be enrolled in a college preparatory curriculum.
3. An early admission authorization form must be completed with all necessary signatures affixed.
4. The student's official high school transcript must be submitted and reflect a cumulative grade point average of 3.00 for the past two years. (For upcoming juniors, ninth- and tenth-grade averages will be used.)

Admissions

5. The applicant must have taken the PSAT, SAT or ACT examination. Contact the Office of Admissions at 724-938-4404 for the current requirements.
6. The student's status will be classified as non-degree for each session while still in high school.
7. The student must submit an authorization form for each session that enrollment at Cal U is desired.
8. If a student desires to attend Cal U upon graduation, they must apply by submitting an application and final high school transcript. A second application fee is not required.

Graduates of Cal U

Students who graduated from Cal U and are seeking an additional degree of the same level must complete a readmissions application for the second degree. Students seeking a graduate degree are required to submit a graduate application and all requirements and pay an application fee.

Other Post-baccalaureate Students

Students who graduated from another institution and want to enroll in undergraduate programs at Cal U must submit a completed application, application fee and official transcripts from all colleges and universities attended.

International Students

International students are defined as students seeking admission to the University who possess citizenship with countries other than the United States of America and nations formally party to the Compact of Free Association.

First-time international students seeking admission to the University must submit:

1. Completed international admissions application form.
2. Non-refundable application fee.
3. Copy of the biographical page of their passport.
4. Official high school transcripts showing senior secondary grades or equivalent credential.
5. Official college entrance examination scores (optional).
6. English Language Test Scores.
7. Completed affidavit of financial support and financial documentation.

All credentials presented in support of an application for admission become the property of the University. The International Admissions official will exercise professional judgment in the context of the student's education system in their nation of origin. Assuming that all records indicate that international students could be successful, final admission is contingent upon acceptable clearance from the education authorities of the home country and from the United States Citizenship and Immigration Services (USCIS).

International students seeking to transfer to California University of Pennsylvania must submit the above items in addition to certified English translations of transcripts from all postsecondary schools attended for admission.

Visiting Students

Students who wish to enroll at Cal U with the expectation of transferring credits to their home institution and do not wish to receive a degree from Cal U are classified as visiting students. Admission is granted for the approved semester only. For more information regarding the admissions process for visiting students, contact the Office of Admissions at 724-938-4404 or admissions@calu.edu.

Non-degree Students

Students may take courses at Cal U without being a candidate for a degree. Non-degree students must submit a completed application, application fee and all appropriate official transcripts to the Office of Admissions. Tuition and fees are the same as for degree-seeking students. Students may complete up to 30 credits in a non-degree-seeking status. After reaching 30 credits, students must either declare a major or indicate in writing that they do not plan to pursue a degree at Cal U.

For more information, contact the Office of Admissions at 724-938-4404.

Admissions

Veterans

Veterans of the United States armed forces who have not attended an institution of higher education since their honorable discharge are admitted to Cal U upon following the general admission procedures. Veterans may be awarded credit for their military training and military schools. All veterans, reservists and National Guard members who have been honorably discharged may be eligible for credits.

Each veteran or reservist seeking such an award must submit a copy of DD 214 to the director of Veterans Affairs. Military personnel are encouraged to submit their transcripts to the Office of Articulation and Transfer Evaluation. Evaluations are conducted based on the latest American Council of Education Guides. For more information regarding military transcripts, contact the Office of Transfer Admissions at 724-938-5939.

Active Military

Military personnel are encouraged to submit their transcripts to the Office of Transfer Admissions. Evaluations are conducted based on the latest American Council of Education Guides. For more information regarding military transcripts, contact the Office of Transfer Admissions at 724-938-5939.

Transfer Student Policies

Please contact the Office of Articulation and Transfer Evaluation at 724-938-5939 or transfer@calu.edu for answers to any questions regarding articulation agreements or transfer credits.

Student Transfer Policy

California University of Pennsylvania (Cal U) does not set a maximum number of transferable credits. The following requirements apply to undergraduate students:

- All first baccalaureate degree students will take at least 30 of the last 60 credits from Cal U.
- All first associate degree students will take at least 15 of their last 30 credits from Cal U.
- All first baccalaureate and associate students must complete at least 50% of the major coursework from any of the 14 universities that comprise the Pennsylvania State System of Higher Education.
- All students completing their first undergraduate certificate must take at least 50% of the credits required for the certificate from one of the 14 universities that comprise the Pennsylvania State System of Higher Education.
- All students completing their first undergraduate minor must take at least 50% of the credits required for the minor from one of the 14 universities that comprise the Pennsylvania State System of Higher Education.

Grades of “D” or above will be accepted for transfer. Grades in a course submitted for a major/minor program requirement must meet the minimum grade required by the department in the parallel course. The academic department reserves the right to require the course be repeated at Cal U if the minimum grade requirement is not met.

When courses are transferred, only the credits are counted. The grades of transfer courses are not included when the Cal U grade point average is calculated.

Courses taken at a community college or proprietary school, the equivalents of which are designated as upper-level courses at Cal U, will only transfer in as upper-level major equivalent courses upon the approval of the department. If the department deems the course is not an upper-level equivalent course, it will transfer in as an elective in the major area.

Developmental courses are not transferrable to Cal U.

Although credits will always transfer according to these provisions, regulations that govern the national professional accreditation of certain programs offered at Cal U may not permit some courses taken in programs not similarly accredited at other two- and four-year institutions to be transferred as the equivalents of courses that may be similarly entitled or described at Cal U. Students who transfer to Cal U under an approved Program-to-Program Articulation Agreement are guaranteed to transfer into a parallel bachelor degree program with junior standing. (<https://patrac.org>)

Admissions

Course Descriptions

ACC-Accounting

ACC100 - Introduction to Accounting

The course emphasizes the practical use of accounting information to support decision making by those in the fields of business including sports/resort management. The course introduces the students to the fundamental concepts, procedures and terminology of accounting.

ACC200 - Financial Accounting

The fundamentals of accounting concepts and procedures for sole proprietors, partnerships and corporations. The interpretation and use of financial statements and other relevant accounting information will be emphasized.

ACC202 - Accounting II

A continuation of basic accounting principles with an emphasis on partnership and corporate accounting.

ACC218 - Federal Income Tax I

This course provides an analysis of the federal income tax structure and procedures. The emphasis is on the federal law as it applies to individuals.

ACC302 - Intermediate Accounting II

A continuation of the in-depth treatment of basic accounting principles and concepts with the emphasis on corporations. A preparation for advanced courses in accounting and for the theory and practice sections of the uniform CPA examination.

ACC318 - Federal Income Tax II

Advanced topics in federal taxation. Partnerships, decedents, estates, trusts, corporations, pension and profit-sharing plans, foreign income, securities, transactions, etc.

ACC320 - Volunteer Income Tax Assistance

The focus of this class is service learning. Students will be afforded the opportunity to receive IRS certification while making a difference in their community. Students will prepare annual income tax returns for low income tax payers who qualify for the volunteer income tax assistance program (VITA). Before doing so, students must pass certification exams on tax law, as well as software usage. All returns prepared as part of this class will be subject to a quality review prior to being filed with the appropriate government agency.

ACC321 - Managerial Accounting

For non-majors; emphasizes the use of accounting data in the decision-making process of a business enterprise. Topics covered are cost-volume relationships; manufacturing costs and analysis; relevant cost analysis; budgeting and variance analysis; responsibility accounting and cost allocation; job and process product costing.

ACC331 - Cost Accounting

An introduction to basic cost-accounting principles, cost-volume, profit analysis, standard costing, process and job order costing, and departmental budgeting.

ACC341 - Nonprofit Accounting

The student will explore the foundation of governmental and non-profit accounting theory. Students will analyze and apply the generally accepted accounting principles established for governmental and non-profit organizations. Additionally, students will learn the unique accounting and reporting requirements for non-profit entities. Topics examined include those related to financial position, operating results, cash flow, and financial strength. Students will be shown how various accounting alternatives for recording transactions impact the usefulness of the information provided for decision making.

ACC401 - Advanced Financial Accounting

Special topics in accounting. Mergers and acquisitions, consolidated financial reports, fiduciaries, etc.

Course Descriptions

ACC441 - Auditing

Internal control evaluation and financial compliance, professional ethics, auditing standards and procedures, statistical sampling, and EDP auditing.

ACC450 - Introduction to Accounting Fraud Investigation

This class provides an introduction into fraud investigation from the perspective of an accounting professional. Coverage includes defining fraud, introduction to various fraudulent accounting schemes, reflection upon high profile fraud cases, quantitative and qualitative investigative techniques, understanding and testing internal controls over financial reporting, and professional ethics considerations.

ACC451 - Advanced Accounting Fraud Investigation

This class provides an advanced review of the strategies relevant to fraud investigation. Furthermore, students will have the opportunity to apply these skills within the context of an actual forensic investigation and valuation.

ACC491 - Accounting Internship

The student is placed with a business firm, bank, government agency or nonprofit organization performing accounting tasks. The internship experience offers a practical training ground for students that supplements academic training by permitting them to apply the theories, concepts and techniques learned through their other coursework to address actual problems in a real business environment.

Advisor Approval

ADVAPR - Advisor Approval Required

This course requires that a Course Substitution Form be signed by your advisor and department chair. The form should then be submitted to the Dean of your college for final approval and processing.

ANT-Anthropology

ANT100 - Introduction to Anthropology

This course is an introduction to biological anthropology (primatology, hominid evolution, variation in modern humans), archaeology (methods, evidences of the evolution and diffusion of culture), anthropological linguistics, and cultural anthropology (methods of participant observation, comparative data from non-Western societies, diversity and unity of culture).

ANT101 - Archaeology Field School

An introduction to archaeological procedures by participation in the excavation of a site, this course provides the opportunity for students to be involved in all phases of an archaeological excavation, from initial preparation of the site for excavation through the processing of artifacts at the campus archaeological laboratory.

ANT200 - Old World Prehistory

A middle-level archaeological examination of the Old World (Europe, Africa, and Asia). The course begins with a discussion of goals, concepts, and techniques, used by archaeologists to both recover cultural remains and interpret the prehistoric past. The starting point for discussing the prehistory of the Old World begins with technological and cultural developments first identified during the late Pliocene Epoch, approximately 2.5 million years ago. The course ends with the emergence of social complexity in Africa and greater Asia beginning c. 3,500 B.C. and about 1,000 BC in Europe.

ANT220 - Aztecs, Mayas and Incas

An introduction and survey of pre-conquest Latin America with special emphasis on the Culture History and Archaeology of Mesoamerica and the Andean Culture areas. The overall purpose of this course is to develop a context for understanding the complex origin of civilizations in Mesoamerica and the Andean Culture areas and the origins of agriculture in the Americas.

ANT231 - Medical Anthropology

This introductory course emphasizes the contributions from biological anthropology, archaeology and cultural anthropology to the study of human sickness and health.

Course Descriptions

ANT232 - Fundamentals of Biological Anthropology

This course for both majors and non-majors introduces students to the field of biological anthropology, including the study of evolutionary theory, modern human populations, the behavior and ecology of nonhuman primates, and the primate (human and nonhuman) fossil record. Special emphasis will be directed toward human form and behavior as a result of the complex interplay of biology and culture acting over millions of years of evolutionary change.

ANT245 - Human Osteology

This lab-intensive course is designed to give students a thorough understanding of the complexity and usefulness of the study of human teeth and bones. Osteology is the study of human skeletal remains and is a crucial part of the physical anthropology curriculum. It has applications in archaeology, anatomy, paleontology and forensic science. Students will learn the entire human skeleton and be able to identify bones and teeth from fragments; determine qualities such as sex, age and pathology from osteological remains; and prepare a professional report on these topics. The application of such knowledge and training is extended into the medical profession, forensic investigation and paleoanthropology/archaeology.

ANT254 - Introduction to Forensic Anthropology

This course teaches the basic analysis of human remains for the medico-legal profession, covering the development of the field of forensic anthropology, how the biological profile of an individual is determined from the skeleton, how skeletal traumas are evaluated, estimation of the interval since death, and how far these assessments can be supported. The course includes discussion of investigation of crime scenes, the legal role of the physical anthropologist as an expert witness, and the importance of report preparation. Case studies of documented individuals are used. While the practical aspects of this field will be the primary focus, attention will also be drawn to the incorporation of anthropological approaches to dealing with death and the handling of human remains.

ANT255 - World Ethnology

An advanced course in the cross-cultural study of human populations using printed, electronic, and other media sources to reveal cultural differences and similarities. In addition to learning about the value of the ethnographic enterprise, considerable time will also be focused on studying the politics of food and eating. Since food serves in more than just a dietary sphere, studying how it is manipulated can shed light on the political, social and economic agendas of individuals and groups in both western non-western cultures.

ANT280 - Indians of North America

This course is a Holistic study (historical, cultural and environmental) of selective Native American cultural groups from cultural areas in North America, with an emphasis upon populations living in the United States and Canada. In addition, a brief overview of the prehistory of each cultural area is provided in order to help develop an historical context for each of the cultural groups to be examined.

ANT290 - Introduction to Archaeology

Students are introduced to the subject of Archaeology by focusing upon what archaeologists try to accomplish, how they conduct their work, and why. More specifically, the course focuses on the methods employed by archaeologists to locate, recover and to study cultures and peoples ways of life using the shreds of evidence recovered during excavation and from museum collections.

ANT300 - Cultural Views of Women

This discussion-based course is structured around the theme of how various world societies have viewed women. The cross-cultural perspective is the means by which American students learn to appreciate other cultural points of view and become more self-aware of their own cultural views about women.

ANT329 - Anthropology Internship

Learning new ideas and skills, as well as applying those already learned in class, is the objective of an internship. Internships are conducted under the guidance of both an on-site and a campus supervisor. Internships are a means for exploring career opportunities.

Course Descriptions

ANT340 - Research Laboratory in Physical Anthropology

This course will provide the student practical, hands-on experience in the cleaning/conservation, cataloging process and basic analysis (classification and description) of specimens commonly used in physical anthropology and how to report the results of laboratory analysis. It shows also how analysis and theory are inescapably linked. Hands-on projects use skeletal elements, dental, biological and paleontological specimens. Students will apply the scientific method in their analysis of data and will report the results in a professional manner within the classroom.

ANT341 - Research Laboratory in Archaeology

This course will provide the student practical, hands-on experience in the cleaning/conservation, cataloging process, basic analysis (classification and description) of artifacts from archaeological contexts, and how to report the results of laboratory analysis. It shows also how analysis and theory are inescapably linked. Hands-on projects use faunal, lithic, ground stone and ceramic collections recovered from Late Prehistoric sites from southwestern Pennsylvania. Students apply the principles of hypothesis testing to artifact assemblages from sites that are part of ongoing research into the prehistory of southwestern Pennsylvania and the lower upper Ohio River Valley.

ANT355 - Prehistoric American Indians

The course provides an overview of North American Prehistory, with a special emphasis on the eastern United States. Using the traditional chronology developed for the eastern United States in the 1950's, the social, economic, subsistence and political systems of these populations will be examined in some detail using archaeologically recovered remains, beginning with the initial occupation sometime prior to 15,000 B.C. and concluding during the 17th century.

ANT360 - Historical Archaeology

The course provides an introduction to the field of historical archaeology. It uses a combined lecture/discussion format and is divided into two main parts. The first half is descriptive and covers the definition of the field, its history, and methodology. The second half used a topical approach and provides an introduction to some of the ways that historical archaeologists have examined our historic past.

ANT379 - Special Problems in Anthropology

Special Problems in Anthropology is a topics course. Areas not covered by the existing curriculum can be explored in a focused study on a topic identified by a faculty member.

ANT385 - Primate Societies and Behavior

This course is an advanced study of the nonhuman primates, including classification to the generic level.

ANT390 - Human Origins

Contemporary biological study of human origins, emphasizing evolutionary theory, genetics, non-human primates, and Paleoanthropology. The importance of technology and the emergence and development of culture are also emphasized.

ANT400 - Fundamentals of Archaeological Theory

The course is devoted to an examination of how archaeologists know what they know and how validity of archaeological interpretation is assessed. The course reviews major theoretical and methodological approaches and issues in the discipline from the 18th century to modern times. Topics that may be addressed include: examination of settlement patterns, identity and affiliation, sample bias and its impact on interpretation, interdisciplinary approaches in archaeology, research design, and applied archaeology.

ANT421 - Anthropological Thought

Within a seminar context, the history of anthropological thought is examined from the period of the Enlightenment to modern times. Particular emphasis is placed on the emergence of the various schools of anthropology that have developed and waned over the past 100 years.

Course Descriptions

ANT445 - Advanced Methods in Archaeology

A study of applications of technology to the study of archaeological remains, this advanced course focuses on geophysical reconnaissance, GIS, microscopic study of use-wear patterns on bone and stone tools, aerial photography, and other analytical techniques for the study of specific categories of archaeological remains. This course allows the students to acquire hands-on experience that is not available in any other course.

ANT455 - Anthropology of Death and Dying

This seminar course explores death and dying from multiple cultural perspectives, utilizing both scientific and humanistic approaches in anthropology and related fields. This course investigates varied cultural views on the causes, meanings, and impacts of death and dying on humans, from the earliest archaeological evidence to modern times.

ANT497 - Seminar in Physical Anthropology

This is an advanced course for studying a specific theoretical and/or methodological issue in physical anthropology. Examples of topics include primatology, classification and systematics, dental anthropology, and paleopathology. The selection of the topic or topics to be examined will vary in accordance with the research interests of the instructor and the students.

ANT498 - Seminar in Archaeology

An advanced course for studying a specific theoretical and/or methodological issue in archaeology. Examples of topics include settlement pattern archaeology, evolutionary archaeology, household archaeology, classification, systematics and cultural history units such as the Late Prehistoric and the Late Woodland. The selection of the topic or topics to be examined will vary in accordance with the research interests of the instructor and students.

ANT499 - Senior Seminar in Anthropology

All seniors are required to take this course. The senior seminar is an in-depth examination of issues relevant to the health, vitality and practice of anthropology. Some of the topics to be discussed include epistemology, paradigms, interdisciplinary research, discipline goals, professional ethics, publication and careers.

ARB-Arabic

ARB101 - Elementary Arabic I

This is the beginner level in Arabic. This course covers and emphasizes the development of the basic skills of the Arabic language and includes instruction in basic pronunciation, comprehension, communication, and grammar. Students will also become acquainted with the culture of the Arab world and establish a solid foundation for more advanced courses in Arabic.

ARB102 - Elementary Arabic II

Elementary Arabic II is the continuation of Elementary Arabic I. This course continues to introduce students to the people and culture of the Arabic-speaking world. Students will become familiar with Arabic grammar and language structure. They will have maximum opportunity to use the different language skills: listening, speaking, reading, and writing in Modern Standard Arabic (MSA). Students will develop greater competency in understanding MSA in both its written and spoken forms and in producing the language in writing and speech. This course will have a greater emphasis on active vocabulary learning, proper grammatical application and on developing the ability to use the language in real-world everyday situations.

ARB203 - Intermediate Arabic I

Intermediate Arabic I is the continuation of Elementary Arabic II. Prior to this course, students must have basic background knowledge in Modern Standard Arabic (MSA) vocabulary and syntax at the elementary level; they should have basic ability to communicate, using simple sentences and have the ability to comprehend simple written and spoken instructions and conversations in basic MSA. In this course, students will acquire additional vocabulary and a greater understanding of more complex grammatical structures. There will be an increased use of Arabic language at this level in instructions and communication. This course will provide the students with a strong foundation at the intermediate level in reading, writing, speaking, and listening. There will be a continued emphasis on the acquisition of more complex grammatical structures, expanding vocabulary and discourse skills, and developing competence in a wide range of communicative situations using all language skills.

Course Descriptions

ARB204 - Intermediate Arabic II

Intermediate Arabic II is the continuation of Intermediate Arabic I. This course provides additional practice to help students attain a higher level of skill development (e.g., listening, speaking, reading and writing) and linguistic accuracy. This course adopts a skills-based approach in which students gain mastery of the language through the use of authentic materials taken from various sources (books, periodicals, videos and radio documentaries). The selection of the materials is based on the complexity of the tasks and the students' professional and personal interests. Teaching vocabulary and grammar is integrated to the skills-based activities, and is incorporated in the class activities as an aid to overcome any communication problems. Teaching techniques are student-centered, with the instructor as the facilitator. Instructions will be conducted mostly in Arabic.

ARB311 - Arabic Conversation

Arabic conversation is designed for students who want to acquire a speaking knowledge of the language with a focus on communication, comprehension, and cultural information about Arabic customs. In this course, students will engage in "real-time" discussions, debate, presentations, and reporting activities.

ARB341 - Contemporary Arabic Culture

This course will engage students in the study of a variety of artistic and socio-cultural aspects of the modern Arab world. There will be an emphasis on representative cultural artifacts (from literature and other arts) that have come to define the region, as well as on culturally specific constructions of gender, ethnicity, race, and diversity. Special attention will be given to the characteristics of the Arabic language, family, gender relations, the Arab experience in the U.S., Arab-American relations, the role of the past, social change, Arab literature, art and music. It promotes tolerance and understanding by providing students with a realistic view of the cultural contours of the modern Arab World and the richness of the Arab cultural heritage.

ARB342 - The Culture of Islam

This course will engage students in the study of the culture of Islam. There will be an emphasis on the identifying preconceived notions relating to Islam. This course will compare and contrast the history, essential tenets, and central practices of Islam to Judaism and Christianity. The context in which Islam began and the role of Muhammad (PBUH) on Islam will also be discussed. The Five Pillars of the Islamic faith and the split in Islam into the two major sects, Sunni, and Shi'a, will be explained. Due to the current events in the Middle East and the great number of social media users, this course will help students to understand a culture where secularism, capitalism, and materialism have no value.

ARB343 - Images of Islam: From Spain to Iran

This course discusses the influence of Islam on art and architecture from select countries from Spain to Iran. It provides an accessible and appealing examination of the significant artistic, architectural, and cultural dimensions of the Islamic World and their influences on the West.

ARB350 - Advanced Arabic I

Advanced Arabic I is the continuation of Intermediate Arabic II. In this course, students will acquire a genuine command of the Arabic language with proficiency and the ability to communicate by listening, speaking, reading and writing. There is intense practice in conversation, composition and phonetics based on modern prose, as well as on natural spontaneous speech models. This course will be conducted in Arabic.

ARB351 - Advanced Arabic II

This course is a continuation of Advanced Arabic I; it is intended to further develop students' proficiencies in speaking, writing, listening and reading so that they can be at a level necessary to communicate with flexibility, knowledge and ease in the language. Emphasis will mainly be placed on composition and oral discussion as well as concepts necessary for a sophisticated appraisal of literature and culture in Arabic. This course will be conducted in Arabic.

ARB401 - Introduction to Arabic Linguistics

This course will focus on the study of Arabic as "a language system" in terms of modern linguistic analysis. Students will study the language's sound system (phonology), word structure (morphology, particularly roots and patterns), phrase and sentence structure (syntax), and meaning at the word and sentential level (semantics). The

Course Descriptions

history of Arabic and the issue of diglossia in Arabic-speaking countries will be discussed. The linguistic features of both Standard Arabic and the modern Arabic dialects of today will also be covered.

ARB402 - Arabic Translation

This course introduces students to the basic techniques of Arabic-English translation. Students will work on stylistic, syntactic, technical, and cultural problems encountered in the Arabic-English translation process. It focuses on the process and quality of translation with emphasis on cultural differences. Exercises will provide translation practice with different types of texts and documents.

ARB421 - Arabic Literature in Translation

This course is a survey of Arabic literature in translation with a focus on continuity and change, influence, and major trends, themes, and genres. It will provide students with a foundation in Arabic literature. Students will be introduced to short stories, novels, essays, poetry, and plays.

ARB480 - Selected Topics in Arabic Language and Culture

This course provides students the opportunity to explore and research Arabic language and culture-related topics of interest that are not available as regular course offerings of the University.

ARB-Arabic

ARB101 - Elementary Arabic I

This is the beginner level in Arabic. This course covers and emphasizes the development of the basic skills of the Arabic language and includes instruction in basic pronunciation, comprehension, communication, and grammar. Students will also become acquainted with the culture of the Arab world and establish a solid foundation for more advanced courses in Arabic.

ARB102 - Elementary Arabic II

Elementary Arabic II is the continuation of Elementary Arabic I. This course continues to introduce students to the people and culture of the Arabic-speaking world. Students will become familiar with Arabic grammar and language structure. They will have maximum opportunity to use the different language skills: listening, speaking, reading, and writing in Modern Standard Arabic (MSA). Students will develop greater competency in understanding MSA in both its written and spoken forms and in producing the language in writing and speech. This course will have a greater emphasis on active vocabulary learning, proper grammatical application and on developing the ability to use the language in real-world everyday situations.

ARB203 - Intermediate Arabic I

Intermediate Arabic I is the continuation of Elementary Arabic II. Prior to this course, students must have basic background knowledge in Modern Standard Arabic (MSA) vocabulary and syntax at the elementary level; they should have basic ability to communicate, using simple sentences and have the ability to comprehend simple written and spoken instructions and conversations in basic MSA. In this course, students will acquire additional vocabulary and a greater understanding of more complex grammatical structures. There will be an increased use of Arabic language at this level in instructions and communication. This course will provide the students with a strong foundation at the intermediate level in reading, writing, speaking, and listening. There will be a continued emphasis on the acquisition of more complex grammatical structures, expanding vocabulary and discourse skills, and developing competence in a wide range of communicative situations using all language skills.

ARB204 - Intermediate Arabic II

Intermediate Arabic II is the continuation of Intermediate Arabic I. This course provides additional practice to help students attain a higher level of skill development (e.g., listening, speaking, reading and writing) and linguistic accuracy. This course adopts a skills-based approach in which students gain mastery of the language through the use of authentic materials taken from various sources (books, periodicals, videos and radio documentaries). The selection of the materials is based on the complexity of the tasks and the students' professional and personal interests. Teaching vocabulary and grammar is integrated to the skills-based activities, and is incorporated in the class activities as an aid to overcome any communication problems. Teaching techniques are student-centered, with the instructor as the facilitator. Instructions will be conducted mostly in Arabic.

Course Descriptions

ARB311 - Arabic Conversation

Arabic conversation is designed for students who want to acquire a speaking knowledge of the language with a focus on communication, comprehension, and cultural information about Arabic customs. In this course, students will engage in "real-time" discussions, debate, presentations, and reporting activities.

ARB341 - Contemporary Arabic Culture

This course will engage students in the study of a variety of artistic and socio-cultural aspects of the modern Arab world. There will be an emphasis on representative cultural artifacts (from literature and other arts) that have come to define the region, as well as on culturally specific constructions of gender, ethnicity, race, and diversity. Special attention will be given to the characteristics of the Arabic language, family, gender relations, the Arab experience in the U.S., Arab-American relations, the role of the past, social change, Arab literature, art and music. It promotes tolerance and understanding by providing students with a realistic view of the cultural contours of the modern Arab World and the richness of the Arab cultural heritage.

ARB342 - The Culture of Islam

This course will engage students in the study of the culture of Islam. There will be an emphasis on the identifying preconceived notions relating to Islam. This course will compare and contrast the history, essential tenets, and central practices of Islam to Judaism and Christianity. The context in which Islam began and the role of Muhammad (PBUH) on Islam will also be discussed. The Five Pillars of the Islamic faith and the split in Islam into the two major sects, Sunni, and Shi'a, will be explained. Due to the current events in the Middle East and the great number of social media users, this course will help students to understand a culture where secularism, capitalism, and materialism have no value.

ARB343 - Images of Islam: From Spain to Iran

This course discusses the influence of Islam on art and architecture from select countries from Spain to Iran. It provides an accessible and appealing examination of the significant artistic, architectural, and cultural dimensions of the Islamic World and their influences on the West.

ARB350 - Advanced Arabic I

Advanced Arabic I is the continuation of Intermediate Arabic II. In this course, students will acquire a genuine command of the Arabic language with proficiency and the ability to communicate by listening, speaking, reading and writing. There is intense practice in conversation, composition and phonetics based on modern prose, as well as on natural spontaneous speech models. This course will be conducted in Arabic.

ARB351 - Advanced Arabic II

This course is a continuation of Advanced Arabic I; it is intended to further develop students' proficiencies in speaking, writing, listening and reading so that they can be at a level necessary to communicate with flexibility, knowledge and ease in the language. Emphasis will mainly be placed on composition and oral discussion as well as concepts necessary for a sophisticated appraisal of literature and culture in Arabic. This course will be conducted in Arabic.

ARB401 - Introduction to Arabic Linguistics

This course will focus on the study of Arabic as "a language system" in terms of modern linguistic analysis. Students will study the language's sound system (phonology), word structure (morphology, particularly roots and patterns), phrase and sentence structure (syntax), and meaning at the word and sentential level (semantics). The history of Arabic and the issue of diglossia in Arabic-speaking countries will be discussed. The linguistic features of both Standard Arabic and the modern Arabic dialects of today will also be covered.

ARB402 - Arabic Translation

This course introduces students to the basic techniques of Arabic-English translation. Students will work on stylistic, syntactic, technical, and cultural problems encountered in the Arabic-English translation process. It focuses on the process and quality of translation with emphasis on cultural differences. Exercises will provide translation practice with different types of texts and documents.

Course Descriptions

ARB421 - Arabic Literature in Translation

This course is a survey of Arabic literature in translation with a focus on continuity and change, influence, and major trends, themes, and genres. It will provide students with a foundation in Arabic literature. Students will be introduced to short stories, novels, essays, poetry, and plays.

ARB480 - Selected Topics in Arabic Language and Culture

This course provides students the opportunity to explore and research Arabic language and culture-related topics of interest that are not available as regular course offerings of the University.

ART-Art

ART106 - Art Appreciation

This course provides a very approachable and easy-to-understand guide to the key visual design building blocks, materials, processes, styles and history of the whole of Western Art. Students will also gain reference knowledge of the key timeline of the major artists, artworks and art processes from the past and present, and why art developed the way it did.

ART110 - Drawing I

A beginning course in drawing skills and techniques stressing line, contour and value studies, and the study of linear perspective, this course stresses rendering techniques and the visual skills necessary for students to draw what they see.

ART112 - Introduction to New and Emerging Art Media

Many traditional mediums are offered in art. This studio course introduces the student to new and emerging art media from the late 19th century to the present dealing with themes such as collaboration, identity, appropriation, open sourcing, telepresence, surveillance, corporate parody, intervention and hacktivism, and social justice. These new art forms include digital painting, projection, animation, virtual art, interactive art, video games, 3D printing, and biotechnology.

ART118 - History of Making

This course studies the history of making art from antiquity to the modern period. It includes major artists, groups, and stylistic developments of specific time periods, exploring artists and works in their historical, cultural, and social contexts. It focuses on several forms of visual art/culture, including sculpture, painting, prints, ceramics, jewelry, and includes on-site visits to museums and galleries, as well as the making of artistic objects.

ART119 - Design 2-D

This is an introduction to the creative and practical foundations of seeing, thinking, making, and communicating via 2-D space. Students become more aware of the design—the organization and application of visual language. Design awareness is structured by focusing learning on the identification and thoughtful manipulation of the specific basic elements and principles of visual language. Students learn by solving, and professionally presenting, many minor and several major visual problems in 2-D design.

ART120 - Design 3-D

This course is an examination of elements and principles of three-dimensional visual composition. These include all the elements and principles used in two-dimensional design, as well as the concepts of mass and volume.

ART127 - Introduction to Graphic Design

The course will introduce the student to the Macintosh as a production tool. It will provide the student with an understanding of the major concepts in the field of graphic design and how design relates to advertising and marketing.

ART130 - Biological Illustration: Form and Function

An introductory course in Biology and Drawing with an emphasis on the relation between form and function. Working with plants and animals, and using a combination of macroscopic and microscopic specimens, students will focus on the careful observation and interpretation of biological forms. Drawing instruction will focus on a variety of techniques commonly used in the biological sciences. Biology instruction will introduce students to basic

Course Descriptions

scientific methodology, the diversity of living forms, the variety of ecological strategies related to those forms, and their scientific classification.

ART165 - Artist's Workshop

Through contact with distinguished visiting artists, this course provides insight into the basic language elements, media, tools, techniques and principles of art production as a professional endeavor. (Variable crs.) Repeatable as needed.

ART212 - Art History I

Art History I introduces students to the historical unfolding of the earliest significant ideas, images, events, artists and personalities involved with the visual arts - from cave art to the dawning of the Renaissance. The textual focus is upon these earliest visual arts from Europe, Asia and Northern Africa. Through lectures, visual aids and opportunities for study in the field, students with or without any prior knowledge of visual art will learn how to make the art of the period accessible and useful.

ART214 - Art History II

This course introduces students to the major monuments of art history from 1300 to the present. Significant artistic developments in painting, sculpture and architecture from the Renaissance through the present are examined within their historical and cultural contexts. The course thus provides a lens through which to understand the formal characteristics, subject matter and meaning of art as it relates to its social-historical context.

ART215 - Digital Painting I

This is a first level digital painting studio course. It utilizes Photoshop and introduces basic principles and techniques towards using digital painting in the CGI fields. The focus will be on matte painting bases, art theory, and criticism used to produce successful digital art images.

ART216 - Introduction to Virtual Reality

This studio course is an introduction to the art and craft of Virtual Reality and its applications to the arts and entertainment fields. VR utilizes visualization, representation, human computer interaction to provide an instructional, immersive, aesthetic experience. This course will focus on student design of VR environments and on various practical and aesthetic issues in the application, design, and implementation of VR in various imaging industries including industrial design, architecture and medical fields.

ART227 - Graphic Design Studio 1

In this course the student will develop a thorough working understanding of QuarkXPress, to develop skills in creative, visual problem solving for the purpose of communication using the elements and principles of design.

ART233 - Natural Science Drawing

An introductory course in observational drawing from biological specimens and outdoor field studies. Working with plant, animal, and landscape subjects, students will focus on the careful observation of natural forms and phenomena. Students will practice methods of scientific illustration through detailed renderings of organisms from direct observation supplemented by visual research. Through slide lectures, students will be introduced to masterworks of natural science drawing, as well as the work of great landscape painters and animal artists. Outdoor field trips will include specimen-gathering and the sketching of landscapes with clouds, water, waves, and land forms. Advanced art students will have the option of working in color with oils or watercolor. Upper level science students may concentrate on drawing subjects that relate to their particular areas of interest. The course is repeatable.

ART243 - Introduction to Asian Art

This course is an introduction to the major artistic traditions of East Asia from prehistory to the present. Works of art from India, China, and Japan are considered in relationship to their social-historical contexts. The course material includes archeological sites such as tombs; images and architecture of Buddhism, Hinduism, and Islam; and issues of modernism in East Asian art.

Course Descriptions

ART244 - Black Art

This course will give students a unique focus to Black Art. The course is designed to connect art, community cultural development, and Black Art throughout the world. Through artist profiles and discussions that provoke a variety of views, students will be challenged to write and present their answers to how racial and cultural links are visually portrayed. When given the opportunity to compare and contrast international Black Art, students can make connections to subject matter and a variety of techniques.

ART261 - Typography

This course is designed to teach effective use of typography as it relates to graphic design. The course covers, in detail, fundamental studio elements along with historical perspectives to give the student deeper insight and understanding.

ART262 - Color Theory

The course is designed to teach the effective use of color across the areas of art and design. The course covers in detail fundamental studio elements along with historical perspective.

ART266 - Selected Topics

This course will provide material not covered in regular art studios or art history classes. It will provide faculty and students the opportunity to explore in depth new ideas and techniques on selected topics. Repeatable.

ART270 - Art History Today

Art History Today is an introduction to the study of art history that emphasizes the global context in which art historians understand and study art history today. The relevance of art history beyond the classroom will be emphasized.

ART295 - Surface Design

Surface designs are everywhere we look: from clothing, to the interior and exterior coverings of where we live and work. In this course students discover how to identify and use the elements, principles in a variety of applications of surface design. Students also will explore a cursory history of materials and processes from around the world as they are applied to unique and patterned surface designs. Students will see what they are learning applied to several "field trips" to real-life places to identify and deconstruct specific surface design applications and design strategies.

ART308 - Art History: Ancient to Medieval

This course introduces students to the historical unfolding of the earliest significant ideas, images, events, artists and personalities involved with the visual arts — from cave art to the dawning of the Renaissance. The textual focus is upon these earliest visual arts from Europe, Asia and Northern Africa. Through lectures, visual aids and opportunities for study in the field, students with or without prior knowledge of visual art will learn how to make the art of this period accessible and useful.

ART310 - Advanced Drawing

This advanced drawing course explores expressive drawing techniques and drawing media and is a continuation of work to improve performance of academic drawing skills. Emphasis is placed on drawing from a model to develop a knowledge of human anatomy and to understand its effects on the surface information of the human form. Basic drawing skills are required.

ART311 - Medieval Art and Architecture

This course will chronologically examine the architecture, painting, sculpture and so-called "minor arts," produced in Europe and the Byzantine Empire during the more than 1,000 years known as the Middle Ages. The works of art discussed in this course will be analyzed not only in terms of style, but they will also be set within their cultural, social and political environment for a deeper understanding of their important place in medieval life. Attention will also be given to patrons of the arts and the role, training, and status of the medieval artist, as well as the methods and materials artists employed.

Course Descriptions

ART312 - New and Emerging Digital Art Media.

Many traditional mediums are offered in art. This course open to all focuses on new and emerging digital art media from the late 19th century to the present dealing with themes such as collaboration, identity, appropriation, open sourcing, telepresence, surveillance, corporate parody, intervention and hacktivism, and social justice. These new art forms include digital painting, projection, animation, virtual art, interactive art, video games, 3D printing, and biotechnology. The students will produce, present, and critique individual and group projects utilizing these concepts from new and emerging art media.

ART315 - Digital Painting I

This is a first level digital painting studio course. It utilizes Photoshop and introduces the most important principles and techniques towards using digital painting in the CGI fields. The focus will be on matte painting bases, art theory, and criticism used to produce successful digital art images, individually and collaboratively.

ART317 - Art History: Neoclassicism Through the Present

The major movements and artists from the neoclassical through the postmodern periods form the basis for this survey of art history. Works of art are examined within the context of their cultural, political and historical milieu. The artistic production of both Western and non-Western cultures is considered. Primary texts are discussed as the course provides a foundation in the theory and criticism appropriate to these periods.

ART319 - Ancient Greek and Roman Art

Ancient Greek and Roman Art considers the major artistic achievements of the classical Mediterranean world. The course will include the study of Greek painting, sculpture, and architecture from the Cycladic to the Hellenistic period and an examination of Roman art from the Etruscan age through the beginning of Christian art. Emphasis is placed on the Greek Classical period and the Roman Imperial period.

ART323 - Women in Art

This course focuses on women both as the subject and the creators of art with a particular emphasis on the 19th and 20th centuries. The course is thematically organized while at the same time retaining a sense of chronology. Among those artists that we will consider are: Artemisia Gentileschi, Berthe Morisot, Mary Cassatt, Alice Neel, Lee Krasner, Judy Chicago, and Shirin Neshat. In addition to women in art, the course also explores the development of and debates amongst feminist approaches to art history.

ART324 - Modern Art

This course traces the development of modern painting, sculpture, photography, design and architecture from Neoclassicism to Abstract Expressionism with an emphasis on understanding the works within their specific social-historical contexts. Artists including Jacques-Louis David, Claude Monet, Vincent van Gogh, Henri Matisse, and Jackson Pollock will be discussed. While the course focuses primarily on modernity in the Western world, the question of multiple modernities in a global context will also be addressed.

ART326 - Contemporary Art

This course will consider developments in art objects and theory from the 1950s to the present with an emphasis on understanding examples of contemporary art within their specific social-historical contexts. The period is marked by dramatic changes in art and society that necessitate a consideration of art beyond the Western world to a global context. Artists including Robert Mapplethorpe, Jeff Koons, Cindy Sherman, Chris Ofili and Ai Weiwei, among many others, will be discussed.

ART327 - Graphic Design Studio II

This course will provide the student with an understanding of graphic design history, theory and criticism. The student will demonstrate this knowledge through projects utilizing previous computer skills while developing an advanced knowledge of Adobe Illustrator.

ART328 - Italian Renaissance Art

Italian Renaissance Art considers the art and architecture of Italy from the late 13th through the 16th century, featuring such artists as Giotto, Donatello, Leonardo, Michelangelo, and Titian. The course explores the variety of contexts in which the art was produced, the changing role of the artist, and the importance of patronage.

Course Descriptions

ART329 - Art Internship

This course will provide the student with supervised experience in applied settings. Students gain experience in setting up exhibits, cleaning and repairing of art works, graphic arts production techniques, organizing and promoting arts and cultural events.

ART333 - American Art: European Settlement through 1918

This course will consider painting, sculpture and photography in America from the time of European settlement to 1918 with special attention given to political, social and cultural contexts. Course organization is both chronological and thematic. It emphasizes major figures, such as John Singleton Copley, Benjamin West, Thomas Cole, Winslow Homer and Thomas Eakins, but it also focuses on issues such as the construction of an American identity, the role of the fine arts in American society, and the tensions of class, gender, race and ethnicity in American art. Examination of key works of art will be accompanied by discussion of related readings in art theory.

ART345 - Methods of Art History

Methods of Art History is an introduction to the history of the art historical discipline and its research and interpretive methods. Rather than discuss the what of art history – that is, the major works and their histories - as most art history courses do, this course addresses the how of art history. We will consider various ways in which art historians interpret a work of art according to its specific and unique characteristics, the place and time period in which the work is created, and the changing nature of viewers' responses to it.

ART350 - Printmaking: Relief

This is a hands-on introduction to, and continued development of, the fundamental ideas, processes, practices, styles, methods, techniques and professional presentation of relief printmaking as an art form. The history, aesthetics and critical frontiers of relief printmaking as an art form will also be addressed throughout the course. Repeatable.

ART351 - Printmaking: Intaglio

This is a hands-on introduction to, and continued development of, the fundamental ideas, processes, practices, styles, methods, techniques and professional presentation of intaglio printmaking as an art form. The history, aesthetics and critical frontiers of intaglio printmaking as an art form will also be addressed throughout the course. Repeatable.

ART352 - Printmaking Processes

Printmaking Processes is a repeatable course that exposes students to all the major printmaking processes. Students learn to create in all the major "green" (safe) printmaking processes, at least half that can be made safely at home or in school. Students will be able to identify all of the major types of prints and printmaking processes used from the 1500's until now. Students will also be able to specifically design and create images for at least 5 different areas of printmaking processes, and professionally present their best work in an exhibition they organize at the end of the semester.

ART372 - Creative Arts for Elementary Education and Early Childhood

This course provides a survey of concepts, theories, and experiences for integrating arts education into the elementary classroom curriculum. Students will have practical experiences in art, music and theatre along with arts and education theories. This course will enable future teachers to develop arts experiences and lesson plans for children.

ART376 - Jewelry/Metals: Casting

This course is designed to give the student a thorough introduction to the materials and processes used in the jewelry/metals medium with a specific emphasis on the casting process. Design issues as well as technical processes will be addressed through a variety of studio exercises and problems. Creativity, problem solving skills and craftsmanship will all be emphasized as well as an understanding of the cultural and historical aspects of this expressive medium. Repeatable.

Course Descriptions

ART377 - Jewelry/Metals: Fabrication

This course is designed to give the student a thorough introduction to the materials and processes used in the jewelry/metals medium with a specific emphasis on the fabrication process. Design issues as well as technical processes will be addressed through a variety of studio exercises and problems. Creativity, problem solving skills and craftsmanship will all be emphasized as well as an understanding of the cultural and historical aspects of this expressive medium. Repeatable.

ART382 - Ceramics Studio

Beginning Ceramics is an introductory exploration of clay through hand building techniques and the potter's wheel. Students will examine the various forms and functions of the ceramic vessel. The course will focus on forming processes and the glazing and firing of pieces made in the studio.

ART385 - Sculpture Studio

This course is an introduction to the basic language, elements, media, tools, techniques and principles of the organization of sculpture. The basic techniques of manipulation, subtraction, substitution and addition involving different media and tools is covered.

ART388 - Critical Writing in Art

This writing intensive course for Art and Design students prepares them for life as a professional artist or designer. Through analysis, deconstruction and personal investigation, students will develop necessary skills in writing about art and design.

ART410 - Teaching Visual Art in Pre-K Through Grade 8

This course is designed to prepare beginning teachers of visual art to effectively meet the diverse challenges of teaching at the Pre-K through grade 8 levels of learning. There is a distinct emphasis upon directing teachers of visual art to establish a safe, efficient, creative, classroom driven by a student-centered/ developmentally sound / standards-based curriculum that accounts for no child being left behind. Ways of finding and exploiting traditional and non traditional techniques and technologies in the visual arts will be exposed if not explored. Students will be required to work in the classroom, visit and use community resources, and develop an art education portfolio.

ART411 - Teaching Art in Grades 9-12

This course is designed to prepare the K-12 art education specialist to be a more effective teacher of art students in grades 9-12 for the needs of the 21st century. Traditional and nontraditional materials and methods will be addressed in art production. In addition, art criticism, art history and aesthetics will be addressed in the context of a daily classroom expectation. Fine art, crafts and visual culture/visual literacy will be explored with a focus on preparing teachers who are able to deliver a solid foundation in visual thinking and learning as well as helping the more career-minded student.

ART420 - Contemporary Issues in Art

This course focuses on issues of contemporary concern in art history. The topics are faculty-selected and of contemporary consequence.

ART422 - Art History: The Art World After Modernism

This is a seminar in art theory: The Art World after modernism is a discussion-based course which considers the theoretical concerns informing and shaping artistic production and dialogue in the late 20th and 21st centuries. The study of primary sources in the form of critical writings addressing late modern, postmodern and contemporary art provides students with a thorough grounding in the bases for the development of the historical movements and the distinctive approaches to artistic production of the period. The course affords students the opportunity to integrate the knowledge of art history gleaned in survey courses with an extensive examination of salient art criticism and theory.

ART427 - Graphic Design Studio 3

In this course the student will create portfolio quality pieces which reflect current marketing and advertising strategies. Students will build upon their previous technical experience in QuarkXPress and Adobe Illustrator, while developing advanced technical experience with Adobe Photoshop.

Course Descriptions

ART428 - Graphic Design Studio 4

This course is designed to develop advanced graphic communication concepts and skills. Emphasis will be placed on client relationships and professional practices.

ART438 - Figure Drawing

This advanced-level drawing course is a repeatable course which focuses on drawing from a model from life. Students work from live nude and clothed models to develop a high level of skill in drawing the human figure while exploring a wide variety of drawing media and techniques.

ART448 - Figure Modeling

This advanced level sculpture course is a repeatable course which focuses on sculpting from a model from life. Students work from live nude and clothed models to develop a high level of skill in sculpting the human figure while exploring a wide variety of sculpture media and techniques.

ART458 - Figure Drawing and Modeling

This advanced level drawing course is a repeatable course which focuses on drawing and sculpting from a model from life. Students work from a live nude and clothed model to develop a high level of skill in drawing the human figure while exploring a wide variety of drawing media and techniques.

ART493 - Advanced Ceramics

This advanced course in ceramics skills and techniques on the potter's wheel and in-hand forming methods places considerable emphasis on glazing and firing a body of work completed through an in-depth study in clay.

ART496 - Advanced Painting

This repeatable painting studio develops proficiencies in painting techniques, rendering skills and the visual analysis of forms. Students explore a variety of painting methods, subjects and themes toward the goal of having each student achieve a unique approach to form and content.

ATE-Athletic Training

ATE150 - Introduction to Athletic Training

This course provides the students associated with Cal U an opportunity to learn and understand common injuries and illnesses associated with athletic participation. Additionally, the course introduces the student to introduction, rehabilitation, and treatment approaches for athletic injuries. The course also addresses the prevention and implication of athletic injuries. Lastly, the laboratory component of the course educates students with skills needed for entry into the professional phase portion of the undergraduate athletic training education program (ATEP). These skills can be applied in a clinical setting immediately and only after the student has been accepted into the professional phase of the undergraduate ATEP.

ATE204 - Athletic Training Clinical Education I Fall

This course permits the undergraduate athletic training student to gain clinical and administrative skills through experiences with interscholastic and intercollegiate teams in the athletic training room and competition areas. Additionally, students complete the sophomore level clinical evaluations on a one to one basis in the classroom and with their preceptors as part of the athletic training program's learning over time model. This course is repeated one time.

ATE206 - Athletic Training Clinical Education II

This course permits the undergraduate athletic training student to gain clinical and administrative skills through experiences with interscholastic and intercollegiate teams in the athletic training room and competition areas. Additionally, students complete the sophomore level clinical evaluations on a one to one basis in the classroom and with their preceptors as part of the athletic training program's learning over time model. Additionally, student's competency is assessed as part of preparation for Junior level athletic training education courses.

ATE215 - Evidence Based Practice

Students will be introduced to evidence based practice approaches to help in making educated clinical decisions once they become a certified athletic trainer. The course will provide the student with skills to differentiate

Course Descriptions

between academic and non-academic literature with the intent to strengthen their knowledge for clinical practice, engage in academic writing, and interpret academic literature relating to statistical reporting.

ATE225 - Evaluative Techniques I

This course entails the study of evaluation techniques of injuries to the lower extremities. Review of anatomy, injury recognition, muscle testing, treatment protocols and preventative measures are also examined. This course has 3 hours of lecture and 1 hour of lab weekly.

ATE265 - Evaluative Techniques II

This course entails the study of evaluation techniques of injuries to the spine and upper extremities. Review of anatomy, injury recognition, muscle testing, treatment protocols and preventative measures are also examined. This course has 3 hours of lecture and 1 hour of lab weekly.

ATE272 - Acute Care of Athletic Injuries

The course focuses on the knowledge and skills necessary for the first person(s) on the scene of an emergency. Whether medical or trauma in nature, upon successful completion of this course, students will have the knowledge and skills to adequately assess and care for a wide variety of illnesses and injuries until advanced level responders arrive.

ATE305 - Athletic Training Clinical Education III Fall

This course permits the undergraduate athletic training student to gain clinical and administrative skills through experiences with interscholastic and intercollegiate teams in the athletic training room and competition areas. Additionally, students complete the junior-level clinical proficiencies on a one-to-one basis in the classroom as part of the athletic training program's learning-over-time model. This course is repeated one time.

ATE306 - Athletic Training Clinical Education IV

This course permits the undergraduate athletic training student to gain clinical and administrative skills through experiences with interscholastic and intercollegiate teams in the athletic training room and competition areas. Additionally, students complete the junior level clinical evaluations on a one to one basis in the classroom and with their preceptors as part of the athletic training program's learning over time model. Further, the student's competency is assessed as part of preparation for senior level athletic training education courses.

ATE315 - General Medical Assessment

Concepts and skills for the evaluation of general medical conditions in athletes are the focus of this course. Pathological conditions of the respiratory, cardiovascular, gastrointestinal, genitourinary, integumentary and neurological systems are examined with emphasis on recognition and determining the need for physician referral and impact upon athletic participation.

ATE330 - Therapeutic Exercise

The course entails the study of the use and theory of rehabilitation equipment and rehabilitative exercises in sports. The student will also be able to explain and use evaluation devices such as goniometry, girth, gait analysis, muscle testing, joint mobilization and proprioceptive neuromuscular facilitation.

ATE340 - Sports Nutrition

This course entails the study of basic concepts of nutrition and the effects of sound nutritional practices on everyday life and sports. The course is designed to allow students to apply nutritional concepts, thus enhancing athletic performance.

ATE401 - Upper Extremity Orthopedic Evaluation in Sports Medicine

The course consists of clinical evaluation of injured athletes by the student and the physician to be used in determining the extent of an upper extremity injury. The physician will critique each student's clinical evaluation and make suggestions as needed. The students will also observe evaluations in the physician's offices and may partake in surgery observation.

Course Descriptions

ATE405 - Athletic Training Clinical Education IV

This course permits the undergraduate athletic training student to gain clinical and administrative skills through experiences with interscholastic and intercollegiate athletic teams. Additionally, students complete the senior level clinical evaluations on a one to one basis with their preceptor.

ATE406 - Athletic Training Clinical Education VI

This course permits the undergraduate athletic training student to gain clinical and administrative skills through experiences with interscholastic and intercollegiate teams in the athletic training room and competition areas. The student also completes the senior level clinical proficiencies on a one to one basis in the classroom and/or with his/her preceptor.

ATE425 - Administrative Strategies in Athletic Training

This course deals with the study of the administrative functions, litigation, staff relationships, ethics, budget and supplies, inventory, facility design, maintenance, safety assessment and student trainer organization.

ATE440 - Pharmacology for Allied Health Sciences

The purpose of this course is to provide an overview of drugs commonly used to treat patients seen by persons working in the allied health professions. Medical reasons for drug treatment, specific actions of therapeutic agents, and adverse effects are presented. Specifically emphasized are drugs affecting the musculoskeletal, cardiovascular, nervous, endocrine, and gastrointestinal systems.

ATE445 - Pilates as Therapeutic Exercise

This course will teach the philosophy and methods of Joseph Pilates. Students will learn to lengthen and strengthen the Powerhouse (area from the pelvic girdle to the shoulder girdle) through the original exercises developed by Joseph Pilates. Participants will not only learn the exercises, but how to cue them effectively and adapt them to general fitness classes and personal training or rehabilitation clients. Following the course, students will have the option of sitting for the Powerhouse Pilates certification exam to obtain a certificate as a Pilates Mat Instructor.

ATE460 - Sports Medicine Research

Different types of research, particularly descriptive and experimental, are presented. Emphasis is placed on developing library research skills, critically analyzing research, and becoming a knowledgeable consumer of research in order to apply it in the clinical environment.

ATE-Athletic Training

ATE150 - Introduction to Athletic Training

This course provides the students associated with Cal U an opportunity to learn and understand common injuries and illnesses associated with athletic participation. Additionally, the course introduces the student to introduction, rehabilitation, and treatment approaches for athletic injuries. The course also addresses the prevention and implication of athletic injuries. Lastly, the laboratory component of the course educates students with skills needed for entry into the professional phase portion of the undergraduate athletic training education program (ATEP). These skills can be applied in a clinical setting immediately and only after the student has been accepted into the professional phase of the undergraduate ATEP.

ATE204 - Athletic Training Clinical Education I Fall

This course permits the undergraduate athletic training student to gain clinical and administrative skills through experiences with interscholastic and intercollegiate teams in the athletic training room and competition areas. Additionally, students complete the sophomore level clinical evaluations on a one to one basis in the classroom and with their preceptors as part of the athletic training program's learning over time model. This course is repeated one time.

ATE206 - Athletic Training Clinical Education II

This course permits the undergraduate athletic training student to gain clinical and administrative skills through experiences with interscholastic and intercollegiate teams in the athletic training room and competition areas. Additionally, students complete the sophomore level clinical evaluations on a one to one basis in the classroom

Course Descriptions

and with their preceptors as part of the athletic training program's learning over time model. Additionally, student's competency is assessed as part of preparation for Junior level athletic training education courses.

ATE215 - Evidence Based Practice

Students will be introduced to evidence based practice approaches to help in making educated clinical decisions once they become a certified athletic trainer. The course will provide the student with skills to differentiate between academic and non-academic literature with the intent to strengthen their knowledge for clinical practice, engage in academic writing, and interpret academic literature relating to statistical reporting.

ATE225 - Evaluative Techniques I

This course entails the study of evaluation techniques of injuries to the lower extremities. Review of anatomy, injury recognition, muscle testing, treatment protocols and preventative measures are also examined. This course has 3 hours of lecture and 1 hour of lab weekly.

ATE265 - Evaluative Techniques II

This course entails the study of evaluation techniques of injuries to the spine and upper extremities. Review of anatomy, injury recognition, muscle testing, treatment protocols and preventative measures are also examined. This course has 3 hours of lecture and 1 hour of lab weekly.

ATE272 - Acute Care of Athletic Injuries

The course focuses on the knowledge and skills necessary for the first person(s) on the scene of an emergency. Whether medical or trauma in nature, upon successful completion of this course, students will have the knowledge and skills to adequately assess and care for a wide variety of illnesses and injuries until advanced level responders arrive.

ATE305 - Athletic Training Clinical Education III Fall

This course permits the undergraduate athletic training student to gain clinical and administrative skills through experiences with interscholastic and intercollegiate teams in the athletic training room and competition areas. Additionally, students complete the junior-level clinical proficiencies on a one-to-one basis in the classroom as part of the athletic training program's learning-over-time model. This course is repeated one time.

ATE306 - Athletic Training Clinical Education IV

This course permits the undergraduate athletic training student to gain clinical and administrative skills through experiences with interscholastic and intercollegiate teams in the athletic training room and competition areas. Additionally, students complete the junior level clinical evaluations on a one to one basis in the classroom and with their preceptors as part of the athletic training program's learning over time model. Further, the student's competency is assessed as part of preparation for senior level athletic training education courses.

ATE315 - General Medical Assessment

Concepts and skills for the evaluation of general medical conditions in athletes are the focus of this course. Pathological conditions of the respiratory, cardiovascular, gastrointestinal, genitourinary, integumentary and neurological systems are examined with emphasis on recognition and determining the need for physician referral and impact upon athletic participation.

ATE330 - Therapeutic Exercise

The course entails the study of the use and theory of rehabilitation equipment and rehabilitative exercises in sports. The student will also be able to explain and use evaluation devices such as goniometry, girth, gait analysis, muscle testing, joint mobilization and proprioceptive neuromuscular facilitation.

ATE340 - Sports Nutrition

This course entails the study of basic concepts of nutrition and the effects of sound nutritional practices on everyday life and sports. The course is designed to allow students to apply nutritional concepts, thus enhancing athletic performance.

Course Descriptions

ATE401 - Upper Extremity Orthopedic Evaluation in Sports Medicine

The course consists of clinical evaluation of injured athletes by the student and the physician to be used in determining the extent of an upper extremity injury. The physician will critique each student's clinical evaluation and make suggestions as needed. The students will also observe evaluations in the physician's offices and may partake in surgery observation.

ATE405 - Athletic Training Clinical Education IV

This course permits the undergraduate athletic training student to gain clinical and administrative skills through experiences with interscholastic and intercollegiate athletic teams. Additionally, students complete the senior level clinical evaluations on a one to one basis with their preceptor.

ATE406 - Athletic Training Clinical Education VI

This course permits the undergraduate athletic training student to gain clinical and administrative skills through experiences with interscholastic and intercollegiate teams in the athletic training room and competition areas. The student also completes the senior level clinical proficiencies on a one to one basis in the classroom and/or with his/her preceptor.

ATE425 - Administrative Strategies in Athletic Training

This course deals with the study of the administrative functions, litigation, staff relationships, ethics, budget and supplies, inventory, facility design, maintenance, safety assessment and student trainer organization.

ATE440 - Pharmacology for Allied Health Sciences

The purpose of this course is to provide an overview of drugs commonly used to treat patients seen by persons working in the allied health professions. Medical reasons for drug treatment, specific actions of therapeutic agents, and adverse effects are presented. Specifically emphasized are drugs affecting the musculoskeletal, cardiovascular, nervous, endocrine, and gastrointestinal systems.

ATE445 - Pilates as Therapeutic Exercise

This course will teach the philosophy and methods of Joseph Pilates. Students will learn to lengthen and strengthen the Powerhouse (area from the pelvic girdle to the shoulder girdle) through the original exercises developed by Joseph Pilates. Participants will not only learn the exercises, but how to cue them effectively and adapt them to general fitness classes and personal training or rehabilitation clients. Following the course, students will have the option of sitting for the Powerhouse Pilates certification exam to obtain a certificate as a Pilates Mat Instructor.

ATE460 - Sports Medicine Research

Different types of research, particularly descriptive and experimental, are presented. Emphasis is placed on developing library research skills, critically analyzing research, and becoming a knowledgeable consumer of research in order to apply it in the clinical environment.

BIO-Biological Science

BIO103 - Contemporary Issues in Biology

Basic biological principles are applied to the understanding of current social-biological problems and how these relate to an individual's personal life. Topics included are human sexuality, nutrition, health and disease, evolution, behavior, and the diversity of life.

BIO112 - Biology of Sexually Transmitted Diseases

A comprehensive review of the biology of sexually transmitted diseases. The course will cover the principles of disease and epidemiology, the biology and ecology of the microbial agents that cause STDs, the host response to disease, treatments, and preventative measures.

BIO117 - Introduction to Human Biology

This course is intended as an introduction to the human body systems and the disease states associated with these systems. Students will be introduced to each of the body's systems through a description of the structures that make up the organ system followed by a rudimentary explanation of its physiology and examples of diseases

Course Descriptions

associated with that system. Emphases will be placed on homeostasis and the interrelatedness of the body systems.

BIO120 - General Zoology

A comprehensive survey of the animal kingdom, the course places an emphasis on evolutionary relationships and the interrelationships of animals with their environments. Laboratory study of representative members of the major phyla is included.

BIO125 - General Botany

This course is a survey of form and function of the major plant groups as well as the bacteria, algae, water molds, slime molds and fungi within the overall framework of a modern phylogenetic system of classification.

BIO126 - Introductory Microbiology Online

This course provides a completely online lecture and laboratory introducing the study of the prokaryotic and eukaryotic world of microorganisms. The medically important concepts of microbiology including microbial control, principles of infectious disease, disease prevention and control will be presented.

BIO130 - Biological Illustration: Form and Function

An introductory course in biology and drawing with an emphasis on the relationship between form and function. Working with plants and animals, and using a combination of macroscopic and microscopic specimens, students will focus on the careful observation and interpretation of biological forms. Drawing instruction will focus on a variety of techniques commonly used in the biological sciences. Biology instruction will introduce students to basic scientific methodology, the diversity of living forms, the variety of ecological strategies related to those forms and their scientific classification.

BIO201 - Survey of Biotechnology

A survey of the scientific principles, research methods, commercial applications, societal impacts, and business environment that impact and define the operation of biotechnology and pharmaceutical companies. Students will learn how genes, proteins and cells work, how biotechnologists study and manipulate living organisms, and how those methods are used to solve problems and create products in medicine, agriculture, industry, criminal justice and the environment. Students will examine ethical, social and economic issues affecting the use of biotechnologies, and the business and regulatory environment in which biotechnology companies operate. The course gives a detailed industry overview relevant to science, engineering, computer science, information management, and business majors considering technical or business careers in biotechnology and pharmaceutical companies or any student interesting in biotechnology's impact on the human condition.

BIO210 - Anatomy and Physiology of Domestic Animals I

This course begins to cover the fundamentals of comparative anatomy and physiology of domestic animals. An emphasis is placed on understanding anatomical terms of position and direction, histology, the integumentary system, the nervous system, the skeletal system, and the cardiovascular system.

BIO215 - Introduction to Cellular and Molecular Biology

This course is designed to introduce the student to the basic concepts of cell chemistry and biology as well as introduce the concepts and skills of molecular biology. It will cover topics such as cellular organization in both prokaryotic and eukaryotic cells including subcellular structures, metabolism, and genome organization. It will explore Mendelian and molecular genetics and gene expression. The lab portion will consist of exercises and experiments designed to demonstrate these topics.

BIO218 - Genetics

Genetics plays an important role in all aspects of biology, acting on molecules, cells, organisms and populations. Genetic analysis also provides a powerful approach to address biological questions, and its methodologies are employed in fields as diverse as biotechnology, forensics, medicine and conservation. This course introduces students to the principles of classical and molecular genetics. Emphasis is placed on understanding the basic concepts of genetics and on using genetic analysis to study biological problems, developing analytical and problemsolving skills. BIO 218 will provide students with a strong background in genetics, which will be useful for

Course Descriptions

those interested in pursuing a career in the life sciences, conservation and population biology, health sciences, biotechnology or medical professions.

BIO220 - Anatomy and Physiology of Domestic Animals II

This course covers the fundamentals of comparative anatomy and physiology of domestic animals. An emphasis is placed on understanding the circulatory system, lymphatic system, respiratory system, the basic structure of the peripheral and autonomic nervous systems, sensory receptors and special sense organs, the endocrine system, digestive system, urinary system, and reproductive system.

BIO226 - Basic Microbiology

This course provides a survey of the prokaryotic and eukaryotic world of microorganisms. The medically important concepts of microbiology including microbial control, acquisition of disease, disease prevention and control will be presented.

BIO230 - Anatomy and Physiology I

This course is a general survey of the basic anatomical terms of position and direction, relevant scientific units, chemical components of living organisms, homeostasis, animal cytology, histology, the integumentary system, rudiments of neurology, the skeletal system, and the cardiovascular system.

BIO232 - Fundamentals of Biological Anthropology

A course for both majors and non-majors to introduce students to the field of biological anthropology, including the study of evolutionary theory, modern human populations, the behavior and ecology of nonhuman primates, and the primate (human and non-human) fossil record. Special emphasis will be directed toward human form and behavior as a result of the complex interplay of biology and culture acting over millions of years of evolutionary change.

BIO248 - General Ecology

Ecology presents the biology or environmental science student with a holistic approach to the study of the biological environment. Emphasis is on the natural environments of organisms, particularly as biotic assemblages of these organisms interact with their environments from the concrete levels of organization up to the regional and biome levels.

BIO260 - Anatomy and Physiology II

This course is a general survey of the basic structure of the peripheral and autonomic nervous systems, sensory receptors and special sense organs, the endocrine system, the cardiovascular system, the lymphatic system, the respiratory system, the digestive system, the urinary system, the reproductive system, human embryonic development, and metabolism.

BIO266 - Cell and Tissue Culture

The course allows students to control the conditions required for the survival and proliferation of mammalian cells. Students will perform cell culture maintenance techniques, such as enzymatic tissue dissociation, hemocytometer cell counts and viability studies. They will also learn techniques for the detection and treatment of contamination, and for the cryopreservation of cultures cells.

BIO305 - Comparative Vertebrate Anatomy

A comparative study of the vertebrate organs and organ systems of animals in the phylum chordata, this course places emphasis on evolutionary changes.

BIO306 - Human Anatomy

A study of the structure of the human body, this course includes discussion of the 11 fundamental systems. Each system is described in terms of its gross anatomy, with some discussion of histology and physiology where appropriate.

Course Descriptions

BIO307 - Plant Anatomy

A detailed study of the form and function of the various cell and tissue types found in higher plants, this course also surveys how scientific knowledge of plant anatomy is applied within a diverse range of fields, including ecology, forensic science, archeology, climatology, the arts and engineering.

BIO320 - Molecular Biology

Molecular Biology is a field of biology that studies biological processes in cells and organisms at a molecular level. It is also a term used to describe techniques for isolating and studying biological molecules, and these approaches are widely used in research labs around the world, as well as in biotechnology, clinical analysis, and drug development. This course covers the structure, formation and function of DNA, RNA, and proteins, focusing on how genomic information is organized and maintained, and how genes are regulated and expressed. Emphasis is placed on the techniques that are used to study biological molecules. The course provides students with hands-on experience in key molecular biology procedures, experimental design, and data analysis.

BIO322 - Methods in DNA Analysis

This course will cover the key principles of DNA analysis methods, from detecting basic sequence variation to manipulating genomes, and how these techniques are employed in fields as diverse as biotechnology, forensics, medicine, agriculture and conservation. Students will learn to apply these techniques in the laboratory to address scientific questions. Techniques covered will include nucleic acid purification, DNA restriction digestion and analysis, gel electrophoresis and gel-shift assays, in situ hybridization, polymerase chain reaction (PCR) and qPCR, transformation, CRISPR and DNA mutagenesis, and DNA sequencing and sequence analysis.

BIO325 - Animal Histology

This course is a study of cellular differentiations in tissue, tissue identification and special functions, especially in the mammals.

BIO326 - General Microbiology

A detailed study of bacteria and viruses, this course also places some emphasis on fungi, algae and protozoans. Special emphasis is given to medical aspects of bacteriology, immunology and virology. The cytology, physiology, microbiology and culture of microbes are pursued in the laboratory.

BIO327 - Parasitology

A comprehensive review of the biology of parasites and their interactions with their hosts and vectors. The course will cover principles of disease and epidemiology, the biology and ecology of the eukaryotic parasites causing disease in animals, the host response to infection, treatments, and preventive measures.

BIO328 - Human Physiology

The functions of the human body are covered. Basic physiological phenomena are studied with considerable emphasis on clinical and practical application.

BIO335 - Plant Physiology

This course will examine and explore the link between the form and function in plants. Plant Physiologists are people interested in learning about what plants do, and what chemical and physical factors cause plants to respond as they do in their environment. This course will explore several important processes which allow plants to survive in their environment and we will examine the ecological implications of the physiological processes under investigation. We will primarily examine this relationship at the whole organism level. Laboratory experiments will reinforce the lecture topics.

BIO336 - Plant Taxonomy

A study of relationships among the vascular plants, their classification and methods of identification. Plant families native to Western Pennsylvania are stressed.

BIO337 - Ornithology

The study of bird life, this course covers classification, anatomy, ecology, behavior and recognition of birds, with emphasis on local species and their relationships to people and the ecological balance with other organisms.

Course Descriptions

Please note: This course requires an earlier start time for 5 outdoor LAB trips which may begin as early as 5:30 AM.

BIO400 - Mammalogy

This course will provide an overview of the Class Mammalia. The lecture portion of the course will cover the evolution and classification of mammals, some basic physiology and behavior, and the ecology and conservation of mammals around the world. The lab portion of the class will involve a more in-depth study of mammal identification, focusing on the mammals of Pennsylvania.

BIO407 - Mycology

A detailed examination of mushrooms, molds, and human mycoses, including an introduction to fungal ecology and assessment of fungal classification, as well as molecular systematics and an overview of medical significance. The course utilizes hands-on, student-driven, inquiry-based practices. Students will use scientific processes and procedures, data analysis, and research tools to investigate fungal morphogenesis, molecular diagnostics, culture techniques, ecological relationships, and human pathogenesis.

BIO410 - Developmental Biology

This course provides an introduction to developmental biology. It will explore different modes of embryogenesis in invertebrates and vertebrates and examine the cellular and molecular mechanisms of animal development using a variety of model organisms and experimental techniques. Emphasis will be placed on the connection between development and disease, between developmental biology and evolution, and on the experimental approaches that have been used to shed light on developmental mechanisms. Current issues surrounding developmental biology, such as stem cells and reproductive technology, will also be discussed.

BIO414 - Plant Ecology

A consideration of the plant communities (and associated populations) which are influenced by both biotic and physical factors. The emphasis in this course is on the vegetation of Pennsylvania and the broader region. Laboratory work provides the student with the opportunity to become familiar with modern methods of vegetation analysis and community sampling.

BIO418 - Biological Research Investigations

This course is intended for advanced undergraduate students who wish to develop an independent research project within the biological and environmental sciences. Emphasis is placed on the use of various scientific instruments and biological procedures necessary for research investigations. Each research project is unique, and the data collected should ultimately be presented and or published.

BIO425 - Neurobiology

An examination of the structure and function of the nervous system. The course is designed to develop a detailed understanding of the nervous system structure and function from the molecular level to the level of complex circuits such as learning and memory. While the primary emphasis is the human nervous system, a central theme is the comparison of the neurological circuits across phyla to identify basic organizational principles.

BIO433 - Herpetology

A consideration of the amphibia and reptilia from taxonomical, morphological, evolutionary, behavioral and physiological viewpoints, this course emphasizes ecological relationships.

BIO435 - Ichthyology

An introduction to the morphology, taxonomy, ecology and distribution of the major groups of freshwater fishes, this course emphasizes the northeastern U.S. fauna.

BIO441 - Ethology

Ethology examines animal behavior within the framework of evolutionary biology, using the comparative methods (in both lecture and the laboratory) to examine similarities and differences in ecology, anatomy and physiology, genetics, and development patterns.

Course Descriptions

BIO442 - Forest Ecology and Dendrology

A study of the forest and its ecology and management, this course includes the identification of the major woody plants, their growth, structure and natural history. An emphasis is given to the forest communities and tree and shrub species common to the eastern United States.

BIO445 - Entomology

A specialized study of insects, this course covers identification and classification, development phases, physiological characteristics, economic importance, and disease vectors.

BIO446 - Freshwater Invertebrate Zoology

This course will examine the diversity of freshwater invertebrates, with an emphasis on their evolution, ecology, taxonomy and practical uses. Students will learn how to collect invertebrates in the field and will use specimens collected from local habitats to develop basic taxonomic skills. During class field trips, students will learn how to design and conduct field surveys designed to evaluate ecosystem health using aquatic invertebrates as biological indicators.

BIO450 - Immunology

A detailed study of the immune system of animals, this course covers nonspecific and specific host responses to foreign materials, the interaction between cells of the specific immune response, the nature and diversity of the immune response, the practical applications of the immune response, and disorders associated with the immune response.

BIO455 - Biology of Cancer

This course encompasses the cellular and molecular biology of cancer, providing a fundamental understanding of contemporary cancer research on the characterization, prevention and treatment of the disease.

BIO460 - Pathophysiology

This course introduces students to understanding how the body responds to diseases resulting from homeostatic imbalances. After completing this course, students will understand how a loss of homeostasis results in pathologies, how pathophysiological changes in the body progress, and how the body responds to those changes both at a local and systemic level. Topics include diseases and disorders related to cells and cell proliferation, as well as the nervous, endocrine, cardiovascular, respiratory, digestive, urogenital, and muscular systems.

BIO478 - Evolution

An advanced, writing intensive course, that examines the mechanisms resulting in biological evolution. Emphasis is placed on how these mechanisms operate at a variety of levels, from individual genes to distantly related species, and thereby produce the diversity of life observed on earth. The origin of life, speciation and hominid evolution are also studied in detail.

BIO480 - Cell Biology

This course studies the biology of the cell, with emphasis on the relationship of structure and function within the cell. It is a study of cell organelles, growth, division, macromolecules, membranes, synthesis and regulation.

BIO486 - Comparative Animal Physiology

A comparative approach to the study of physiological systems in the kingdom Animalia. Emphasis is on vertebrate organisms, but invertebrate examples are used where appropriate.

BIO488 - Water Pollution Biology

The purpose of this course is to convey a broad understanding of our freshwater aquatic ecosystems and the effects of the various types of environmental pollutants on these systems. We will review the basic concepts of limnology, freshwater ecology and freshwater biology covering both lotic and lentic systems with application to water quality, pollution, and aquatic system management and restoration. Aquatic system response will be analyzed in a lecture/laboratory format.

Course Descriptions

BIO492 - Biological and Environmental Science Internship

Student interns are placed with an organization or institution which most nearly approximates their goals for employment. The intent of the internship is to provide students with practical work experience in an environment in which they will be dealing with practical problems requiring real solutions in a relatively short time frame.

BUS-Business

BUS100 - Introduction to Business

This course provides background and insight into business organizations and is intended for non-business majors. It covers a variety of basic business concepts focusing on major issues that affect today's organizations, such as domestic and global environments, corporate social responsibilities and ethics, managing businesses, people in organizations, marketing principles, accounting and financial issues, and information technology. Students will learn the many areas involved in operating a business in today's society and explore how businesses influence and interact with the social, political, legal, economic, technical, cultural and global external environments.

BUS242 - Business Law I

This course is designed to introduce students to the American legal system, increase their understanding of legal issues and potential liabilities in business contexts, and equip them to meet their legal obligations with ethical integrity in a competitive marketplace. Topics will include the structure and function of the American legal system, contracts, torts, white-collar crime, business organizations, and intellectual property law, with emphasis on legal reasoning and policy implications.

BUS281 - Management Science I

This course is part of a sequence designed to teach mathematical methods of problem solving through their application to problems found in economics and the business disciplines. Topics covered will include applications of algebra, solving systems of linear equations, derivative and integral calculus, and derivative calculus of several variables. The core focus of the course is on the use of mathematical methods in business problem solving, not on deriving formulas or proving theorems.

BUS342 - Business, Government, and Society

This course uses the concept of social responsibility to address the role of business in society. Social responsibility is concerned with company values, responsibilities, actions, and outcomes that affect employees, investors, business partners, communities, and other stakeholders. We explore issues including workplace ethics, the natural environment, government regulation, information technology, diversity, corporate governance, philanthropy, and volunteerism to better understand the relationship between business and society. This course is highly practical and explores organizational best practices to improve social responsibility. We will explore organizational successes and failures using various case studies.

BUS343 - Corporate Social Responsibility

This course is designed to inform and stimulate thinking on the ethical concepts, processes, and best practices within business. It addresses the complex environment of ethical decision making and organizational compliance in organizations as well as enhancing the awareness and decision-making skills needed to contribute to responsible business conduct. The material covered will prepare students to recognize and manage ethical and social responsibility issues as they arise, and help them formulate their own standards of integrity and professionalism.

BUS345 - Business Ethics

The course provides a framework to identify, analyze and understand how business people make ethical decisions and deal with ethical issues. Using a case method approach, students will analyze real life business situations and gain insight into the realities and complexity of making decisions in a business environment.

BUS346 - Business Law II

This course is designed to allow students who have successfully completed Business Law I to build on their knowledge base by introducing them to more advanced topics in the American legal system. Thereby they will increase their understanding of legal issues and potential liabilities in business contexts, and equip them to

Course Descriptions

meet their legal obligations with ethical integrity in a competitive marketplace. Topics will include negotiable instruments, secured transactions, agency, bankruptcy and formation of business entities, with emphasis on legal reasoning and policy implications.

BUS379 - Special Topics in Business

This course allows for the examination of a particular problem, theme or issues viewed through the lens of accounting, economics, finance, management, marketing or related disciplines. The topic(s) address will vary from semester to semester. The course is repeatable with different topics.

BUS381 - Management Science II

This course introduces students to the use of various quantitative tools to inform complex decision-making situations. Emphasis is placed on the application of the tools. Whenever possible, concrete examples, real-world applications and case studies are used to practice concepts. Topics may include the application of linear and dynamic programming, inventory control models, regression, forecasting, and simulation models to problems in economics, finance, management and marketing such as demand and sales forecasting, new product development, financial planning, production planning, staff scheduling, advertising strategy, resource allocation, risk analysis, and process design. Spreadsheets are used extensively.

BUS479 - Field Studies in Business

This course includes an off-campus, residential component that allows for the examination of a particular problem, theme or issue viewed through the lens of accounting, economics, finance, management, marketing or related disciplines. The topic(s) address and location of the field study will vary from semester to semester. The course is repeatable with different topics/locations.

BUS499 - Integrated Strategic Capstone

Strategic planning provides overall direction to the enterprise and involves specifying the organization's objectives, developing policies and plans designed to achieve these objectives, and then allocating resources to implement the plans. This is the capstone course for the Business Administration major. Students will apply what they have learned throughout their program of study to real-world and hypothetical case studies and simulation problems and effectively communicate their findings through written analyses, planning documents, and reports to internal and external stakeholders

CDC-Comm, Design, Culture

CDC100 - Communication Perspectives

This course will assist students in developing an understanding of human communication by creating, demonstrating and practicing the production and dissemination of messages; analyzing their effectiveness; and reflecting on the results. Emphasis will be placed on the significance of audience, context, and media in the production of messages. Students will begin building their identity as scholars and professionals and experience thinking, creating, succeeding, failing, reflecting, reworking, and audiencing as they integrate into the Communication, Culture and Design program.

CDC101 - Public Speaking

This course is designed to develop the knowledge and skill necessary for preparing and presenting extemporaneous speeches to accomplish informative and persuasive goals on issues of civil, political, or cultural importance. Course topics include audience analysis, research, organization, language use, and delivery that facilitate effective communication with audiences.

CDC120 - Visual Communication 1

An introduction to the creative process behind communication design. The focus is on visual thinking, experimentation, and exploring the relationship of word and image. Examination of the design process will develop skills in creating multiple solutions to a given problem. Core concepts and skills required to understand and control visual language and principles of design are introduced along with studio techniques required for visualization of communication problems.

Course Descriptions

CDC150 - Imagine, Design, Create

Introduces students to innovation, creativity and design as concepts and generative processes that affect their personal, social and professional potential in the communication field. Provides frameworks and initiates discussions that support independent learning and creative activity in the discipline while giving students the opportunity to learn through observation, challenge and application.

CDC151 - Producing Media Messages

D. Introduction to the skills and concepts of basic audio and video production. Attendance and presentation of work generated in the class at Departmental Festival Required. Students must register for both the lecture and the laboratory components in the same term.

CDC200 - Truth and Representation

An introductory course in theories of the nature of reality and what makes sentences true or false.

CDC201 - Argumentation and Advocacy

This course aims to cultivate students' critical understanding of forms of reasoning deployed by advocates in various situations. Students learn about argument form, structures and strategies used in supporting or undermining propositions. Students act as advocates for particular positions in a team debate and write critical analyses of advocates in debates, panel discussions, and argumentative essays.

CDC210 - Special Topics in Communication, Design, and Culture

This course title is reserved for special, experimental, or unique courses which are not be taught as part of the regular courses available to students.

CDC220 - Visual Culture

As an introduction to key issues in the field of visual culture, this course explores the ways that we make, understand, and communicate with visual images. We will consider various kinds of visual material culture from different historical and geographic areas, but especially the modern and contemporary U.S. context in relation to the global. Topics of study will include the politics of images, the modern history of visibility, the social role of images and visibility, the circulation of images through various media, and globalization as well as the cross-fertilization of images across various social arenas, such as art, advertising, design, popular culture, and science.

CDC230 - Strategic Professional Communication

This course examines some of the fundamental components of strategic communications—how to communicate, how to persuade, and how to do so ethically. Students' assumptions about communications will be challenged through an exploration of the intersections between information, communication, and meaning in today's social media world. Theories of persuasion will be examined in order to learn how persuasion works in changing our attitudes and behaviors, and we apply ethical reasoning to real-world strategic communications issues as we consider the effects of our communications on relevant stakeholders. Students will learn the basic concepts and principles of Public Relations, focusing on approaches, uses, tools, and methods while addressing theories of communication, persuasion and ethics. Students will practice their ability to write for multiple audiences, with each assignment presenting increasingly complex challenges to students.

CDC252 - The Art of Film

An introduction to the study of film. Covers fundamental concepts in the history, aesthetics, style, technique and critical interpretation of film. Emphasizes the filmmaker as a creative artist.

CDC301 - Advanced Public Speaking

This course will build on students' foundational skills in public speaking and performance to further their development of performance in a variety of settings. This is done through a combination of speaking, writing, and reading assignments. Students will develop and deliver messages that are appropriate and effective for the audience, purpose, context and media. This course will focus each semester on particular communication applications and contexts including but not limited to: advanced public speaking, storytelling, media announcing and narrating, and other advanced performance topics.

Course Descriptions

CDC302 - Persuasion

Methods of changing attitudes and behaviors through communication; analysis of individuals, audiences, occasions, and subjects for persuasive appeals. Study of logical and psychological arrangements and the ethics of persuading and being persuaded.

CDC303 - Organizational Communication

This course examines many facets of organizational life (e.g., culture, power, politics, conflict, ethnic diversity, gender, and ethics) to illustrate how organizing is dependent upon communication processes.

CDC304 - Communication Research

This course introduces students in Communication Studies to communication research and communication theory as these are used by communication scholars and professionals in their investigation of communication phenomena from social scientific perspectives. Special attention will be devoted to developing students' bibliographic research and writing skills as these are used by communication scholars and professionals.

CDC305 - Sports Communications and Media Relations

This course provides sports management training in sports public relations, publicity and marketing. It includes sports publicity writing for the media, managing the sports/media relationship, and using the media to obtain marketing objectives.

CDC310 - Seminar in Communication, Design and Culture

Although seminar topics will vary, the course instructor will assign appropriate readings, research topics, projects or reports. Topics include but are not limited to social media and identity, visual rhetoric and digital media, corporate events and organizational culture, narrative in images and words, visual design and organizational vision and mission. Students are expected to raise and answer questions, debate issues, critique ideas, and participate in the development of course. This class can be taken up to 3 times and is a Seminar/Conversation course.

CDC311 - Applied Experience Laboratory in Communication, Design, and Culture

This course provides students with opportunities to develop and apply their skills, knowledge and conceptual understanding to real-world problems or situations. Course instructors direct and facilitate learning in the classroom, laboratory, studio, or in the field, students through embedded activities such as case and problem-based studies, guided inquiry, simulations, experiments, or projects. Application contexts include organizations seeking public relations, graphic design, media, visual/image, or other communication help, event specific challenges, special media projects, or other projects created by students. This class can be taken up to 3 times and is a Lab/Experiential Learning course.

CDC312 - Area Studies in Communication, Design, and Culture

Theories help us to make sense of the world around us and shape how we make judgments about reality, relationships, circumstances, and decisions in our lives. This course exposes students to theories in the areas of Communication, Design and Culture. Upon completing this course, students will have a broad understanding of major theories and/or specialized knowledge in a content area of interest. This class can be taken up to 3 times and is considered an Area Studies course.

CDC330 - Introduction to Public Relations

Examines PR as the communication function that allows organizations to interface with their environments and publics. It describes the public relations process as well as its history, the guiding principles and concepts of organizational advocacy, and explores the various career opportunities in the field.

CDC331 - Public Relations Applications

This course seeks to develop the production skills necessary to function in an entry-level public relations position. Many assignments will help students develop: 1) proficiency using the host of vehicles PR practitioners use, and 2) a portfolio. Effort will be made to create an atmosphere similar to the first job in PR. The instructor will be the first PR supervisor—the boss—editing the work; criticizing style; asking for research; forcing the student to plan, analyze, write, rewrite, prepare, repair, organize and reorganize.

Course Descriptions

CDC350 - Image, Sound, Text

Human communication is formed and mediated in different ways that are, in turn, substantially and materially inflected with culturally specific values and ideologies. Some messages are highly visual while others are more auditory. Some messages are more immediate and physically “present” while others are highly mediated and transpire across complex terrains of time and place. Some messages are transient, informal and spontaneous while others are contrived, crafted and meant to transcend time and place. Some messages are meant to be “merely” instrumental while others are highly “performative” and purposefully creative. In this course, students will learn various approaches to the critical interpretation and analysis of various communication forms and genres. The course aims to develop in students a “critical disposition” toward communication so that they are empowered to speak and write precisely and productively about various forms of human communication across formal, generic, technological and ideological contexts.

CDC351 - Producing Media Messages II

Audio/Visual Production in digital media offers instructional lessons for planning, filming, editing and viewing of quality digital video. This course is designed to enhance their technical skills and knowledge for the creation of video productions. Students whose career interests focus on any area of communication design or application will benefit from this in-depth production course.

CDC355 - Media Writing I

This course develops the basic knowledge and skills needed to design, plan and express original narrative media projects in a variety of formats.

CDC356 - Media Writing II

This course gives students the opportunity to design, prepare, write and revise original media projects as a means of developing core content development and expression competencies.

CDC357 - Media Management

Development of a working knowledge of the managerial structures of a broadcast organization.

CDC370 - Challenges in Communicating Science

This course explores both the social need for expert communicators of science as well as the key understanding and skills required to become a practicing science communicator.

CDC430 - Public Relations and Integrated Communication Practicum

The course requires students to demonstrate and deepen their understanding of the management of public relations campaigns by integrating communication theory and research with professional practice. Special attention is given to techniques for designing, implementing and evaluating effective campaign strategies for clients by creating a campaign proposal. Students will examine principles of integrated applied communication, create written and web-based products, and develop a full and executable campaign. Working in collaborative teams, students complete a project that demonstrates planning and managing communication for organizational goals.

CDC431 - Public Relations Cases and Problems

In this course students will analyze the methods of the public relations profession found in the case study literature and apply those methods to their own research, and through the investigation of public relations case studies come to understand the strategies and tactics of a public relations campaign. In addition, students will develop analytical skills so that graduates may function in the four primary roles of the public relations practitioner: 1. monitor of public opinion and change; 2. voice of organization’s conscience; 3. advocate for organizations; and 4. monitor of organizational policies and programs.

CDC432 - Public Relations Campaign Management

This is the capstone course for students in the public relations concentration. The course seeks to increase understanding of the management of public relations campaigns by integrating communication theory and research with professional practice. Special attention is given to techniques for designing, implementing and evaluating effective campaign strategies for clients by creating a campaign proposal.

Course Descriptions

CDC450 - Media, Society, Culture

This course examines the relationship between communication media, social formations, ideological belief systems and subjective experience. The course explores how media environments are constructed by prevailing (and transformative) technologies as well as ideological and material social systems.

CDC451 - Media Production III

Students plan and execute an original advanced media project suitable for inclusion in their portfolio. Attendance and presentation of work generated in the class at external outside of class presentation.

CDC455 - Media Writing III

This course gives students the opportunity to do advanced work suitable for a professional portfolio.

CDC460 - Philosophy in Art: History, Theory and Criticism

A focused course in the Philosophy of Art or Art Theory. Addresses topics of contemporary artistic/philosophical significance.

CDC461 - Communication and Social Meaning

Epistemology is the philosophical study of the nature of knowledge. Social epistemology focuses on knowledge as it is generated by, propagated through, or passed between social groups. Communication is central to the creation, dispersal and modification of social knowledge. An understanding of the generation and codification of social knowledge enables students to understand the responsibilities and consequences inherent in all skilled communication practices.

CDC465 - Media Ethics

This course examines ethical controversies arising from media.

CDC490 - Theorizing Human Communication

A seminar in which the theories of human communication are analyzed, debated, and evaluated.

CDC497 - Communication, Design, and Culture Internship

Communication, Design, and Culture Internship. Opportunity for practical, professional communication work and field experiences in various off-campus settings. Internship are to be jointly administered by an on-site supervisor and a Departmental Internship Supervisor.

CDC498 - Senior Project in Communication, Design, and Culture.

This course provides a single opportunity or experience that serves as a summary and synthesis of courses in the student's undergraduate academic career. Students will use their knowledge and educational experience to plan, design and produce original projects that integrate various types of expression. Problem analysis, information sharing, creative solutions, and projects drive this course. Learning, not teaching, is at the center of such experiences.

CDC499 - Career Design Strategies

Students in their final year will apply their communication expertise to craft a coherent, persuasive professional identity and a focused picture of their professional goals for the next five years. Students will use the theory and knowledge from their courses in communication studies regarding verbal and visual information, technology, rhetoric and research in the recursive design of their own portfolios, oral presentations and in the application and interpretation of peer feedback and third party reviews.

CEA-Cultural Experience Abroad

CEA200 - Cultural Experiences Abroad

Cultural Experiences Abroad (CEA) is affiliated with Cal U and provides international study program opportunities for students. CEA offers programs in 24 cities located in Argentina, Australia, Chile, China, Costa Rica, Czech Republic, England, France, Germany, Ireland, Italy, Mexico, South Africa and Spain. Students must apply for placement and receive approval for courses to be taken while on exchange for credit toward their Cal U degree

Course Descriptions

program. Students may exchange for up to one full academic year. CEA 200 denotes a student's first term of participation.

CEA300 - Cultural Experiences Abroad

Cultural Experiences Abroad (CEA) is affiliated with Cal U and provides international study program opportunities for students. CEA offers programs in 24 cities located in Argentina, Australia, Chile, China, Costa Rica, Czech Republic, England, France, Germany, Ireland, Italy, Mexico, South Africa and Spain. Students must apply for placement and receive approval for courses to be taken while on exchange for credit toward their Cal U degree program. Students may exchange for up to one full academic year. CEA 300 denotes a student's second term of participation.

CEA400 - Cultural Experiences Abroad

Cultural Experiences Abroad (CEA) is affiliated with Cal U and provides international study program opportunities for students. CEA offers programs in 24 cities located in Argentina, Australia, Chile, China, Costa Rica, Czech Republic, England, France, Germany, Ireland, Italy, Mexico, South Africa and Spain. Students must apply for placement and receive approval for courses to be taken while on exchange for credit toward their Cal U degree program. Students may exchange for up to one full academic year. CEA 400 denotes a student's third term of participation.

CET-Computer Engineering Tech

CET235 - Digital Electronics Design

This is a first course in digital electronics dealing with the theory and practice of modern electronic computer circuitry. Major units of the course include logic gates, integrated circuits, latches, counters, shift registers, arithmetic circuits and memory elements. Laboratory exercises reinforce the theoretical concepts by providing hands-on experience with digital integrated circuits, logic system simulation software, and digital troubleshooting equipment.

CET270 - Introduction to Microprocessor Design

This course introduces the microprocessor from both the hardware and software viewpoints. It covers the stored program concept, addressing modes, the instruction set, bus operation and machine language implementation of software algorithms. Laboratory exercises are based on a microprocessor evaluation system and/or simulator to provide hands-on experience with course topics.

CET335 - Microprocessor Interfacing

This course deals with advanced concepts in the programming and the interfacing of microprocessors/microcontrollers to the outside world as demonstrated by a variety of application examples. It covers the advanced architecture of modern processors and the many I/O peripherals now commonly found on-board the device. Detailed studies of computer I/O and interrupt techniques as applied to analog-to-digital, digital -to-analog, timers, parallel and serial interfaces are included. Laboratory activities provide the student with experience in developing the hardware and software required to incorporate microprocessors into systems that solve real-world interfacing problems.

CET350 - Technical Computing Using Java

This course enables the student to acquire a thorough understanding of the Java language and its application in solving engineering and real world problems. Both Java programs and Applets will be studied. Emphasis is placed on efficient software development using structured programming techniques. Students are required to design, write, test, and run programs using an appropriate version of Java.

CET360 - Microprocessor Engineering

This course examines the product development cycle of a typical microcontroller-based product. Methods of hardware and software development as well as their integration and debugging are studied. The student will design and implement a major term project utilizing these concepts plus various laboratory development tools as well as produce written documentation on the project, including both requirements/specification and final reports. Also included is a survey of recent developments in microcontroller technology.

Course Descriptions

CET440 - Computer Networking

This course involves the electronic hardware of networking systems such as those used to connect heterogeneous computers. Major topics include locality, topologies, media standards, Internet working devices and protocols. Hands-on application of network theory is provided via a laboratory-style term project involving a multiuser network computer system. The student will design and develop the hardware and communication software required to implement access to a network-available, shared resource.

CET485 - Special Topics in CET

This course allows current topics in computer engineering technology to be offered in a timely fashion. The topics are not covered in other courses and will not be regularly offered as a special topic; however, they are appropriate to a senior-level course. The course topic depends upon current trends in computer engineering technology, interests of the student, and the instructor. The student may take the course multiple times as long as each instance covers topics different than those already covered.

CET490 - Senior Project I: Software Engineering

This course introduces students to software engineering. They will study its history, terminology, requirements, specifications and design. Students will write requirements, specifications and design documents, and one or more papers on software engineering topics.

CET492 - Senior Project II

This course is a continuation of the Senior Project I software engineering course and the capstone course of the program. The project proposal developed and designed in the first senior project class will be implemented in this course. The student will produce a project users' manual and will demonstrate proficiency in the academic program through the development of the project.

CET495 - Computer Engineering Technology Internship

Student interns work with professionals in a computer engineering technology-related field to apply their understanding of computer hardware and software. The intent of the internship is to provide the student with practical work experience solving actual problems in a dynamic environment, yielding enhanced job opportunities upon graduation.

CHD-Childhood Education

CHD200 - Introduction to PreK to Grade 8 Education

This is an introductory course that emphasizes the knowledge, skills, and dispositions required to become a PreK to Grade 4 or Grade 4-8 educator. National and state professional standards provide a framework in the areas of planning and preparation, classroom environment, instructional delivery, professional conduct, assessment, and knowledge of diverse learners. A 30-hour field experience in a school setting is required.

CHD250 - Health and Physical Education Methods for Pre K-4th Grade

This course is designed to meet the Pennsylvania Department of Education (PDE) guidelines for the Pre K - grade 4 certification program. Topics covered include understanding the needs of the whole child, the role of play in health and physical activity needs, integrating physical activity throughout the curriculum, fitness, nutrition, and safety during activity and in the environment. More specifically, the Pennsylvania State and National standards for Health and Physical Activity for grades Pre K – 4 will be addressed and applied in the context of learning about developmentally, culturally and individually appropriate practices to support children's healthy growth and development, both in and out of the classroom.

CHD312 - Instructional Leadership in Childhood Education

The goal of this course is to develop teacher leaders who advocate for all students in grades Prek-4, including students with exceptionalities and students of diverse populations. Objectives are aligned with Pennsylvania Department of Education Field competencies, Levels 1 and 2, and candidates are required to complete these competencies with 30-45 hours of observation and classroom experience under the guidance and observation of a mentor teacher in a Prek-4 setting. Based on field experiences in the assigned Prek-4 classroom, interviews with school personnel, and research of professional literature, candidates will examine current issues and trends in policy, ethics, organization and administration of Prek-4 learning environments. As a result, candidates will

Course Descriptions

develop a comprehensive plan for advocacy on a relevant and timely educational issue based on analysis of schoolwide and demographic data. Candidates will also become reflective practitioners, developing plans for their own professional development based on their self-identified strengths and weaknesses. The course is standards-based, supported by the Pennsylvania Department of Education standards for teacher preparation, the National Association for the Education of Young Children (NAEYC), and the Interstate New Teacher Assessment and Support Consortium (InTASC).

CHD350 - Family and Community Collaboration Partnerships

An exploration of the knowledge, dispositions, and skills required of professionals in order to respond to diverse family systems and needs. Emphasis is placed on: developing collaborative partnerships, effective communication, mobilizing community resources, ethical and research-based practices, and advocating for culturally, linguistically, developmentally, and socioeconomically diverse individuals and families.

CHD400 - Issues, Advocacy and Leadership in Childhood Education

The goal of this course is to develop teacher leaders who advocate for all children in early childhood and middle level grades. Candidates will examine current issues and trends in policy, ethics, organization and administration of early and middle level learning environments. Candidates will explore social, historical, and philosophical perspectives in the field of early childhood and middle level education (e.g. developmentally appropriate practice, advocacy, ethical conduct, standards-based education). In addition, they will analyze and apply skills that demonstrate effective advocacy and leadership. This course provides candidates with the opportunity to develop a comprehensive plan for advocacy on a relevant and timely educational issue based on analysis of schoolwide and demographic data. The three-credit course involves fieldwork in an early childhood setting for Prek-4 majors and a or middle level setting for Grades 4-8 majors. Prek4/Special Education majors and Grades 4-8 /Special Education majors will complete the course for two credits with no field component included within this course. Candidates will also begin to be reflective practitioners, developing plans for their own professional development based on their self-identified strengths and weaknesses.

CHD412 - Field Experiences with Diverse Populations

This course is designed to provide students practical experiences in identifying and working with diverse populations in a K-8 classroom. The dimensions of diversity include race, ethnicity, gender, sexual orientation, language, culture, religion, mental and physical ability, class, and immigration status. Pennsylvania Department of Education Field competencies, Level 3, provide the objectives of this course. Students are required to complete these competencies with 30-45 hours of observation and teaching under the guidance and observation of a mentor teacher in K-8 elementary classroom. Current teaching technology and strategies to meet the needs of children in grades K-8 will be researched, observed and discussed. Students will complete a diversity field project, in which they will complete an action research project to identify underrepresented groups in a K-8 classroom, areas of need, a plan of action, data analysis, conclusion, and recommendations. University classroom seminars and field classroom teaching experiences are combined to give students an opportunity to discover their aptitude and interest in working with K-8 school children. The course is standards-based, supported by the Pennsylvania Department of Education standards for teacher preparation, the National Association for the Education of Young Children (NAEYC), the Association for Middle Level Education (AMLE), and the Interstate New Teacher Assessment and Support Consortium (InTASC).

CHD413 - Content Area Literacy Field Experience

This course is designed to provide teacher candidates with practical experiences in a K-8 classroom. Pennsylvania Department of Education Field Competencies, Level 3, provide the objectives of this course. Teacher candidates are required to complete the field competencies with 30-45 hours of observation and teaching under the guidance and observation of a mentor teacher in a K-8 classroom. Teacher candidates will gain insights into the different ways in which literacy enables learning across the curriculum and will explore how to integrate literacy instruction into the content areas. Candidates will gain an understanding of language and literacy development and will examine the literacy needs and experiences of linguistically, culturally, and economically diverse students. Candidates will develop a diverse toolkit of instructional and assessment practices that can be used in a variety of classroom contexts to support literacy across the disciplines. Course content will help students in conceptualizing, designing, and implementing content specific literacy instruction. Candidates will complete a mini-action research based project in which learners in a K-8 classroom will be assessed to identify areas of need

Course Descriptions

associated with a specific content area; then candidates will plan and implement developmentally appropriate lessons, using age-appropriate assessments to determine the overall impact on student learning. University classroom seminars and field classroom teaching experiences are combined to give students an opportunity to discover their aptitude and interest in working with K-8 school children across the content areas.

CHD450 - Assessment and Data Literacy for Teaching

This course is designed to provide teacher candidates with in-depth instruction and authentic experience to integrate assessment literacy and data literacy into instructional planning, implementation, and decision-making to improve teaching, learning, and school programs. The course includes methods for transforming information into actionable instructional knowledge and practices by collecting, analyzing, and interpreting various sources of data to determine instructional next steps and program revisions. Additionally, this course includes methods for planning assessments that are integrated with instruction, crafting assessment tools, grading and evaluating students, assessing higher-order thinking, interpreting state-mandated and other standardized tests scores for classroom and school-wide purposes, and aligning assessment with state standards. Further, this course integrates a field-based component and requires work in a field placement.

CHE-Chemistry

CHE101 - General Chemistry I

This is an introductory course for majors and non-majors. Topics covered include atomic structure, chemical reactions, stoichiometry, the gaseous state, chemical bonding, phase changes, and enthalpy. Either five total classroom hours in the studio format, or three class hours and three laboratory hours, each week.

CHE102 - General Chemistry II

This course is a continuation of General Chemistry I and is for majors and non-majors. Topics covered include solutions, kinetics, thermodynamics, gaseous and ionic equilibrium, acids and bases, and solubility equilibrium.

CHE103 - Chemistry for the Everyday World

Chemical principles are introduced and applied to issues and problems facing society. The fundamental language and symbols of descriptive chemistry are covered and used as a means of describing the natural world. To promote science literacy, case studies of important current topics in science with an impact on society will be examined.

CHE306 - Inorganic Chemistry

A foundation course for chemistry majors and minors. Topics covered include covalent, ionic, and metallic bonding, molecular symmetry, solid state structures, acid/base and oxidation reduction chemistry, as well as transition metal complexes.

CHE320 - Analytical/Instrumental Chemistry

This is a foundation course for chemistry majors and minors in which the principles of analytical chemistry are introduced. The course initially focuses on the traditional "wet" chemical technique of titrimetry and progresses to study of instrumental methods of analysis. Specific topics covered include acid/base, precipitation, and complexometric titrations as well as optical spectroscopy and chromatography.

CHE331 - Organic Chemistry I

An introduction to the basic principles that govern the reactions of carbon-based compounds. Particular emphasis is placed on introduction of the basic functional groups and their structural and stereochemical properties.

An introduction to reactions of functional groups, including alkanes, alkyl halides, alcohols, alkenes, alkynes and conjugated systems through study of reaction mechanisms, molecular modeling and synthesis. Students are introduced to and trained in important purification techniques and instrumentation used for characterizing molecules.

CHE333 - Chemical Hazards

This course provides in-depth study of chemistry knowledge involved in the main classes of hazardous materials including explosives, compressed gases, flammable liquids and solids, oxidizers, poisons, corrosives, and radioactive materials. Chemical principles such as molecular structures, reactivity, and compatibility will be

Course Descriptions

examined for each class of hazardous materials. The course will also introduce chemical safety and relevant regulations involved with hazardous materials in various industries, laboratories, and the environment.

CHE341 - Organic Chemistry II

This is an in-depth course for chemistry majors and minors which continues the study of important functional groups including alcohols, ethers, carboxylic acids, esters, amides, aldehydes, ketones, amines, phenols and aryl halides. There is a special focus on reactions, mechanisms and synthetic strategies, and introduces and demonstrates the use of spectroscopy to further understand molecular structure.

CHE342 - Organic Chemistry II Lab

This is a laboratory section for non-chemistry majors to accompany Organic Chemistry II (CHE 341). Students continue experiments that study organic functional groups transformations using advanced techniques and instrumentation. There is a special emphasis on molecular structure analysis using spectroscopy.

CHE371 - Intermediate Chemistry Laboratory I

This is a foundation course for chemistry majors with an emphasis on synthesis and characterization of organic, inorganic, and organometallic molecules using higher level experimental protocols and spectroscopic methods. Topics in this integrated laboratory course include proper use of the experimental notebook, molecular modeling, and spectroscopic theory.

CHE372 - Intermediate Chemistry Laboratory II

This is a foundation course for chemistry majors with a continued emphasis on synthesis and characterization of organic, inorganic, and organometallic molecules. This second semester, integrated laboratory course will have an increased focus on using analytical techniques and spectroscopic instrumentation to achieve these goals. These experiences will culminate in an assigned individual research project.

CHE381 - Environmental Chemistry

This is an in-depth course in the chemistry curriculum. It is a comprehensive overview of major environmental problems based on origin, fate, toxicity and remediation of chemical pollutants. Modern environmental pollution issues such as: global warming, ozone depletion, photochemical smog, acid rain, fine particulate matter, pesticides, toxic metals and alternative energy are introduced. Chemical principles for understanding various air, water and soil pollution and relevant control strategies are also covered.

CHE410 - Chemistry Internship

This is an upper-division elective course intended for chemistry majors who wish to advance their academic growth through an external work environment. Designed to supplement classroom and laboratory studies, internships provide students with additional knowledge and skills and apply previously learned information to on-site situations. Student will work under joint supervision between the internship location and a department faculty member. Students are to complete the university internship training process before registration for the course. (Var. 1-6 crs.)

CHE415 - Biochemistry I

A comprehensive survey of the properties, reactions and structure of amino acids, proteins, enzymes, carbohydrates, fats and lipids, and nucleic acids. Special focus on protein structure and nomenclature, enzyme catalysis and kinetics, mechanistic analysis, and in-depth study of important metabolic pathways.

CHE420 - Advanced Analytical Chemistry

This is an in-depth course for chemistry majors in which the principles and practice of electroanalytical chemistry and mass spectrometry are presented. The course covers the theory, application, and instrumentation associated with each of these important realms of analytical chemistry.

CHE421 - Advanced Inorganic Chemistry I

This is an in-depth course for chemistry majors in which the topics of molecular orbital theory, symmetry and group theory and organometallic chemistry are presented. The course covers the theory, application, and instrumentation associated with advanced inorganic chemistry.

Course Descriptions

CHE433 - Advanced Organic Chemistry

Advanced study of organic compounds in terms of structure and chemical properties. The student is introduced to complex structure evaluation through interpretation of advanced spectroscopy applications. The student continues evaluation of organic functional group manipulation through study of reaction, mechanism and retrosynthetic analysis, culminating in literature organic synthesis analysis.

CHE461 - Physical Chemistry I

This is a foundation course for chemistry majors and it is the first of a two-semester sequence of physical chemistry. The laws of thermodynamics are introduced and applied to physical, chemical, electrochemical systems and solutions. Properties of gases, liquids and solids are reviewed. Phase stability, phase diagrams, chemical reaction kinetics and reaction mechanisms are also covered.

CHE462 - Physical Chemistry II

This is an in-depth course for chemistry majors and it is the second of a two-semester sequence of physical chemistry. Quantum mechanics is introduced and applied to the electronic, vibrational and rotational properties of molecules. Atomic and molecular structure is analyzed in great detail based on electronic, vibrational and rotational spectroscopy.

CHE471 - Advanced Chemistry Lab I

A foundation course for chemistry majors. The primary focus will be on use of instrumentation to obtain data, calculate and increase understanding of chemical phenomenon.

CHE472 - Advanced Chemistry Lab II

This is the second of a two-semester advanced laboratory sequence designed to expose students to advanced chemical laboratory techniques. Emphasis is given to physical chemistry aspects of a wide range of hands-on experiences including equilibrium thermodynamics, molecular spectroscopy, properties of macromolecules and chemical kinetics. This is an in-depth course for chemistry majors offering students an opportunity to excel in tackling open-ended chemistry problems. Great importance is given to the critical and effective analysis and discussion of experimental findings. This is a writing intensive course where students spend considerable time creating publication-quality reports of experimental work. This class meets three hours each week.

CHE483 - Adv Env Chemistry

This is an in-depth elective course in the chemistry curriculum. It focuses on the sources, transport, reactions, effects and fate of chemical species in the atmosphere, hydrosphere and geosphere. Transformation and interaction of chemical contaminants within and between the three environmental systems are covered. Advanced chemistry concepts such as thermodynamics, photolysis, catalytic reactions, chemical equilibria, and kinetics are emphasized in the course. Case studies and contemporary literature in the field are discussed.

CHE484 - Polymer Chemistry

This is an upper level chemistry course. It introduces nomenclature, classification, synthesis, chemical and physical properties, characterization, and processing methods of polymers. Polymerization reaction mechanisms, physical and chemical properties of polymer-based materials are discussed as well as their common industrial and technological applications. Various major classes of polymers are studied in detail. A look at the historical development of polymer based materials is provided with an emphasis on current and potential applications of polymers as blends, composites, and other superior materials for advanced technological applications.

CHE491 - Chemistry Research I

This is an in-depth course for chemistry majors. Under the direction of a faculty mentor, the student will focus on execution of a research project including a comprehensive literature review, project management, independent notebook maintenance, and experimental design and execution. This experience will culminate in a seminar presentation.

CHE492 - Chemistry Research II

This is an in-depth course for chemistry majors. Under the direction of a faculty mentor, the student will continue to focus on execution of a research project including a comprehensive literature review, project management,

Course Descriptions

independent notebook maintenance, and experimental design and execution. Using their laboratory activities, students will be expected to communicate their research findings in a professionally prepared written report.

CHE493 - Advanced Chemistry Research

This is a repeatable in-depth, independent study, elective course for chemistry majors. Under the direction of a faculty mentor, the student will focus on execution of a research project including a comprehensive literature review, project management, independent notebook maintenance, and experimental design and execution. Using their laboratory activities, students will be expected to communicate their research findings in a professionally prepared written report.

CHE497 - Special Topics in Chemistry

This is an in-depth course for chemistry majors who have successfully completed CHE 461 (Physical Chemistry I). The specific advanced topics taught will be chosen by the instructor(s) for the given semester. The material presented in this course is unique and not found in any other courses offered in the chemistry program and the content will vary from semester to semester. This course will be “turn” taught by multiple faculty members, each appearing for a portion (module) of the class meetings. The course topics depend on the current trends in chemistry, instrumentation and the preference of the instructor.

CHI-Chinese

CHI101 - Elementary Chinese I

This is the beginner level in Mandarin Chinese and an introductory course for students who have not studied Chinese previously. This course covers and emphasizes the development of the basic skills of the Chinese language and includes instruction in basic pronunciation, comprehension, communication, grammar and Chinese characters. Students will become acquainted with the Chinese culture and establish a solid foundation for more advanced Chinese courses. The course also provides students with powerful online support, which presents an engaging online learning environment containing exercises and audio files. Students can record their responses and also work with partners via the Internet in order to practice speaking and listening skills.

CHI102 - Elementary Chinese II

This is a continuation of Chinese 101. Students will be familiar with Chinese grammar and language structure. Students have the maximum opportunity to use all four language skills: listening; speaking; reading; and writing. The course will develop the ability to use Mandarin Chinese in real-world everyday life. The course also provides students with powerful online support, which presents an engaging online learning environment containing all of the exercises and audio files. Students will gain experience recording their responses via the Internet in order to practice speaking and listening skills.

CIS-Computer Info Systems

CIS110 - Introduction to Information Systems

This course is an introductory study of information systems. Major topics include: the role and value of information systems, hardware and software used in information systems, managing information and data resources, decision making, and developing information systems.

CIS207 - Data Preparation and Cleaning

This course provides students with an introduction to the need for and methods for data cleaning. The course presents methods for locating and handling invalid values, out-of-range values, and missing values along with methods for managing datasets. The course uses SAS software.

CIS213 - Data Visualization

This course explores techniques and tools for creating effective data visualizations. The course covers the creation and exploration of visualizations for categorical data, time series data, spatial and geospatial data. SAS software will be used for this course.

Course Descriptions

CIS251 - Big Data Tools

This course covers an introduction to big data analysis tools. The course provides an overview of SAS, Hadoop and other big data tools. The course covers the structure and framework of data analytic tools and covers the use of these tools to perform various analyses.

CIS261 - Big Data Analytics

This course is intended to provide the student with an introduction to big data, big data analytics and several methods useful in big data analytics such as clustering, association rules and various forms of regression. SAS® statistical software will also be introduced and used to solve data problems.

CIS302 - Visual Programming

This course teaches Windows applications programming using the object-oriented event-driven programming paradigm, with the programming language VisualBasic.NET. It is designed as a beginning OOED programming course, but assumes students know Windows object vocabulary, have basic Windows file management skills, and are familiar with the generic procedural programming language constructs of decision structures and looping.

CIS304 - COBOL

This course introduces students to the essential elements of the COBOL language using well-structured programming techniques. Students will write and execute report programs, control break programs, data validation programs, programs that implement tables and sequential update programs. Good analysis, design and structure will be emphasized.

CIS308 - Python

This course enables the student to acquire a thorough understanding of the Python language and its application in solving real world problems. Emphasis is placed on efficient software development using structured programming techniques, Object Oriented Programming, GUI interfaces, as well as a variety of Python modules and packages. Students are required to design, write, test, and run programs using an appropriate version of Python.

CIS321 - Data Base Management Systems and Data Base Design

This introductory course to DBMS (Database Management System) provides students with the theory and practice behind the use of modern DBMS. Database terminology and concepts covered include, but are not limited to, the logical and physical design of databases and the tables within them as determined through the analysis of information needs and modeling; the creation of ERD (Entity Relationship Diagrams) and their translation into relational schemas (logical and physical design); normalization techniques; DDL (Data Definition Language) and SQL (Structured Query Language) for database, table, view and index creation; and database performance and optimization.

CIS322 - Data Base Application Development

Building upon the conceptual understanding of a modern DBMS (Database Management System) and database and table design concepts gained in CIS 321 Database Management Systems and Design, this course provides students with the practice of applying database technology via the Oracle DBMS to the solution of business and other information-related problems. Experience is provided with database design and implementation based on a thorough analysis of requirements and information modeling. The use of Structured Query Language (SQL) for interaction with a working DBMS for data creation, manipulation and extraction is stressed as well as optimization techniques, such as view creation and indexing. PL/SQL and database triggers are introduced.

CIS325 - Introduction to Decision Support Systems

This course presents the concept of decision-making within the framework of a contextualized management information system that utilizes databases or spreadsheets as tools in the problem-solving process. The course distinguishes between two logical components of a management information system: the transactional processing systems (TPS) and decision support systems (DSS), in which computer-based systems aid decision-makers in confronting problems through direct interaction with data and analysis models. Some of the topics covered include critical thinking problem-solving through decision support, information requirements diagramming and influence diagramming, modeling, decision-making, frames of references in decision-making, and decision-making techniques such as goal seeking, "What If" scenarios and graphic displays.

Course Descriptions

CIS332 - Web Programming II

This course introduces the student to server-side technologies. Students are required to write and test database driven websites that use both client-side and server-side scripts.

CIS341 - CISCO CCNA 1

This course is designed for the information systems major. It is the first in a series of four CCNA (Cisco Certified Networking Associate) courses. It provides the student with a thorough understanding of basic computer networking concepts.

CIS342 - CISCO CCNA 2

This course is designed for the information systems major. It is the second in a series of four CCNA (Cisco Certified Networking Associate) courses. It provides the student with a thorough understanding of the router basics involved in computer networking.

CIS343 - CISCO CCNA 3

This course is designed for the information systems major. It is the third in a series of four CCNA (CISCO Certified Networking Associate) courses. It provides the student with a thorough understanding of the switching basics and intermediate routing involved in computer networking.

CIS344 - CISCO CCNA 4

This course is designed for the information systems major. It is the fourth in a series of four CCNA (Cisco Certified Networking Associate) courses. It provides the student with a thorough understanding of wide area network (WAN) technologies and their role in computer networking.

CIS352 - Global, Economic and Social Ethical Issues in Computing

This course covers issues related to various global, economic and social frameworks and moves to topics specifically related to computers. Emphasis is placed on the study of ethical situations that arise as a consequence of the development and deployment of computers and related technologies, and also from parties with malicious intents toward prevalent technologies. Topics can include areas such as: security, economics of information systems, computer crime and hacking, computer software ownership, privacy, risks of computing, professional liability, internet freedom in computing and international laws and governance. The course is to be delivered in a writing intensive format, with treatise and arguments communicated effectively to a wide variety of audiences.

CIS354 - Systems Project Management

This course, taken from the latest Model Curriculum for Information Systems (IS 2002), is intended for CIS or CS majors. Building on the systems analysis and design concepts of CIS 299, this course focuses on the management and completion of a systems-software development project. Both technical and behavioral aspects of project management are applied within the context of an information systems development project.

CIS401 - Concepts in Enterprise Resource Planning

This course will provide students an overview of the fundamental business processes/systems used to run organizations and how the increase in their system integration adds value, improves productivity and increases growth. The basic functional areas of business and their related information systems are reviewed with emphasis on identifying opportunities for business process reengineering. ERP software, the latest trends and industry best practices in ERP implementations will be discussed.

CIS402 - Data Analysis Capstone Project

This course is designed for the certificate in Data Science to provide hands-on experience in the area of data science. This experience will enable students to apply their knowledge of data science and provide valuable experience in the application of methods studied within the program that should enhance their job opportunities upon graduation. Students will receive experience with real world data. Analysis will be completed using SAS®

Course Descriptions

CIS419 - CIS Internship

This course is designed for majors in the computing-disciplines who are seeking work experience in a related area. This intern experience will enable the student to apply her/his educational background in his/her field to a real work place. The internship will provide the student with the valuable experience that should enhance the student's job opportunities upon graduation. Prerequisite: Students should have completed 64 credits with a good grade-point average plus have sufficient background to meet the needs of the particular internship in which they will be participating. Variable credits (1-15) depending on the length of the internship and the number of hours devoted to the internship.

CIS474 - Special Topics in Information Systems

This course allows current topics in information systems to be offered to the students in a timely fashion. The topics are not covered in other courses and will not be regularly offered as a special topic. The student is able to take the course several times as long as the course is covering topics different than those already taken. The course topic depends on the current trends in the field of information systems and the interests of the students and the instructor.

CIS-Computer Info Systems

CIS110 - Introduction to Information Systems

This course is an introductory study of information systems. Major topics include: the role and value of information systems, hardware and software used in information systems, managing information and data resources, decision making, and developing information systems.

CIS207 - Data Preparation and Cleaning

This course provides students with an introduction to the need for and methods for data cleaning. The course presents methods for locating and handling invalid values, out-of-range values, and missing values along with methods for managing datasets. The course uses SAS software.

CIS213 - Data Visualization

This course explores techniques and tools for creating effective data visualizations. The course covers the creation and exploration of visualizations for categorical data, time series data, spatial and geospatial data. SAS software will be used for this course.

CIS251 - Big Data Tools

This course covers an introduction to big data analysis tools. The course provides an overview of SAS, Hadoop and other big data tools. The course covers the structure and framework of data analytic tools and covers the use of these tools to perform various analyses.

CIS261 - Big Data Analytics

This course is intended to provide the student with an introduction to big data, big data analytics and several methods useful in big data analytics such as clustering, association rules and various forms of regression. SAS® statistical software will also be introduced and used to solve data problems.

CIS302 - Visual Programming

This course teaches Windows applications programming using the object-oriented event-driven programming paradigm, with the programming language VisualBasic.NET. It is designed as a beginning OOED programming course, but assumes students know Windows object vocabulary, have basic Windows file management skills, and are familiar with the generic procedural programming language constructs of decision structures and looping.

CIS304 - COBOL

This course introduces students to the essential elements of the COBOL language using well-structured programming techniques. Students will write and execute report programs, control break programs, data validation programs, programs that implement tables and sequential update programs. Good analysis, design and structure will be emphasized.

Course Descriptions

CIS308 - Python

This course enables the student to acquire a thorough understanding of the Python language and its application in solving real world problems. Emphasis is placed on efficient software development using structured programming techniques, Object Oriented Programming, GUI interfaces, as well as a variety of Python modules and packages. Students are required to design, write, test, and run programs using an appropriate version of Python.

CIS321 - Data Base Management Systems and Data Base Design

This introductory course to DBMS (Database Management System) provides students with the theory and practice behind the use of modern DBMS. Database terminology and concepts covered include, but are not limited to, the logical and physical design of databases and the tables within them as determined through the analysis of information needs and modeling; the creation of ERD (Entity Relationship Diagrams) and their translation into relational schemas (logical and physical design); normalization techniques; DDL (Data Definition Language) and SQL (Structured Query Language) for database, table, view and index creation; and database performance and optimization.

CIS322 - Data Base Application Development

Building upon the conceptual understanding of a modern DBMS (Database Management System) and database and table design concepts gained in CIS 321 Database Management Systems and Design, this course provides students with the practice of applying database technology via the Oracle DBMS to the solution of business and other information-related problems. Experience is provided with database design and implementation based on a thorough analysis of requirements and information modeling. The use of Structured Query Language (SQL) for interaction with a working DBMS for data creation, manipulation and extraction is stressed as well as optimization techniques, such as view creation and indexing. PL/SQL and database triggers are introduced.

CIS325 - Introduction to Decision Support Systems

This course presents the concept of decision-making within the framework of a contextualized management information system that utilizes databases or spreadsheets as tools in the problem-solving process. The course distinguishes between two logical components of a management information system: the transactional processing systems (TPS) and decision support systems (DSS), in which computer-based systems aid decision-makers in confronting problems through direct interaction with data and analysis models. Some of the topics covered include critical thinking problem-solving through decision support, information requirements diagramming and influence diagramming, modeling, decision-making, frames of references in decision-making, and decision-making techniques such as goal seeking, "What If" scenarios and graphic displays.

CIS332 - Web Programming II

This course introduces the student to server-side technologies. Students are required to write and test database driven websites that use both client-side and server-side scripts.

CIS341 - CISCO CCNA 1

This course is designed for the information systems major. It is the first in a series of four CCNA (Cisco Certified Networking Associate) courses. It provides the student with a thorough understanding of basic computer networking concepts.

CIS342 - CISCO CCNA 2

This course is designed for the information systems major. It is the second in a series of four CCNA (Cisco Certified Networking Associate) courses. It provides the student with a thorough understanding of the router basics involved in computer networking.

CIS343 - CISCO CCNA 3

This course is designed for the information systems major. It is the third in a series of four CCNA (CISCO Certified Networking Associate) courses. It provides the student with a thorough understanding of the switching basics and intermediate routing involved in computer networking.

Course Descriptions

CIS344 - CISCO CCNA 4

This course is designed for the information systems major. It is the fourth in a series of four CCNA (Cisco Certified Networking Associate) courses. It provides the student with a thorough understanding of wide area network (WAN) technologies and their role in computer networking.

CIS352 - Global, Economic and Social Ethical Issues in Computing

This course covers issues related to various global, economic and social frameworks and moves to topics specifically related to computers. Emphasis is placed on the study of ethical situations that arise as a consequence of the development and deployment of computers and related technologies, and also from parties with malicious intents toward prevalent technologies. Topics can include areas such as: security, economics of information systems, computer crime and hacking, computer software ownership, privacy, risks of computing, professional liability, internet freedom in computing and international laws and governance. The course is to be delivered in a writing intensive format, with treatise and arguments communicated effectively to a wide variety of audiences.

CIS354 - Systems Project Management

This course, taken from the latest Model Curriculum for Information Systems (IS 2002), is intended for CIS or CS majors. Building on the systems analysis and design concepts of CIS 299, this course focuses on the management and completion of a systems-software development project. Both technical and behavioral aspects of project management are applied within the context of an information systems development project.

CIS401 - Concepts in Enterprise Resource Planning

This course will provide students an overview of the fundamental business processes/systems used to run organizations and how the increase in their system integration adds value, improves productivity and increases growth. The basic functional areas of business and their related information systems are reviewed with emphasis on identifying opportunities for business process reengineering. ERP software, the latest trends and industry best practices in ERP implementations will be discussed.

CIS402 - Data Analysis Capstone Project

This course is designed for the certificate in Data Science to provide hands-on experience in the area of data science. This experience will enable students to apply their knowledge of data science and provide valuable experience in the application of methods studied within the program that should enhance their job opportunities upon graduation. Students will receive experience with real world data. Analysis will be completed using SAS®

CIS419 - CIS Internship

This course is designed for majors in the computing-disciplines who are seeking work experience in a related area. This intern experience will enable the student to apply her/his educational background in his/her field to a real work place. The internship will provide the student with the valuable experience that should enhance the student's job opportunities upon graduation. Prerequisite: Students should have completed 64 credits with a good grade-point average plus have sufficient background to meet the needs of the particular internship in which they will be participating. Variable credits (1-15) depending on the length of the internship and the number of hours devoted to the internship.

CIS474 - Special Topics in Information Systems

This course allows current topics in information systems to be offered to the students in a timely fashion. The topics are not covered in other courses and will not be regularly offered as a special topic. The student is able to take the course several times as long as the course is covering topics different than those already taken. The course topic depends on the current trends in the field of information systems and the interests of the students and the instructor.

CMD-Communication Disorders

CMD105 - Language and Speech Development

The purpose of this course is to introduce normal language and speech development in children. The course provides theoretical and practical frames of reference for students entering child-centered professions. The foundations of language and speech acquisition, developmental processes requisite to normal speech and

Course Descriptions

language, and means of facilitating normal communicative abilities are all addressed. This course addresses the following content areas as mandated PDE (2005-2006 standards) and contributes to the skills and knowledge as outlined in the Course Matrix: IB, IC, ID, IE, IF, IG, IJ, IIIB. This course has been designed to ensure that students demonstrate required knowledge and skills as outlined in the 2005 ASHA Standards and Implementations for the Certificate of Clinical Competency in Speech-Language Pathology.

CMD108 - Nature of Language

This introductory course is designed for the student who seeks to understand communication in its broadest terms, and in a variety of settings, and including verbal, nonverbal, technological, and cultural communication. The course essentially describes the various forms of communication that occur in everyday life. The student will encounter communication as it occurs in many domains: male-female communication, development of communication in children, the effect of culture on language, the phonemic influence of one's native language on learning English, methods to assess communication skill, self-assessment of his own receptive and expressive vocabularies, animal "language", written language, language vs. codes and icons, technology and communication, language and literacy, non-standard vs sub-standard communication, and normal vs atypical communication. The student will learn about the professional area and responsibilities of the speech-language pathologist who works with individuals of all ages. Taught within a web format, the course provides the student with opportunities to research a multitude of diverse topics related to communication. Sharing his/her personal observations and online research with academic peers on a D2L platform provides an opportunity for first-hand communication with a large, diverse group of communicators.

CMD203 - Phonetics

Introduces practical phonology and phonetics as they apply to the communicative process. The student is required to learn and use the International Phonetic Alphabet. A major focus is on basic human communication processes including (a) anatomical and physiological bases, (b) the physical and psychophysical bases, and (c) linguistic and psycholinguistic aspects. A major theme in this class is to learn about therapeutic intervention strategies, materials and resources used with the speech, language, and voice populations.

CMD216 - Articulation

This course will provide the student with traditional views toward articulation disorders and their assessment and treatment. Current management and assessment procedures will be presented.

CMD220 - Communication Across the Lifespan

This introductory course is designed for the student who seeks to understand communication in its broadest terms, across the lifespan. He/she will do an in-depth analysis of the disease processes and problems that attack individuals in the following age groups: prenatal, natal, post-natal, the 1 to 3 year old, the 3 to 6 year old, the 7 to 12 year old, the 12 to 17 year old, the 18 to 30 year old, the 30 to 55 year old, the 55 to 75 year old, the 75 to 100 year old, and finally the 100+ year old. The student will learn about the professional area and responsibilities of the speech-language pathologist who works with individuals of all ages. Taught within a web format, the course provides the student with opportunities to research a multitude of diverse topics related to communication across lifespan. Sharing his/her personal observations and online research with academic peer on a D2L platform provides an opportunity for first-hand communication with a large, diverse group of communicators. Individual research is primarily submitted through Discussions and Dropbox.

CMD221 - Speech Science

An introductory course in speech science: the study of the physical characteristics of speech, its perception, and its production.

CMD301 - Fundamental Language Disorders in Adults

Primary emphasis is placed on several of the major speech and language disorders in adults including fluency disorders, head injury, learning disabilities, aphasia, dysarthria, apraxia, dementia, and autism/Asperger Syndrome. The student will begin to understand, and/or apply evidenced-based information to form therapeutic strategies related to cognition, communication, emotional/social development, motor development, sensory integration, and adaptation. A major focus is on basic human communication processes including (a) anatomical and physiological bases, (b) the physical and psychosocial bases, and (c) linguistic and psycholinguistic aspects.

Course Descriptions

A major theme in this class is to learn about the characteristics/symptoms of each diagnosis and the therapeutic intervention strategies, materials and resources used with adults with speech and language disorders. Federal entitlements that relate to the provision of specialized service, service options, and equipment for individuals with speech and language disabilities may be introduced as appropriate. Where appropriate, service delivery models (collaboration, co-treatment, integration, pull-out of individuals and groups) will be discussed.

CMD305 - Intro to Audiology

The course will provide the student with an understanding of the genetic and disease processes producing hearing loss in children and adults and the procedures used to assess hearing loss and rehabilitate persons with hearing impairment.

CMD306 - Acoustics/Psychoacoustics

A basic analysis of how sound is generated and measured. In addition, the manner in which the human auditory system encodes sound information and subsequently extracts meaning from it will be investigated.

CMD310 - Anatomy and Physiology

A deep understanding of the structure and function of the human body is critical to the individual who plans to teach, treat professionally or train others. This course addresses both normal and abnormal human anatomy and physiology, and relates variances to disorders and disease processes.

CMD320 - Assessment of Speech and Language

The student learns to select, administer, score, and interpret basic speech and language tests, conduct clinical interviews, and write diagnostic reports based on the results. A major focus is on basic human communication processes including (a) anatomical and physiological bases, (b) the physical and psychophysical bases, and (c) linguistic and psycholinguistic aspects. A major theme in this class is to learn about intervention strategies, materials and resources used with the language, articulation, stuttering and voice.

CMD321 - Common Organic Disorders

This course provides an overview of cleft lip and palate, cerebral palsy, traumatic brain injury, cranio-facial and other syndromes, and autism in children and adults. Emphasis will be placed on identification of and differentiation between the various disorders. Attention is given to speech and language development in children with these disorders, to the nature of the speech and language disorders they may exhibit, and to the differential diagnosis and clinical management by speech-language pathologists in conjunction with specialists from other disciplines. A major focus is on basic human communication processes including (a) anatomical and physiological bases, (b) the physical and psycho-physical bases, and (c) linguistic and psycho-linguistic aspects. Cultural differences in management of these disabilities will also be addressed. A major theme in this class is therapeutic intervention strategies, including materials and resources used with these populations. Federal entitlements that relate to the provision of specialized service, service options, and equipment for individuals with speech and language disabilities will be introduced as appropriate. Where appropriate, service delivery models (collaboration, co-treatment, integration, pull-out of individuals and groups) will be discussed.

CMD322 - Technical Writing in Health Care and Education

This course offers the opportunity for intensive study and practice of the various types of writing skills and responsibilities expected of educators and health care professionals. Areas covered in this course include: research papers, diagnostic report writing, informational letter writing, progress notes, summary reports, treatment plans, IEPs, behavioral goals.

CMD350 - Sign Language and Braille I

This is a course about the various communication codes or languages used (a) by the Deaf (i.e., finger spelling and American Sign Language), (b) the Blind (i.e., Braille) and (c) the deaf-blind (finger Braille). A major focus of this course is to develop the ability to communicate with these three populations by learning and using (a) finger spelling, (b) a minimum of 500 signs, (c) Braille code and (d) finger Braille. Within each of these codes, the student analyzes the various components of language: letter representations, word choices, grammars and conversational strategies. There are two main points of focus in this class: First, to help the student understand that the Deaf and the Blind are very specific subcultures that each hold their own language or code, beliefs,

Course Descriptions

customs, arts, history and folklore. Secondly, to help the student recognize that American Sign Language is a legitimate language, having its own vocabulary, grammar, syntax and pragmatics. This course is for the student who wants to learn entry-level sign language and entry-level Braille.

CMD352 - Sign Language and Braille II

This is a course about the various communication codes or languages used (a) by the Deaf (i.e., finger spelling and American Sign Language), (b) the blind (i.e., Braille), and (c) the deaf-blind (finger Braille). A major focus of this course is to develop the ability to communicate with these three populations which was learned in Sign Language and Braille I. Within each of these codes or languages, the student analyzes the various components of the system: letter representations, word choices, grammars, and conversational strategies. There are two main points of focus in this class: first, to help the student understand that the Deaf and Blind are very specific subcultures that each holds its own communication methods, beliefs, customs, arts, history, and folklore. Secondly, to help the student recognize Sign Language as a legitimate language having its own vocabulary, grammar, syntax, and pragmatics. This course is for the student who already knows entry-level sign language and entry-level Braille and who wants to expand his/her knowledge in both areas. If time permits, a field trip to a school for the deaf, blind, or deaf-blind may be scheduled.

CMD401 - Clinical Practicum: Speech and Hearing Clinic

This course provides introductory exposure to the clinical context in speech-language pathology through “hands on”, face-to-face observation in the Speech and Hearing Clinic. Students are paired with graduate students, and under the direction of a clinical faculty member, assist in evaluation or therapy with clients who present with various speech and language delays and disorders.

CMD402 - Clinical Practicum: Learning and Language Center

The class, resembling a lab experience, provides the undergraduate student with an introductory “hands-on” experience with typically-developing children, as well as children having speech, language, and /or other hearing disorders. Students participate in a guided study to facilitate knowledge of preschool children.

CMD450 - Intro to Clinic Procedures

This course is designed to give the senior-level Communication Disorders student his or her first in-depth view of actual clinical procedures. The major goal of the course is to consider all the issues related to basic/entry-level clinical interaction and to share information with classmates. Topics will include creating an appropriate clinical environment, professional behavior, motivating others, reinforcement principles, legalities of clinical interactions, record keeping, data collection, basic medical terminology, and administering basic speech and hearing screenings. A major focus is on basic human communication processes including (a) anatomical and physiological bases, (b) the physical and psychophysical bases, and (c) linguistic and psycholinguistic aspects. A major theme in this class is to learn about therapeutic intervention strategies, materials, and resources used with the language, articulation, and hard of hearing populations.

COM-Communication Studies

COM141 - Audio Production I

This course covers the fundamentals of radio production, including the theory and use of audio lab equipment, writing and producing various types of basic radio programs, and the study of FCC rules and regulations as they apply to radio broadcasters.

COM220 - Group Communication

This course examines elements and processes in group communication as they are required for making decisions, solving problems, managing conflict, understanding interpersonal influence and interaction, and evaluating leadership roles. Both theoretical and practical guidelines as they apply to group communication are examined. Group projects and experiential learning activities may require participation in service-learning activities outside of class and off campus.

COM242 - Video Production II

This course is designed to prepare a student to perform in the various areas of single-camera electronic field production, including the fundamentals of scripting, planning and budgeting field shoots; gathering audio and

Course Descriptions

video in the field; field lighting; skills and aesthetics of editing field produced video; and the understanding and reading of test equipment for video signals.

COM246 - Radio and Television Announcing

Theories and practice of gathering, evaluating, writing and delivering newscasts, sports, commercials and interviews for radio and television audiences are covered.

COM250 - Oral Communication: Management

Students will develop an awareness of, and an appreciation for, communication in the business world and preparing and presenting oral reports and speeches designed especially for persons who function in organizations, businesses or industries.

COM320 - Intercultural Communication

Students will gain insight into the cultural communication problems of individuals and groups in face-to-face communication and in technologically mediated communication. The course provides description and analysis of cultural factors in communication, such as perception, value systems, language codes and nonverbal communication.

COM325 - Media Literacy

This course explores how media are used by individual, institutions and cultures. Students will apply their enhanced understanding of the media to construct more effective communication.

COM355 - Broadcast Management

Students will develop a working knowledge of the managerial structures of broadcast organization.

COM370 - Public Communication Law and Policy

This course examines the meaning of the speech and press clauses of the First Amendment and the application of those clauses to the formulation of public communication policy. It considers electronic media policy formulation in the areas of commercial speech, contemporary speech controversies, privacy, public interest and evolving communication technologies from the perspectives of statute limitations, court constitutional interpretations, common law, regulatory mandates and international treaties.

COM436 - Public Relations Cases and Problems

In this course students will analyze the methods of the public relations profession found in the case study literature and apply those methods to their own research, and through the investigation of public relations case studies come to understand the strategies and tactics of a public relations campaign. In addition, students will develop analytical skills so that graduates may function in the four primary roles of the public relations practitioner: 1. monitor of public opinion and change; 2. voice of organization's conscience; 3. advocate for organizations, and 4. monitor of organizational policies and programs.

CSC-Computer Science

CSC101 - Personal Productivity Software

This course provides a structured laboratory experience designed to develop and enhance a student's proficiency in using selected Windows microcomputer application software packages.

CSC102 - Problem Solving and Programming Constructs

This course will provide the student with a basic literacy of computers, present problem solving heuristics and structured programming techniques, present language independent data types, operations, programming constructs and statements, introduce arrays and linked lists, and implement fundamental programs using an appropriate programming language.

CSC120 - Problem Solving and Programming Constructs

This course will provide the student with a basic literacy of computers; present problem-solving heuristics and structured programming techniques; present language independent data types, operations, programming

Course Descriptions

constructs and statements; introduce arrays and linked lists; and implement fundamental programs using an appropriate programming language.

CSC124 - Computer Programming I

This course builds on CSC 120. It gives the student a thorough understanding of the presently adopted language so that the student will develop the ability to program in the language. Emphasis is placed on efficient software development using structured programming techniques. Students are required to write, test and run programs.

CSC150 - Introduction to Database Applications

This course is an introductory study of database application software as it is used on a microcomputer. The more commonly used operations of a selected database applications software package will be presented. Introductory database design techniques, queries, forms and reports will be presented. Laboratory assignments and projects will be used to combine database theory and database software to solve information management problems.

CSC199 - Field Experience in Computer Science

This course is designed for the associate degree student majoring in computer science. This course will enable students to apply their knowledge of computers to the real world of computer technology. The field experience will provide the student with an opportunity to see and work with the many aspects of computers in the workplace and should enhance the student's job opportunities when the student graduates..

CSC201 - Internet Concepts

This primarily hands-on course will review computer system concepts, will introduce the student to all facets of the Internet, and will develop a student's proficiency in Web page design and publishing.

CSC216 - Logic and Switching Theory of the Computer

This course provides the student with an in-depth study of the basis of digital computers. Number systems, arithmetic operations, codes, Boolean algebra, Boolean minimization techniques, state transition tables and state transition graphs are discussed. Extensive emphasis is placed on the analysis and synthesis of synchronous and asynchronous combinational networks which form digital computers.

CSC265 - Object-Oriented Programming

Object Oriented Programming- This course teaches object-oriented programming. Object-orientated programming offers a natural method for designing software systems that build on the concepts of data abstraction, information hiding and modularity. Students will design and implement solutions to problems using an object-oriented programming language.

CSC302 - Visual Programming

This course teaches Windows applications programming using the object-oriented event-driven programming paradigm, with the programming language VisualBasic.NET. It is designed as a beginning OOED programming course, but assumes students know Windows object vocabulary, have basic Windows file management skills, and are familiar with the generic procedural programming language constructs of decision structures and looping.

CSC306 - Fortran

The FORTRAN language will be studied. Most of the major programming constructs of FORTRAN will be covered, including assignment statements, loops, decisions, subprograms, arrays, character manipulation and file processing. Comparisons with other languages will be made, and documentation of programs will be emphasized.

CSC308 - Python

This course enables the student to acquire a thorough understanding of the Python language and its application in solving real world problems. Emphasis is placed on efficient software development using structured programming techniques, Object Oriented Programming, GUI interfaces, as well as a variety of Python modules and packages. Students are required to design, write, test, and run programs using an appropriate version of Python.

Course Descriptions

CSC322 - Data Base Application Development

Building upon the conceptual understanding of a modern DBMS (Database Management System) and database and table design concepts gained in CIS 321 – Database Management Systems and Design, this course provides students with the practice of applying database technology via the Oracle DBMS to the solution of business and other information-related problems. Experience is provided with database design and implementation based on a thorough analysis of requirements and information modeling. The use of Structured Query Language (SQL) for interaction with a working DBMS for data creation, manipulation and extraction is stressed as well as optimization techniques, such as view creation and indexing. PL/SQL and database triggers are introduced.

CSC323 - Assembly Language Programming

In this course students will study assembly language. In doing so, students will develop some concepts related to the architecture and operations of the computer. Programs will be written and implemented using the instructions in this assembly language. Constructs such as selection, looping and subprograms will be implemented.

CSC328 - Data Structures

The design, use and programming of data structures, such as stacks, queues, linked lists and binary trees, will be discussed. Sorting and searching methods are also discussed in this course. The analysis of algorithms will be considered as well as the applications of the various data structures.

CSC352 - Global, Economic and Social Ethical Issues in Computing

This course covers issues related to various global, economic and social frameworks and moves to topics specifically related to computers. Emphasis is placed on the study of ethical situations that arise as a consequence of the development and deployment of computers and related technologies, and also from parties with malicious intents toward prevalent technologies. Topics can include areas such as: security, economics of information systems, computer crime and hacking, computer software ownership, privacy, risks of computing, professional liability, internet freedom in computing and international laws and governance. The course is to be delivered in a writing intensive format, with treatise and arguments communicated effectively to a wide variety of audiences.

CSC360 - Analysis of Algorithms

This course covers algorithm analysis theory and techniques. Students learn properties of both efficient and inefficient algorithms. The importance of analyzing algorithms before implementing them will be emphasized. This course will teach the skills necessary to determine the best algorithm for a given problem. We will investigate greedy, graph theoretic, divide and conquer, and distributed algorithms. We will cover both polynomial time algorithms and NP-completeness.

CSC378 - Computer Architecture

This course provides the student with an in-depth study of the organization of the central processing unit, arithmetic logic unit, control unit, instruction formats, and addressing schemes of digital computers. Extensive emphasis is placed on the translation of assembly language instructions into their micro-sequence operations within the control unit and the interconnection and control of registers, arithmetic logic units, memory units, and busses which form the central processing unit and the digital computer.

CSC400 - Operating Systems

This course involves an introductory study of the main elements of an operating system – memory management, process management, device management, and file management. An operating system defines an abstraction of hardware behavior with which programmers can control the hardware. It also manages resource sharing among the computer's users. This course investigates these concepts as well as issues that influence the design of contemporary operating systems, including management of processes, memory, devices, and files. Additional special topics may include scripting, security, fault tolerance, and real-time systems.

CSC419 - Internship

This course is designed for the computer science major who is seeking work experience in the computer science area. This intern experience will enable the student to apply her/his knowledge of computers in the real work-

Course Descriptions

place. The internship will provide the student with the valuable computer experience that should enhance the student's job opportunities upon graduation.

CSC420 - Artificial Intelligence

This course offers a selective survey of key concepts and applications of artificial intelligence and an introduction to a language commonly used for building AI systems.

CSC424 - Numerical Analysis

Numerical Analysis-In this course, various mathematical algorithms and applications relating to the numerical computation are investigated. Topics include: roundoff errors and computer arithmetic; numerical instability; error analysis and estimation; approximation; Gaussian elimination and pivoting strategies for linear systems; numerical integration and numerical solution of differential equations; curve fitting, polynomial approximation; and regression.

CSC455 - Structures of Programming Languages

Students will study the four categories of programming languages: imperative, object-oriented, functional and logic. An in-depth discussion of the imperative languages will be followed by discussions of the other three paradigms. Students will be required to investigate at least one language.

CSC460 - Language Translation

This course studies the design and construction of compilers. Lexical analysis, syntactic analysis and code generation are investigated in detail. Language design, interpreters, semantic analysis, intermediate code generation and code optimization are also considered.

CSC475 - Theory of Languages

This course is an introduction to abstract machine theory, combinatorial systems, computable functions, and formal linguistics. Topics include finite-state machines, regular sets, Turing machines, Chomsky hierarchy grammars and languages. Emphasis is on surveying basic topics and developing an intuitive understanding in the theory of languages.

CSC485 - Special Topics in Computer Science

This course allows current topics in computer science to be offered in a timely fashion. Topics are not covered in other courses and will not be regularly offered as a special topic. The course topic depends on current trends in computer science and the interests of the students and the instructor. This course may be repeated if a different topic is offered.

CSC490 - Senior Project I: Software Engineering

This course introduces students to software engineering. They will study its history, terminology, requirements, specifications and design. The students will write requirements, specifications and design documents and one or more papers on software engineering topics.

CSC492 - Senior Project II

This course is a continuation of the Senior Project I: Software Engineering course and the capstone course of the program. The project proposal developed and designed in the first Senior Project class will be implemented in this course. The student will produce a project users' manual and will demonstrate proficiency in the academic program through the development of the project.

DAN-Dance

DAN131 - Foundations of Dance Technique

Foundations of Dance Technique is designed to provide accessibility to the world of dance for all students, novice or pre-professional. As this course is intended for students with little# no dance training, the class will use lecture, discussion, and studio work to introduce ballet, jazz, and tap, their history, and their aesthetics. The lecture and discussion will help the student recognize and articulate key terminology and criteria for aesthetic judgment in this form of expression. The studio work, including barre exercises and center and traveling sequences, will be

Course Descriptions

performed in small groups as well as individually in order to help the student develop creativity in expressing themselves and a kinesthetic awareness for self-evaluation.

DAN132 - Ballet Technique I

Introductory instruction in the basic techniques applicable to ballet as practiced in western Europe and in the United States is covered. Basic techniques include barre exercises, port de bras and center practice with jumps, beats and turns.

DAN133 - Jazz Technique I

This is an introductory, entry level jazz technique class emphasizing American jazz dance style. The focus of instruction and performance is on developing flexibility, isolation techniques, as well as jazz jumps, kicks and turns necessary for most forms of jazz dance. This course is a 3 credit course and is required for dance minors.

DAN134 - Tap Dance Technique I

This course emphasizes instruction in the basic tap techniques practiced classically and in modern day. Basic techniques include a center warm ups for feet, floor progressions with tap technique and center practice encompassing rhythm and timing elements.

DAN232 - Ballet Technique II

Ballet II is a second level course designed for the development of strength and fluidity through an extension of techniques demonstrated in specialized study and drill. Emphasis is placed on quicker retention of complex combinations. Further emphasis is placed on center floor work to develop the student's artistry, technique, and physical ability in the dance form.

DAN233 - Jazz Technique II

This course is intended for more advanced students who already have a basic understanding of jazz technique. This course will be a resource for improving one's overall technique, improving style, and becoming comfortable with choreographing a solo as a final for the class. Jazz II is intended to be a challenge and opportunity to improve both physically and mentally as a dancer.

DAN260 - Modern Dance

Modern dance is an expressive form of movement which serves to enhance individual creativity and exploration. The class will emphasize creative problem solving through movement and modern dance technique. The development of movement quality, as well as the use of force, time and energy, will be explored while learning the rich history of modern dance.

DAN301 - Theatre Dance I

Introductory, entry-level instruction in the basic elements of period movement/style used in acting and musical theater, as well as social/ballroom, jazz and tap dance, will be presented in this course. Student presentations of these various styles and dance forms used in musical theater will be provided by the instructor and evaluated for credit.

DAN302 - Theatre Dance II

This course will help the dancer develop specific movement skill and style in the area of musical theater. Emphasis will be place on the basic techniques of American modern, jazz and tap forms including those used by Agnes DeMille and Jerome Robbins (American modern), Bob Fosse and Michael Bennett (jazz), as well as Gene Kelly and Gregory Hines (tap).

DAN399 - Dance History

The historical investigation of dance in its traditional, social and theatrical contexts. The student will be expected to give presentations, write papers and take part in group projects and discussions.

Course Descriptions

DMA-Developmental Math

DMA092 - Introductory Algebra

For students whose understanding of algebra is minimal. It may be a terminal course for some, and a preparatory course for further mathematics for others. It starts with signed numbers, and emphasizes the relationship between general arithmetic and algebra. This is not an arithmetic course. This course does not earn credit toward graduation.

Digital Media Technology

DMT100 - Foundations of Print Media

This course offers students an opportunity to understand the practical applications of electronic file preparation as it relates to print production. It covers image design, file conversion, image carrier preparation, image transfer and finishing techniques. Two lecture-hours and three laboratory-hours per week.

DMT101 - Time-based Media

This course focuses on time as an element of design and communication. In design, time usually incorporates changes that can be in the form of an animation, an event, or an action taken by the viewer. This is an introductory-level course for all students who would like to explore the creative use of traditional time-based media and story telling. Students will use non-computer-based media to view, analyze, capture, and express the world around us.

DMT180 - Foundations of Digital Media

This course focuses on the fundamental concepts of digital media technology and typical components including hardware, software, peripheral devices, conventional photography/scanned images, digital photography, bit-mapped and vector based image creation and editing, web pages, video, animation, 3D images, and audio. The application of digital media in business, marketing, education, entertainment and training will be explored. Practical hands-on assignments will be used to reinforce learning.

DMT200 - Print Media Production Processes

This course offers additional experiences in the practical application of digital printing. The student is introduced to the use of digital media as an extension of print media for communications and marketing purposes. The integration and implementation of new printing and imaging technologies that affects day-to-day communication is explained. Practical experiences are gained in digital printing reproduction through laboratory and computer based activities.

DMT220 - Digital Photography

This course emphasizes techniques involved in still photography utilizing a digital camera. It covers the basic aspects of digital camera operation, photographic composition, lighting, photo retouching, tonal correction, and digital output. Practical experiences are gained in the digital manipulation of images through computer-based activities.

DMT225 - Digital Page Layout

This course provides an in-depth study into the page layout - the arrangement of text and images on both printed and digital pages — as a primary tool used by graphic designers to communicate messages in a compelling and memorable way. The emergence of new media — from the Web to interactive eBooks, smartphones, and the iPad — has fundamentally changed the nature of page layout. While fitting static content on a finite page used to be a primary challenge for print layouts, today the task demands that designers incorporate scrolling Web pages, interactivity, sound, animation, movies, slide shows, and other elements that produce multiple dimensions and unlimited depth for a single page.

DMT240 - Vector Based Graphics

The world we live in is filled with all types of visual images whether it be electronically through TVs, computers, or mobile devices, but also through print in advertisements, vehicle wraps, and signage. This course focuses on the creation of artwork using vector-based graphics software typically used in the print and digital media industry. Students will learn how to create, edit, and output vector-based graphics and their integration with other software such as Photoshop and web applications.

Course Descriptions

DMT250 - Digital Imaging

The advanced study of the practical applications of digital editing through means of computer applications. This course emphasizes techniques involved in advanced picture taking, color imaging, and digital image manipulation by means of a computer. It will focus on developing the necessary skills to preparing images for a variety of output methods.

DMT302 - Commercial Print Techniques

An in-depth study of commercial printing applications focusing on the lithographic process incorporating line and halftone reproduction of graphic elements. Assigned projects require students to gain an understanding of the operations of a lithographic press through hands on activities and simulator exercises to reinforce lecture presentations. Production workflow is analyzed and evaluated through class projects. Substrates and inks are studied to show the effect on specific projects,

DMT312 - Specialty Graphics Printing Techniques

This course defines and analyzes the process of screen printing, pad transfer printing, printed electronics and other specialty printing processes. It is an introduction to the various specialty printing applications. Student designed activities are supported by exercises that provide quality and control for the printing process. Emphasis of the course is centered on establishing repeatability of the printing process by controlling variables; digital design and imaging; single and multiple color image design, conversion and transfer; manual and semi-automatic presswork; printing applications of simple and complex close register line images.

DMT320 - Digital Video

This course explores digital video from the inception of an idea to the delivery of the finished video. Students will develop and use their understanding of video concepts, storytelling, camera use, video editing, and exporting to create videos for the Internet, multimedia presentations and video broadcasts. Source footage comes from photos, previously shot footage, or footage shot using the University's equipment or the student's camera and is edited on cross platform systems using commercial video editing software.

DMT330 - Package Printing Processes

This course provides an in-depth study of the processes and techniques involved in the printing and converting of packaging and labeling materials. Laboratory applications include the design, preparation and flexographic printing and converting of various paper, foil and plastic substrates. Emphasis is placed on establishing repeatability of the printing process by controlling variables. Methods and techniques of quality assurance are implemented as an integral part in the production of flexographic printed products.

DMT331 - Web Publishing

This course examines web publishing and what makes an accomplished web designer. Students will design, develop, evaluate, and validate web pages that include HTML language syntax and incorporate elements such as animations, sounds, and video. Students will learn in depth HTML syntax and apply CSS to a webpage's layout and style.

DMT340 - 3D Computer Animation

This course deals with the use of computers to create and animate three-dimensional appearing objects. Topics will include production strategies, basic modeling concepts, rendering, lighting, virtual cameras, and animation. Students will learn the fundamentals in the classroom and apply them in laboratory activities.

DMT342 - Cost Analysis for Digital Media

A critical examination of the operations involved in the production of commercially printed products for the purpose of determining costs of the operations. The procedures necessary to assemble this information to produce estimates of typical printing matter and digital media elements are discussed. The identification and study of cost centers as they relate to the hourly costs and ultimately to the selling price are examined. Students are required to prepare a number of cost estimates for the course.

Course Descriptions

DMT350 - Motion Graphics

In recent years there's been an explosion of opportunities in the industry of motion graphics; they appear in just about every form of popular media today, whether it's online media, network television, video on your cell phone, iPod, DVD, video games. In this course students will gain knowledge and skills in color theory, composition, typography in relation to the motion. These skills will blend with skills traditionally covered in other disciplines like film, visual effects and animation.

DMT360 - Game Development

One of the education and entertaining applications of digital media is gaming and interactive applications. This course teaches students about game design and how to incorporate visual, audio, and character assets into the creation of a game. The course delves into the scripting, development tools, interfaces, and build process necessary to create a finished game.

DMT365 - Color Imaging

Primary emphasis is placed on developing an understanding of the nature of light, the nature of color and the relationship to print reproduction through various printing processes. Conventional and digital color reproduction processes are discussed and supported by laboratory projects. Color and tonal correction methods are employed in the preparation of files for print reproduction.

DMT402 - Advanced Commercial Print Techniques

This course provides advanced, in-depth study of the processes and techniques involved in the printing, finishing and converting of packaging, labeling and commercial materials. Laboratory applications include the design, preparation, printing and finishing of various paper, foil and plastic substrates. Emphasis is placed on establishing repeatability of the printing process by identifying and controlling variables. Multiple-color tonal images such as duotones and process-color images are reproduced by various printing processes. Students learn the importance of accurate proofing and incorporate proofing steps into lab projects. Methods and techniques of quality assurance are implemented as an integral part in the production of advanced printed products.

DMT406 - Digital Workflow and Print Technology

This course will introduce the student to the components and terminology of digital printing and workflow technology as a basis for understanding the applications in field of digital printing. Through a series of research, laboratory and computer-based activities, the student will experience the role of graphical user interfaces and various computer peripherals used to support digital printing and imaging. Variable data printing and multi-channel applications are investigated.

DMT420 - Emerging Technologies in Digital Media Technology

This course involves, but is not limited to, directed study, special projects, institutes, or workshops in Digital Media. Subject areas are organized according to student needs and will be designed to cover theory and/or practices going beyond the scope of regular coursework. Course content is planned cooperatively between the student(s) and the instructor. A course contract is prepared and will include: the objectives to be achieved, the procedures to be followed, any special conditions, the expected findings, and specifications for the evaluation of activities.

DMT431 - Advanced Web Publishing

This course examines web publishing and what makes an accomplished web designer. Students will design, develop, evaluate, and validate web pages that include HTML language syntax and incorporate elements such as animations, sounds, and video. Students will learn in depth HTML syntax and apply CSS to a webpage's layout and style.

DMT445 - Digital Media Project Planning

This course focuses on the application of production management and operations concepts and techniques related to the field of digital media. It is concerned with long-term issues of strategic importance such as equipment investment, plant layout, and organizational structure. Basic concepts of project management methodology will be introduced to provide an understanding of the skills needed to manage teams, schedules and resources as well as to assess and manage risk. The course emphasizes items of day-to-day administrative

Course Descriptions

importance: production planning, scheduling and control; inventory control and purchasing; production cost analysis and quality control.

DMT485 - Senior Seminar

This is an all-encompassing seminar-type course designed to provide seniors in Digital Media Technology (DMT) with opportunities to enhance their knowledge base through collaborative and individual work. Through projects and activities that will vary each time the course is taught, students will work to apply the skills learned in previous courses, develop and refine their skills in project management, and work to a high level of quality and professionalism. Each student is also required to do a major research paper on a particular problem or technology relating to the digital media industry.

DMT495 - Internship

The Digital Media Technology internship is designed to allow students to gain practical employment experience and to build upon the fundamental knowledge and skills that they developed in earlier courses. Student interns will expand their basic knowledge and skills through research efforts, problem solving, and practical applications in a print manufacturing technology-related research or business environment. Students participating in an internship program gain valuable hands-on experience in solving technical problems and in working with people in a real-world setting. Student interns are placed with an organization, which most nearly approximates employment goals. If this is not possible, students are placed in some type of graphics environment, which is available at the time. The intent of the internship is to provide students with practical work experience in an environment in which they will be dealing with real problems requiring real solutions in a relatively short time frame.

EAS-Earth Science

EAS100 - Introduction to Earth Science

This introductory laboratory-oriented earth science course designed to acquaint the student with the four general areas of the earth sciences: astronomy, geology, meteorology, and oceanography. Laboratory activities are designed to enhance student's understanding of elementary scientific concepts in earth science.

EAS104 - Introduction to Meteorology

This course deals with the physics and chemistry of the atmosphere as influenced by the earth-atmosphere interaction. The effects of the physical controls as they alter the elements are emphasized. Basic laws of Physics and Chemistry are emphasized. The construction and analysis of weather maps is an integral part of the laboratory component of the course. Students are expected to visualize, interpret, and investigate various weather phenomena as they relate to the current state of the atmosphere. Basic prediction of future weather conditions is the final culminating experience of the course, after extensive laboratory investigations in both manual and computer settings.

EAS142 - Introduction to Climate Science

In this course the elements and controls of climate are analyzed in a systematic fashion. The physical parameters controlling climate are reviewed, as they relate to physics and chemistry. Various methods and techniques of classifying climates are presented. Climatology is concerned not only with the most frequently occurring types, the average weather, but the infrequent and unusual types as well. Because climatology also analyzes climatic conditions at locations on the earth's surfaces and its effect on human society and/or the environment, the course is geographical in nature. Climates of the past and potential future issues will be discussed. The student will be able to make an informed decision in the form of a research proposal about impending climate change and climate data analysis by the conclusion of the course.

EAS150 - Introduction to Geology

This course introduces students to the physical and chemical nature of the Earth, erosional and tectonic processes that shape the Earth, and geologic history. Laboratory work is an integral part of the course where students will learn how to apply primary methods used in geologic investigations through identification of rock and minerals samples, outcrop observations, collection and analysis of field data, construction and interpretation of maps, graphs and diagrams.

Course Descriptions

EAS163 - Introduction to Oceans and Climate

Oceanography examines the world ocean from an Earth system perspective. Specifically, it is designed to be an introduction in the study of the four main branches of oceanography: (1) geology of the oceanic basins (origins of the oceans, structure and geomorphology of the ocean's floor, methods of investigation); (2) chemistry of the ocean waters; (3) physics of the oceans (currents, waves, tides, etc.); (4) biology of the oceans (marine plants and animals).

EAS200 - Historical Geology

The topic of Historical Geology centers on the principles of Geologic Time. This course is an in-depth study of the geologic history of the earth emphasizing the succession of the major chemical, tectonic and biologic events that have shaped earth history. Interpretation of earth history is based on principles of relative and absolute dating, especially as they are applied to the sedimentary rock record. Laboratory work is a significant emphasis of the course, with hands-on exercises including examination of geologic maps, cross sections and rock and fossil specimens. Field trips are also an integral part of the course and will require you to adjust your schedule to accommodate one or two weekend events.

EAS210 - Introduction to Soils

This introductory course in soil science presents basic concepts of soils including: composition and genesis; physical, chemical, and biological properties; soil water; classification and mapping; soil conservation; management practices; and soil fertility and productivity. It introduces the relation of soil to other environmental concerns such as environmental quality and non-agricultural land use. Emphasis is placed on hands-on exercises including examination of topographic, soil and geologic maps, and soil and rock specimens. Field trips are also an integral part of the course.

EAS230 - Earth Resources

This is a survey course focusing on the diversity of the geologic resources of Earth. Attention is paid to the interaction of all of Earth's surficial systems, particularly the geosphere, hydrosphere and biosphere. Special emphasis will be placed on the mineral and energy resources of Pennsylvania. Students will explore the relation of resources to society and their importance to global and local economies. Lab and field sessions provide additional time for discussion and illustration of topics, as well as providing hands-on experience with selected locales and rock and mineral samples.

EAS245 - Weather Analysis and Forecasting I

Introduction to the application of basic atmospheric concepts on real-time weather data. This course aims to synthesize observational and numerical weather analyses in order to understand weather phenomena on synoptic scale. Topics include: analysis of forces, accelerated reference frames, conservation equations of mass, momentum and energy; scale analysis; pressure coordinates; geostrophic and gradient flow; thermal wind; kinematic description of the wind, trajectories; circulation, vorticity and potential vorticity. The last part of the course will introduce quasi-geostrophic theory applications in synoptic meteorology and introduce concepts of frontogenesis and atmospheric jets.

EAS250 - Volcanology

This course is the study of volcanic processes on Earth and the other terrestrial planets. Topics include a review of igneous materials and eruptive styles, eruption-triggering mechanisms, formation of lava and pyroclastic flow deposits, lahars, volcanic gas, volcanic hazards, and case studies of recent eruptions.

EAS290 - Planetary Geology

An introduction to the geology and geochemistry of the Solar System, with an emphasis on the rocky planets. The course includes an introduction to space exploration and uses imagery and data to present the origins of the solar system, the geology of the planets, asteroids, and their satellites, and how this relates to human advancement and future discovery.

EAS300 - Natural Hazards

This course examines the physical processes responsible for producing natural disasters. Topics covered in the course include types of natural hazards, trends in the frequency and losses from natural hazard events, and

Course Descriptions

spatial variations in risk from natural hazards. These concepts will prepare the student for an understanding of where and why disaster events occur most frequently. The course will present and describe the mechanisms responsible for creating natural disasters. Specifically, the knowledge and theories learned in this course will provide the student with an understanding of the underlying science behind natural disasters.

EAS301 - Professional Development for Geologists

The course develops the students' understanding of career opportunities and expectations in Geology and the sciences. Students learn about the different career tracks in Geological and Environmental industries. Graduate school topics are addressed such as logistics of preparing and applying, expectations, and sub-disciplinary program strengths around the country. Students create resumes, cover letters, and portfolios. They are introduced to networking opportunities and techniques, job search strategies, and interview protocols. The purpose of the course is to develop the whole student as a scientist, but also as a mature, well-prepared professional that can contribute to their employer on the first day on the job.

EAS303 - Hydrology

A survey course about the existence of water on Earth, topics include the occurrence and movement of water, physical and chemical characteristics of water, and climatologic and geologic considerations of surface and subsurface water.

EAS315 - Surface Geology for Land Management

This survey course presents fundamental concepts of soil science, hydrology and hydrogeology, and geomorphology within the broader context of geological surface processes. It combines the common physical principals of hydrologic and atmospheric processes and their interaction with Earth's surface. It addresses soil types and formation, stream and groundwater flow and transport, and landscape development in a framework of historical and current geological processes. Content is presented within the specific context of land use and management especially as it relates to geological resource exploration and extraction, including coal, oil and natural gas, as well as human demands on water resources.

EAS316 - Subsurface Geology for Land Management

This course focuses on evaluation of subsurface geologic conditions necessary for generating conventional and unconventional petroleum systems, coal deposits and other important earth resources. Included are discussions of how these systems form, how these systems are found and evaluated, and the environmental impacts inherent in extracting them.

EAS323 - Atmospheric Instrumentation and Measurement

This upper-division course in meteorology deals with the specifics of data collection and instrument functionality. Time will be spent dealing with proper site selection, the physical mechanisms present within an automated sensor array, and quality control for data collected. Students taking this course should have a detailed understanding of the role each meteorological parameter has in making a weather forecast.

EAS331 - Mineralogy

Minerals make up nearly all of the solid part of our planet, providing us with critical resources. Their behavior, particularly their interactions with the fluid portions of the planet, determines an array of important environmental variables. This course will provide you with an opportunity to learn about minerals and mineral behavior. If you take full advantage of this opportunity, you should complete the course with the ability to apply mineralogical data and tools to geologic and environmental problems. The course is designed as an introduction to the morphology and internal structure of crystals and the chemical and physical characteristics of minerals. Laboratory time is devoted to the study of crystal models and the identification of selected mineral specimens.

EAS333 - Geochemistry

Geochemistry is essential to all aspects of modern earth science. This course provides an introduction to geochemistry for undergraduates pursuing careers in geology, environmental science, and atmospheric sciences. The course combines two distinct topical groupings. The first is an introductory focus on essential geochemical principles of thermodynamics and kinetics, aquatic chemistry, isotope geochemistry, and trace element geochemistry. The second is a deeper pursuit to understand the Earth from a geochemical perspective

Course Descriptions

and includes topics such as formation of the elements; formation of the Earth and solar system; evolution of the crust, mantle and core; weathering and stream chemistry; and ocean chemistry.

EAS342 - Dynamic Meteorology I

This course is an introduction to description and theory of atmospheric motion; analysis of forces, accelerated reference frames, conservation equations of mass, momentum and energy; scale analysis; pressure coordinates; geostrophic and gradient flow; thermal wind; kinematic description of the wind, trajectories; circulation and vorticity. The last part of the course will introduce quasi-geostrophic theory.

EAS343 - Geomorphology

This course involves the study of the origin, history, and characteristics of landforms and landscapes as they are produced by the processes of weathering, mass-wasting, fluvial, glacial, wind, and wave erosion (or a combination of these) acting upon the geological materials and structures of the earth's crust. Field trips are also an integral part of the course.

EAS355 - Geophysics

This course will cover basic theories involving methods of collection and interpretation of several types of geophysical data. Included are the usage of gravitational, electric, and magnetic geophysical surveys, and the instrumentation required to collect these data in a non-invasive and non-destructive manner for both environmental and economic purposes. Seismic methods will also be covered in detail with explanation of how they are utilized in the oil and gas industry for identifying traps and describing reservoir potential. They can also be used for identifying the depth of the water table and locating coal seams, mines, and mineral resources. Ground penetrating radar will also be described with a focus on shallow environmental subsurface issues such as shallow fracture systems and groundwater flow characteristics.

EAS365 - Remote Sensing: Satellite and Radar Interpretation

This course emphasizes the characteristics and scientific role of radar and satellite interpretation, as well as computer-assisted processing of spectral data acquired by satellites, as they relate to atmospheric analysis.

EAS369 - Climate Dynamics

The main goal for this course is to present the working of the climate system as a whole and its critical components (the atmosphere, ocean, sea ice, glaciers, land surface, etc), their complex interactions and feedbacks, and the mechanisms governing natural climate variability (e.g., ENSO) and the climate response to external perturbations (e.g., the increase in greenhouse-gas concentrations). Several important periods in Earth's climate history are explained in terms of natural and anthropogenic forcings and climate system responses. Various scenarios of future climate changes are also discussed.

EAS391 - Geology of the Northwestern US Field Course

Field Geology, an integral part of a geology degree, is best addressed with a focused, immersive approach to expose students to the topics and locations that act as a "live textbook." Generally, western states provide a more accessible location for study of sedimentary layers and geologic structures due to the relatively sparse vegetation. The course is designed for students pursuing geological and environmental earth science careers. Participants will explore spatial relationships of geologic features. Geologic mapping will be introduced, including use of a Brunton Compass for measuring structure and orienteering. A field course focusing on regional geology of northwestern states including, but not limited to Wyoming, Utah, Idaho, and Montana. Students will visit and study geological features such as volcanoes, folds, faults, fossils, igneous intrusions, geysers and hot springs. Additional travel costs may be required.

EAS392 - Geology of the Southwestern US Field Course

Field Geology, an integral part of a geology degree, is best addressed with a focused, immersive approach to expose students to the topics and locations that act as a "live textbook." Generally, western states provide a more accessible location for study of sedimentary layers and geologic structures due to the relatively sparse vegetation. The course is designed for students pursuing geological and environmental earth science careers. Participants will explore spatial relationships of geologic features. Geologic mapping will be introduced, including use of a Brunton Compass for measuring structure and orienteering. A field course focusing on regional geology of

Course Descriptions

southwestern states including, but not limited to Arizona, Utah, New Mexico, and Colorado. Students will visit and study geological features such as volcanoes, folds, faults, fossils, and dune fields. Additional travel costs may be required.

EAS393 - Geology of the Eastern US Field Course

Field Geology, an integral part of a geology degree, is best addressed with a focused, immersive approach to expose students to the topics and locations that act as a “live textbook.” Generally, western states provide a more accessible location for study of sedimentary layers and geologic structures due to the relatively sparse vegetation. The course is designed for students pursuing geological and environmental earth science careers. Participants will explore spatial relationships of geologic features. Geologic mapping will be introduced, including use of a Brunton Compass for measuring structure and orienteering. This field course focuses on regional geology of eastern states. Trips will alternate between trips to the Great Lakes region, the Northeast (especially New England), and the Southeast. Students will visit and study geological features such as metamorphic terrains, folds, faults, fossils, and glacial landscapes. Additional travel costs may be required.

EAS402 - Groundwater Hydrology

This course is designed as a follow-up course to Hydrology. Students will have the opportunity to study and apply the principles governing the movement and occurrence of water in the subsurface. Emphasis is placed on the physics and engineering principles as they relate to groundwater for water supplies as well as related to contamination issues.

EAS414 - Synoptic Climatology

Synoptic climatology studies the relationship between the atmospheric circulation and the surface environment while focusing on longer term interactions. The course draws on content from introductory Climatology to indoctrinate the student in a physical environmental analysis via weather map patterns. This culminates in a semester-long research project. The project requires use of simple to complex statistical procedures and appropriate research methods. The course will demonstrate how surface environmental variables such as air/water quality, acid rain, and drought can be understood in terms of various atmospheric circulation states and synoptic weather types. Finally, forecasting projects and competitions will also be undertaken to extrapolate the immediate relevance of Synoptic Climatology in long-term forecasting applications.

EAS419 - Applied Climatology

This course examines the effect of climate on the physical, biological, and cultural environments and includes both present-day and future (re: Climate change) relationships. Part of the course will examine current practices/methodological developments that represent the basic “tools” which underpin applied climatological research. Significant time will be spent investigating the relationship between climate/climate change and a wide range of human activities and responses. This course is a “writing intensive” course, as defined by California University of Pennsylvania. Therefore, many topical discussions, research investigations and climate diagnostic analyses will require writing with the opportunity for the student to revise their original work.

EAS425 - Structural Geology

This course deals with the origin and analysis of geologic structures including folds, faults, and joints. Brittle and ductile deformation processes are examined in relation to fractures, faults, and folds. Geologic maps and cross-sections are formulated and analyzed.

EAS427 - Tectonics

Tectonics is the study of Earth’s lithospheric plates and their interrelationships of motion and collision. The focus of the course is on macroscopic issues related to plate motion and specific plate relationships, which elucidate the historical geologic record, shape the landscape, and effect the distribution of resources and hazards. The goal of the course is to evaluate tectonic theories within a framework of worldwide historical geology but with an emphasis on the Appalachian and the North American Cordilleran orogenic events.

EAS429 - Petroleum Geology

This course deals with the processes that lead to generation of hydrocarbons and the accumulation of an economically sufficient amount of petroleum and/or natural gas to warrant extraction. Emphasis is placed on the

Course Descriptions

economics of all types of hydrocarbon deposit including both conventional and unconventional accumulations of liquid, solid, and gaseous hydrocarbons. In addition to the science of formation, attention will also be given to the future societal impacts of reliance on hydrocarbons as a source of energy. This is intended as a course for geology or energy-related majors, and a student will need an understanding of basic geologic principles. Students will be introduced to all parts of the petroleum system and extraction process. Well log analysis and site evaluation activities will be an integral part of the course and will give students a well-rounded view of the science and economics of the petroleum system.

EAS432 - Broadcast Practicum II

The course is a continuation of EAS 431 which augments the previous course's objectives with a greater emphasis on individualized performances on-camera and in weather communications skills as a station scientist. Students are expected to generate their own accurate weather-climate forecast with ability to construct an effective set of visual slides/tools to augment their weather narrative. The course consists of weekly lecture/lab meetings and one-on-one critiquing/coaching by the instructor and their peers to develop and improve descriptive science language. Greater importance is placed on peer-to-peer analysis and critique. Individualized projects from out-of-classroom experiences are required. Students are also expected to work in assigned group projects relating to weather-science docu-dramas. Finally, students will be assessed on a final digital portfolio from their semester-long performances and their analysis of the job market at the present time.

EAS437 - Field Methods in Geology

This course provides students with knowledge of geologic problems encountered in fieldwork and the techniques utilized to solve those problems. The student is exposed to geologic and topographic maps as well as various geologic instruments. The course consists of planned trips with overnight stays to areas of geologic interest.

EAS438 - Computer Applications in Earth Sciences

This upper-level course introduces the principles of computational methods and numerical modeling in the Earth Sciences. Students will use modern computational techniques and tools to solve real-world problems. The course is designed to provide students the opportunity to apply computer and mathematical procedures to the solution of Earth and Environmental Science problems. Emphasis is placed on hydrologic systems, including groundwater, surface water, and atmospheric water. Particular attention is paid to modeling natural systems using a range of techniques and software packages. Additional topics in the Earth Sciences may be addressed, including global climate and geophysical models. A written project will be required.

EAS441 - Advanced Environmental Geology

This course deals with the natural environment, particularly geologic factors that may impact upon human life or way of life. Emphasis is placed on an in-depth study of environmental problems and possible alternative solutions to such problems. Basic engineering principles as applied to geological problems are considered.

EAS448 - Watershed Evaluation

This course introduces students to the hydrology and management concepts of watersheds. The course will cover the physical nature of water (quantity and quality) as well as water balance of systems, the morphology and ecology of fluvial systems including hillslopes, floodplains, and riparian corridors, and the intersection of water with land use and human activities. The course places these concepts in the context of water issues that affect water supply, land use, ecosystem health, and human engineering of the natural environment. Lectures, laboratory exercises and problems, field reports and a research paper are an integral part of the course.

EAS449 - Mesoscale Meteorology

Introduction to the structure and dynamics of mesoscale weather phenomena. This course aims to synthesize observational and numerical modeling studies of mesoscale weather phenomena. Topics include: mesoscale instabilities, boundary layer dynamics, low-level jets, air mass boundaries, deep moist convection, supercell thunderstorms and tornadogenesis. The last part of the course introduces severe weather associated with deep moist convection.

Course Descriptions

EAS455 - Geochronology

This course focuses on the various techniques used in the earth sciences to provide accurate quantitative ages for terrestrial and extraterrestrial rocks and minerals. Earth and planetary science is gradually becoming more dependent on accurate ages from natural materials and essentially all sub disciplines in earth science can benefit directly from these analyses. An understanding of the limitations and advantages involved with the various styles of geochronologic dating is critical to the successful determination of which method to employ in each different setting. In addition, various techniques related to utilization of geochronologic datasets in tectonic reconstructions and planetary geology will also be emphasized. The ability to critically evaluate peer-reviewed literature utilizing geochronologic methodology will be a core component of the course.

EAS491 - Field Course in Earth Science

This course is designed for the serious earth science student who desires to apply his/her classroom knowledge to specific sites and earth science field problems. In each semester a flexible plan will include trips with overnight stays to various sites at which geologic, meteorological, or oceanographic processes, principles, and phenomena can be studied. The student will be required to take essay tests and to write research papers based on field trips.

EAS492 - Field Course in Geology

This course provides the opportunity for a student to identify an unanswered question regarding geologic phenomena including hydrologic, geochemical, structural, and petrographic studies and thoroughly answer that question using rigorous field methodology and efficient data analysis practices. Students will personally collect meaningful and original datasets to answer their self-defined research question, analyze their data, and disseminate the results to their peers and select professionals to gain experience with field methodologies and the processes of scientific research.

EAS542 - Applied Climatology

This course examines the effect of climate on the physical, biological and cultural environments and includes an analysis of historical (paleo-climatic), present-day and future relationships. Part of the course will examine current practices/methodological developments which represent the basic "tools" that underpin applied climatological research, many of which are statistical in nature. Significant time will be spent investigating the relationship between climate and a wide range of human activities and responses.

EAS-Earth Science

EAS100 - Introduction to Earth Science

This introductory laboratory-oriented earth science course designed to acquaint the student with the four general areas of the earth sciences: astronomy, geology, meteorology, and oceanography. Laboratory activities are designed to enhance student's understanding of elementary scientific concepts in earth science.

EAS104 - Introduction to Meteorology

This course deals with the physics and chemistry of the atmosphere as influenced by the earth-atmosphere interaction. The effects of the physical controls as they alter the elements are emphasized. Basic laws of Physics and Chemistry are emphasized. The construction and analysis of weather maps is an integral part of the laboratory component of the course. Students are expected to visualize, interpret, and investigate various weather phenomena as they relate to the current state of the atmosphere. Basic prediction of future weather conditions is the final culminating experience of the course, after extensive laboratory investigations in both manual and computer settings.

EAS142 - Introduction to Climate Science

In this course the elements and controls of climate are analyzed in a systematic fashion. The physical parameters controlling climate are reviewed, as they relate to physics and chemistry. Various methods and techniques of classifying climates are presented. Climatology is concerned not only with the most frequently occurring types, the average weather, but the infrequent and unusual types as well. Because climatology also analyzes climatic conditions at locations on the earth's surfaces and its effect on human society and/or the environment, the course is geographical in nature. Climates of the past and potential future issues will be discussed. The student will be able to make an informed decision in the form of a research proposal about impending climate change and climate data analysis by the conclusion of the course.

Course Descriptions

EAS150 - Introduction to Geology

This course introduces students to the physical and chemical nature of the Earth, erosional and tectonic processes that shape the Earth, and geologic history. Laboratory work is an integral part of the course where students will learn how to apply primary methods used in geologic investigations through identification of rock and minerals samples, outcrop observations, collection and analysis of field data, construction and interpretation of maps, graphs and diagrams.

EAS163 - Introduction to Oceans and Climate

Oceanography examines the world ocean from an Earth system perspective. Specifically, it is designed to be an introduction in the study of the four main branches of oceanography: (1) geology of the oceanic basins (origins of the oceans, structure and geomorphology of the ocean's floor, methods of investigation); (2) chemistry of the ocean waters; (3) physics of the oceans (currents, waves, tides, etc.); (4) biology of the oceans (marine plants and animals).

EAS200 - Historical Geology

The topic of Historical Geology centers on the principles of Geologic Time. This course is an in-depth study of the geologic history of the earth emphasizing the succession of the major chemical, tectonic and biologic events that have shaped earth history. Interpretation of earth history is based on principles of relative and absolute dating, especially as they are applied to the sedimentary rock record. Laboratory work is a significant emphasis of the course, with hands-on exercises including examination of geologic maps, cross sections and rock and fossil specimens. Field trips are also an integral part of the course and will require you to adjust your schedule to accommodate one or two weekend events.

EAS210 - Introduction to Soils

This introductory course in soil science presents basic concepts of soils including: composition and genesis; physical, chemical, and biological properties; soil water; classification and mapping; soil conservation; management practices; and soil fertility and productivity. It introduces the relation of soil to other environmental concerns such as environmental quality and non-agricultural land use. Emphasis is placed on hands-on exercises including examination of topographic, soil and geologic maps, and soil and rock specimens. Field trips are also an integral part of the course.

EAS230 - Earth Resources

This is a survey course focusing on the diversity of the geologic resources of Earth. Attention is paid to the interaction of all of Earth's surficial systems, particularly the geosphere, hydrosphere and biosphere. Special emphasis will be placed on the mineral and energy resources of Pennsylvania. Students will explore the relation of resources to society and their importance to global and local economies. Lab and field sessions provide additional time for discussion and illustration of topics, as well as providing hands-on experience with selected locales and rock and mineral samples.

EAS245 - Weather Analysis and Forecasting I

Introduction to the application of basic atmospheric concepts on real-time weather data. This course aims to synthesize observational and numerical weather analyses in order to understand weather phenomena on synoptic scale. Topics include: analysis of forces, accelerated reference frames, conservation equations of mass, momentum and energy; scale analysis; pressure coordinates; geostrophic and gradient flow; thermal wind; kinematic description of the wind, trajectories; circulation, vorticity and potential vorticity. The last part of the course will introduce quasi-geostrophic theory applications in synoptic meteorology and introduce concepts of frontogenesis and atmospheric jets.

EAS250 - Volcanology

This course is the study of volcanic processes on Earth and the other terrestrial planets. Topics include a review of igneous materials and eruptive styles, eruption-triggering mechanisms, formation of lava and pyroclastic flos deposits, lahars, volcanic gas, volcanic hazards, and case studies of recent eruptions.

Course Descriptions

EAS290 - Planetary Geology

An introduction to the geology and geochemistry of the Solar System, with an emphasis on the rocky planets. The course includes an introduction to space exploration and uses imagery and data to present the origins of the solar system, the geology of the planets, asteroids, and their satellites, and how this relates to human advancement and future discovery.

EAS300 - Natural Hazards

This course examines the physical processes responsible for producing natural disasters. Topics covered in the course include types of natural hazards, trends in the frequency and losses from natural hazard events, and spatial variations in risk from natural hazards. These concepts will prepare the student for an understanding of where and why disaster events occur most frequently. The course will present and describe the mechanisms responsible for creating natural disasters. Specifically, the knowledge and theories learned in this course will provide the student with an understanding of the underlying science behind natural disasters.

EAS301 - Professional Development for Geologists

The course develops the students' understanding of career opportunities and expectations in Geology and the sciences. Students learn about the different career tracks in Geological and Environmental industries. Graduate school topics are addressed such as logistics of preparing and applying, expectations, and sub-disciplinary program strengths around the country. Students create resumes, cover letters, and portfolios. They are introduced to networking opportunities and techniques, job search strategies, and interview protocols. The purpose of the course is to develop the whole student as a scientist, but also as a mature, well-prepared professional that can contribute to their employer on the first day on the job.

EAS303 - Hydrology

A survey course about the existence of water on Earth, topics include the occurrence and movement of water, physical and chemical characteristics of water, and climatologic and geologic considerations of surface and subsurface water.

EAS315 - Surface Geology for Land Management

This survey course presents fundamental concepts of soil science, hydrology and hydrogeology, and geomorphology within the broader context of geological surface processes. It combines the common physical principals of hydrologic and atmospheric processes and their interaction with Earth's surface. It addresses soil types and formation, stream and groundwater flow and transport, and landscape development in a framework of historical and current geological processes. Content is presented within the specific context of land use and management especially as it relates to geological resource exploration and extraction, including coal, oil and natural gas, as well as human demands on water resources.

EAS316 - Subsurface Geology for Land Management

This course focuses on evaluation of subsurface geologic conditions necessary for generating conventional and unconventional petroleum systems, coal deposits and other important earth resources. Included are discussions of how these systems form, how these systems are found and evaluated, and the environmental impacts inherent in extracting them.

EAS323 - Atmospheric Instrumentation and Measurement

This upper-division course in meteorology deals with the specifics of data collection and instrument functionality. Time will be spent dealing with proper site selection, the physical mechanisms present within an automated sensor array, and quality control for data collected. Students taking this course should have a detailed understanding of the role each meteorological parameter has in making a weather forecast.

EAS331 - Mineralogy

Minerals make up nearly all of the solid part of our planet, providing us with critical resources. Their behavior, particularly their interactions with the fluid portions of the planet, determines an array of important environmental variables. This course will provide you with an opportunity to learn about minerals and mineral behavior. If you take full advantage of this opportunity, you should complete the course with the ability to apply mineralogical data and tools to geologic and environmental problems. The course is designed as an introduction to the morphology

Course Descriptions

and internal structure of crystals and the chemical and physical characteristics of minerals. Laboratory time is devoted to the study of crystal models and the identification of selected mineral specimens.

EAS333 - Geochemistry

Geochemistry is essential to all aspects of modern earth science. This course provides an introduction to geochemistry for undergraduates pursuing careers in geology, environmental science, and atmospheric sciences. The course combines two distinct topical groupings. The first is an introductory focus on essential geochemical principles of thermodynamics and kinetics, aquatic chemistry, isotope geochemistry, and trace element geochemistry. The second is a deeper pursuit to understand the Earth from a geochemical perspective and includes topics such as formation of the elements; formation of the Earth and solar system; evolution of the crust, mantle and core; weathering and stream chemistry; and ocean chemistry.

EAS342 - Dynamic Meteorology I

This course is an introduction to description and theory of atmospheric motion; analysis of forces, accelerated reference frames, conservation equations of mass, momentum and energy; scale analysis; pressure coordinates; geostrophic and gradient flow; thermal wind; kinematic description of the wind, trajectories; circulation and vorticity. The last part of the course will introduce quasi-geostrophic theory.

EAS343 - Geomorphology

This course involves the study of the origin, history, and characteristics of landforms and landscapes as they are produced by the processes of weathering, mass-wasting, fluvial, glacial, wind, and wave erosion (or a combination of these) acting upon the geological materials and structures of the earth's crust. Field trips are also an integral part of the course.

EAS355 - Geophysics

This course will cover basic theories involving methods of collection and interpretation of several types of geophysical data. Included are the usage of gravitational, electric, and magnetic geophysical surveys, and the instrumentation required to collect these data in a non-invasive and non-destructive manner for both environmental and economic purposes. Seismic methods will also be covered in detail with explanation of how they are utilized in the oil and gas industry for identifying traps and describing reservoir potential. They can also be used for identifying the depth of the water table and locating coal seams, mines, and mineral resources. Ground penetrating radar will also be described with a focus on shallow environmental subsurface issues such as shallow fracture systems and groundwater flow characteristics.

EAS365 - Remote Sensing: Satellite and Radar Interpretation

This course emphasizes the characteristics and scientific role of radar and satellite interpretation, as well as computer-assisted processing of spectral data acquired by satellites, as they relate to atmospheric analysis.

EAS369 - Climate Dynamics

The main goal for this course is to present the working of the climate system as a whole and its critical components (the atmosphere, ocean, sea ice, glaciers, land surface, etc), their complex interactions and feedbacks, and the mechanisms governing natural climate variability (e.g., ENSO) and the climate response to external perturbations (e.g., the increase in greenhouse-gas concentrations). Several important periods in Earth's climate history are explained in terms of natural and anthropogenic forcings and climate system responses. Various scenarios of future climate changes are also discussed.

EAS391 - Geology of the Northwestern US Field Course

Field Geology, an integral part of a geology degree, is best addressed with a focused, immersive approach to expose students to the topics and locations that act as a "live textbook." Generally, western states provide a more accessible location for study of sedimentary layers and geologic structures due to the relatively sparse vegetation. The course is designed for students pursuing geological and environmental earth science careers. Participants will explore spatial relationships of geologic features. Geologic mapping will be introduced, including use of a Brunton Compass for measuring structure and orienteering. A field course focusing on regional geology of northwestern states including, but not limited to Wyoming, Utah, Idaho, and Montana. Students will visit and

Course Descriptions

study geological features such as volcanoes, folds, faults, fossils, igneous intrusions, geysers and hot springs. Additional travel costs may be required.

EAS392 - Geology of the Southwestern US Field Course

Field Geology, an integral part of a geology degree, is best addressed with a focused, immersive approach to expose students to the topics and locations that act as a “live textbook.” Generally, western states provide a more accessible location for study of sedimentary layers and geologic structures due to the relatively sparse vegetation. The course is designed for students pursuing geological and environmental earth science careers. Participants will explore spatial relationships of geologic features. Geologic mapping will be introduced, including use of a Brunton Compass for measuring structure and orienteering. A field course focusing on regional geology of southwestern states including, but not limited to Arizona, Utah, New Mexico, and Colorado. Students will visit and study geological features such as volcanoes, folds, faults, fossils, and dune fields. Additional travel costs may be required.

EAS393 - Geology of the Eastern US Field Course

Field Geology, an integral part of a geology degree, is best addressed with a focused, immersive approach to expose students to the topics and locations that act as a “live textbook.” Generally, western states provide a more accessible location for study of sedimentary layers and geologic structures due to the relatively sparse vegetation. The course is designed for students pursuing geological and environmental earth science careers. Participants will explore spatial relationships of geologic features. Geologic mapping will be introduced, including use of a Brunton Compass for measuring structure and orienteering. This field course focuses on regional geology of eastern states. Trips will alternate between trips to the Great Lakes region, the Northeast (especially New England), and the Southeast. Students will visit and study geological features such as metamorphic terrains, folds, faults, fossils, and glacial landscapes. Additional travel costs may be required.

EAS402 - Groundwater Hydrology

This course is designed as a follow-up course to Hydrology. Students will have the opportunity to study and apply the principles governing the movement and occurrence of water in the subsurface. Emphasis is placed on the physics and engineering principles as they relate to groundwater for water supplies as well as related to contamination issues.

EAS414 - Synoptic Climatology

Synoptic climatology studies the relationship between the atmospheric circulation and the surface environment while focusing on longer term interactions. The course draws on content from introductory Climatology to indoctrinate the student in a physical environmental analysis via weather map patterns. This culminates in a semester-long research project. The project requires use of simple to complex statistical procedures and appropriate research methods. The course will demonstrate how surface environmental variables such as air/water quality, acid rain, and drought can be understood in terms of various atmospheric circulation states and synoptic weather types. Finally, forecasting projects and competitions will also be undertaken to extrapolate the immediate relevance of Synoptic Climatology in long-term forecasting applications.

EAS419 - Applied Climatology

This course examines the effect of climate on the physical, biological, and cultural environments and includes both present-day and future (re: Climate change) relationships. Part of the course will examine current practices/methodological developments that represent the basic “tools” which underpin applied climatological research. Significant time will be spent investigating the relationship between climate/climate change and a wide range of human activities and responses. This course is a “writing intensive” course, as defined by California University of Pennsylvania. Therefore, many topical discussions, research investigations and climate diagnostic analyses will require writing with the opportunity for the student to revise their original work.

EAS425 - Structural Geology

This course deals with the origin and analysis of geologic structures including folds, faults, and joints. Brittle and ductile deformation processes are examined in relation to fractures, faults, and folds. Geologic maps and cross-sections are formulated and analyzed.

Course Descriptions

EAS427 - Tectonics

Tectonics is the study of Earth's lithospheric plates and their interrelationships of motion and collision. The focus of the course is on macroscopic issues related to plate motion and specific plate relationships, which elucidate the historical geologic record, shape the landscape, and effect the distribution of resources and hazards. The goal of the course is to evaluate tectonic theories within a framework of worldwide historical geology but with an emphasis on the Appalachian and the North American Cordilleran orogenic events.

EAS429 - Petroleum Geology

This course deals with the processes that lead to generation of hydrocarbons and the accumulation of an economically sufficient amount of petroleum and/or natural gas to warrant extraction. Emphasis is placed on the economics of all types of hydrocarbon deposit including both conventional and unconventional accumulations of liquid, solid, and gaseous hydrocarbons. In addition to the science of formation, attention will also be given to the future societal impacts of reliance on hydrocarbons as a source of energy. This is intended as a course for geology or energy-related majors, and a student will need an understanding of basic geologic principles. Students will be introduced to all parts of the petroleum system and extraction process. Well log analysis and site evaluation activities will be an integral part of the course and will give students a well-rounded view of the science and economics of the petroleum system.

EAS432 - Broadcast Practicum II

The course is a continuation of EAS 431 which augments the previous course's objectives with a greater emphasis on individualized performances on-camera and in weather communications skills as a station scientist. Students are expected to generate their own accurate weather-climate forecast with ability to construct an effective set of visual slides/tools to augment their weather narrative. The course consists of weekly lecture/lab meetings and one-on-one critiquing/coaching by the instructor and their peers to develop and improve descriptive science language. Greater importance is placed on peer-to-peer analysis and critique. Individualized projects from out-of-classroom experiences are required. Students are also expected to work in assigned group projects relating to weather-science docu-dramas. Finally, students will be assessed on a final digital portfolio from their semester-long performances and their analysis of the job market at the present time.

EAS437 - Field Methods in Geology

This course provides students with knowledge of geologic problems encountered in fieldwork and the techniques utilized to solve those problems. The student is exposed to geologic and topographic maps as well as various geologic instruments. The course consists of planned trips with overnight stays to areas of geologic interest.

EAS438 - Computer Applications in Earth Sciences

This upper-level course introduces the principles of computational methods and numerical modeling in the Earth Sciences. Students will use modern computational techniques and tools to solve real-world problems. The course is designed to provide students the opportunity to apply computer and mathematical procedures to the solution of Earth and Environmental Science problems. Emphasis is placed on hydrologic systems, including groundwater, surface water, and atmospheric water. Particular attention is paid to modeling natural systems using a range of techniques and software packages. Additional topics in the Earth Sciences may be addressed, including global climate and geophysical models. A written project will be required.

EAS441 - Advanced Environmental Geology

This course deals with the natural environment, particularly geologic factors that may impact upon human life or way of life. Emphasis is placed on an in-depth study of environmental problems and possible alternative solutions to such problems. Basic engineering principles as applied to geological problems are considered.

EAS448 - Watershed Evaluation

This course introduces students to the hydrology and management concepts of watersheds. The course will cover the physical nature of water (quantity and quality) as well as water balance of systems, the morphology and ecology of fluvial systems including hillslopes, floodplains, and riparian corridors, and the intersection of water with land use and human activities. The course places these concepts in the context of water issues that affect water supply, land use, ecosystem health, and human engineering of the natural environment. Lectures, laboratory exercises and problems, field reports and a research paper are an integral part of the course.

Course Descriptions

EAS449 - Mesoscale Meteorology

Introduction to the structure and dynamics of mesoscale weather phenomena. This course aims to synthesize observational and numerical modeling studies of mesoscale weather phenomena. Topics include: mesoscale instabilities, boundary layer dynamics, low-level jets, air mass boundaries, deep moist convection, supercell thunderstorms and tornadogenesis. The last part of the course introduces severe weather associated with deep moist convection.

EAS455 - Geochronology

This course focuses on the various techniques used in the earth sciences to provide accurate quantitative ages for terrestrial and extraterrestrial rocks and minerals. Earth and planetary science is gradually becoming more dependent on accurate ages from natural materials and essentially all sub disciplines in earth science can benefit directly from these analyses. An understanding of the limitations and advantages involved with the various styles of geochronologic dating is critical to the successful determination of which method to employ in each different setting. In addition, various techniques related to utilization of geochronologic datasets in tectonic reconstructions and planetary geology will also be emphasized. The ability to critically evaluate peer-reviewed literature utilizing geochronologic methodology will be a core component of the course.

EAS491 - Field Course in Earth Science

This course is designed for the serious earth science student who desires to apply his/her classroom knowledge to specific sites and earth science field problems. In each semester a flexible plan will include trips with overnight stays to various sites at which geologic, meteorological, or oceanographic processes, principles, and phenomena can be studied. The student will be required to take essay tests and to write research papers based on field trips.

EAS492 - Field Course in Geology

This course provides the opportunity for a student to identify an unanswered question regarding geologic phenomena including hydrologic, geochemical, structural, and petrographic studies and thoroughly answer that question using rigorous field methodology and efficient data analysis practices. Students will personally collect meaningful and original datasets to answer their self-defined research question, analyze their data, and disseminate the results to their peers and select professionals to gain experience with field methodologies and the processes of scientific research.

EAS542 - Applied Climatology

This course examines the effect of climate on the physical, biological and cultural environments and includes an analysis of historical (paleo-climatic), present-day and future relationships. Part of the course will examine current practices/methodological developments which represent the basic "tools" that underpin applied climatological research, many of which are statistical in nature. Significant time will be spent investigating the relationship between climate and a wide range of human activities and responses.

ECO-Economics

ECO100 - Elements of Economics

An introduction to the elements of economic analysis, structured particularly for the non-major. The student is exposed to the rational self-interest model of human behavior, the mechanics of the market system and a survey of modern macroeconomic theory and policy. Emphasis is placed on examples from everyday life whenever possible.

ECO102 - Economics for Elementary Education Majors

This course provides an introduction to the fundamentals of economics focusing on a basic understanding of the economic way of thinking, markets, economic efficiency, market failures, the business cycle and macroeconomic policy.

ECO200 - Current Economic Issues

An application of contemporary economic principles. Current readings in economics are examined.

Course Descriptions

ECO201 - Principles of Microeconomics

This course focuses on explaining the economic choices made by individuals, households and firms. Topics to be covered will include: consumer choice, supply and demand and markets, production and costs, economic efficiency, and market structure.

ECO202 - Principles of Macroeconomics

This course is an introduction to the study of the economy as a whole. Important topics include the determination of national income, the problems of inflation and unemployment, international trade, and economic growth. Simple models used to study the macroeconomy will be introduced and used to study changes in key variables. Emphasis is placed on the roles of monetary and fiscal policy in the conduct of macroeconomic policy.

ECO301 - Intermediate Microeconomics

The purpose of this course is to develop the analytical skills required for dealing with problems of economic behavior and resource allocation, along with an appreciation of the methodological issues involved in modern economic analysis. It covers the traditional body of microeconomic theory, including: utility theory and consumer behavior, the analysis of production and the behavior of the firm, coordination in product and factor markets under perfect competition, and (time permitting) the impact on market operations of monopoly, imperfect competition, externalities, asymmetric information, and public goods.

ECO302 - Intermediate Macroeconomics

This course further explores the theories of economic growth, unemployment, inflation, and business cycles, and traces the evolution of macroeconomic thought from Keynes to the modern day. A particular emphasis will be placed on the key features of modern macroeconomic theory and the conduct of fiscal and monetary policy.

ECO304 - Money and Banking

This course discusses the relationship of money and credit to economic activity and prices as well as the impact of public policy in financial markets and the markets for goods and services. The policies, structure and functions of the Federal Reserve System, and the organization, operations and functions of the commercial banking system, as related to questions of economic stability and public policy, are also covered.

ECO308 - Public Finance

This course studies the role of federal, state and local governments in the economy. Topics include the role of government in society and markets, tax theory and policy, government expenditures, public debt management, cost-benefit analysis, income redistribution, and the economics of voting and politics (public choice theory).

ECO311 - Labor Economics

This course will examine labor markets, focusing on the determination of labor demand and labor supply, and the resulting equilibrium wages and employment levels. The effect of job characteristics and investments in human capital, such as education, on wages will also be examined. The effects of different compensation schemes on productivity, labor market discrimination based on gender and race, and unemployment will also be studied. This course will examine these issues both theoretically and empirically. The course will stress the application of economic theory to important policy issues such as minimum wage laws, manpower policies, welfare policies, occupational health and safety standards, immigration laws, and anti-discrimination policies.

ECO315 - Health Economics

This course explores the application of economic principles and models to various topics in the areas of health, insurance, and health policy. How do we "produce" health? How is health economics different from other areas of economics? The course will examine the role of market failures and government interventions in the market for health insurance and the provision of social insurance.

ECO331 - Urban Economics

This course introduces students to regional economic analysis: theories of city locations and hierarchies, industrial location patterns, land-use patterns, the short-run impact of industrial change upon employment in one community and on long-run differentials of per capita income between regions. This first part of the course focuses on the determinants of location of economic activity within and between urban areas. Topics include comparative

Course Descriptions

advantage and regions, urbanization and economic growth in the US, and the theoretical analysis of regional structure. The second part of the course uses economic analysis to examine problems of special interest to regions/urban areas. Topics may include the economics of poverty, housing markets, racial discrimination and segregation, transportation systems, local economic development, and local public finance.

ECO360 - International Economics

This course provides a non-technical yet rigorous examination of the causes and effects of the international flows of goods, services, labor, and (investment) capital. Also examined is the impact of government policies on these flows and the institutions that have been established to regulate international trade and finance, including the World Trade Organization and the International Monetary Fund. Key topics include: the role of comparative advantage, factor endowments, scale economies, and imperfect competition in international trade; the welfare effects of international trade: who wins and who loses; the economic impact of trade policy (tariffs, quotas and other trade measures); the balance of payments and the causes and effects of trade imbalances; the foreign exchange markets; and regional trading arrangements such as NAFTA and the European Union.

ECO402 - Games and Behavior

Game theory is the study of how individuals make a decision when they are aware that their actions affect others and each decision maker takes this "strategic effect" into account. This course provides a concise, yet rigorous, introduction to game theory and its applications drawn from a variety of disciplines, primarily driven by student interest. Consideration is given to both empirical and experimental tests of game theoretic predictions.

ECO421 - Applied Econometrics

This course explores the formulation, estimation and testing of empirical models in economics and the social sciences. The focus of the course is on the use multiple regression analysis in the estimation and testing of causal relationship. Topics include appropriate model construction including variable selection and functional form, the use of dummy variables and panel data, the assumptions of the Classical model and the problems of multicollinearity, heteroskedasticity and autocorrelation. The class involves both lectures and hands on practice/labs. A significant part of the course is an independent research project utilizing the techniques discussed in the course.

ECO460 - Global Economic Perspectives

This course focuses on an understanding of the global economy in an era of shifting borders, restructuring economies, and regional realignments. Emphasis is placed on the strategic implications for businesses of globalization, analyzing public policy options regarding current international economic issues and on collecting and interpreting international economic data. Students will also be introduced to the roles of various international organizations and the different economic systems, cultural, legal, political, environmental, and social contexts in which businesses operate in different countries.

ECO492 - Economics Internship

The student is placed with a business firm, bank, industrial firm, government office, healthcare facility or similar institution for on-the-job experiences related to classroom coursework. This course should be taken quite late in the undergraduate career. Credit-hours will range from 1 to 12 depending on the nature of the particular assignment.

EDF-Educational Foundations

EDF333 - Educational Technology

This course provides the learner with fundamental concepts and skills that build a foundation for applying computer hardware and software in educational settings. The course focuses on the computer as an object of instruction, a productivity tool and an adjunct to instruction in the classroom.

EDU-College of Education

EDU101 - ESL Intermediate Listening and Speaking

This course is designed to build the oral English skills of non-native speakers of English in order to prepare for academic work in English. This is an intermediate level listening and speaking course and includes practice in group interaction, public speaking and listening comprehension for academic purposes. This course will help

Course Descriptions

students expand their vocabulary and knowledge of language usage in a variety of everyday and classroom situations. NOTE: This course is not a substitute for a Public Speaking course. This course can be repeated for credit.

EDU102 - ESL Intermediate English Reading and Writing

This course is designed to build the English reading and writing skills of non-native speakers of English to prepare for academic work in English. This course is an intermediate level reading and writing course. This course will help students develop into active, fluent readers in the English language for academic purposes. Students will learn and utilize reading comprehension strategies geared toward second language learners to enhance vocabulary knowledge as well as reading fluency and comprehension. Students will read academic texts to search for main ideas and details, read diagrams and charts, and other text structures that will enable them to learn academic content effectively while they are learning English. Students will also learn to write grammatically correct sentences, basic paragraphs, short essays, and respond to academic readings in writing. NOTE: This course is not a substitute for ENG 100, ENG 101, or ENG 102 nor does it supplant the English placement examination. This course can be repeated for credit.

EDU210 - Critical Thinking and Reading

This course exposes students to in-depth readings and well-chosen oppositional readings to help them develop intellectually and ethically by recognizing competing arguments and making a reasoned, context-appropriate commitment to one position. Some of the oppositional readings include artists' statements, criticisms, biographies, web-based essays, peer-reviewed journal articles, and book chapters. These authentic authorial voices engage students in thinking through competing perspectives on an issue. Students will practice critical thinking and reading in order to: reconsider and revise views where honest reflection suggests that change is warranted and face their own biases, prejudices, stereotypes, or egocentric tendencies. When students believe that their efforts are contributing significantly to their learning, learning becomes its own motivation.

EDU310 - Teaching in a Multicultural Society

Teaching in a Multicultural Society is a course designed to develop intergroup-interpersonal awareness to promote the better understanding of the different sexes, religious beliefs, national origins, and the socioeconomic backgrounds found in our multicultural society. The emphasis is on developing the awareness, knowledge skills, and competencies needed for positive human relationships. No Field Experience Required

EDU335 - Teaching in an Online Environment

This course is designed to provide teacher education majors and others who may teach or train with online instruction the necessary skills, knowledge, and literature background to be able to construct online instruction using a Course Management System (CMS). While this is a teacher education course, it is also a technology in teaching course which can be useful to any person attempting to instruct/train online. The course requires an understanding of basic learning approaches, basic computer technology skills, and experience as a learner using a CMS.

EDU375 - Introduction to Integrative STEM Education

This course is designed to provide the candidate with an understanding of integrated STEM education as well as effective instructional strategies for teaching STEM in K-12 classrooms. The course provides an introduction to the fundamentals of STEM disciplines and the strategies used to implement integrative STEM education. Candidates will review basic fundamental concepts of STEM disciplines (science, mathematics, engineering, and technology), effective STEM pedagogy and teaching strategies, integrative STEM learning, and innovative problem-based instruction utilizing the engineering and design process. Candidates will participate in hands-on laboratory and research-based activities as they engage in engineering design challenges intended to provide candidates with an opportunity to work individually and in collaborative groups to utilize skills of scientific inquiry and problem-solving to design, test, analyze, and evaluate STEM-related processes and products. Candidates will utilize the design process, computational thinking, critical thinking, and problem solving to engage in design challenges and will then communicate the results of the engineering and design process through a variety of formats (i.e., lab reports, multimedia presentations, design briefs, etc.).

Course Descriptions

EET-Electronic Eng Technology

EET110 - Electrical Circuits I

Circuits I is an introductory course into DC and AC circuit analysis suitable for entry level engineering technology students and technology students. The course focus is developing a basic understanding of voltage, current resistance and reactance in basic circuits. Topics include resistance, voltage, current, series, parallel and series-parallel circuits.

EET160 - Electrical Circuits II

An introduction to the study of electrical circuits in the sinusoidal steady state. Topics include capacitors, inductors, complex numbers, AC mesh analysis AC nodal analysis, and network theorems pertaining to AC sources.

EET210 - Linear Electronics I

A study of solid state semiconductor devices including diodes and transistors, and their application in electronic circuits. Topics include diode and transistor structure and characteristics, design parameters for electronic circuit application, typical power conditioning circuits, and typical amplifier circuits. The laboratory component reinforces course content by applying scientific calculator and circuit analysis/simulation software skills to the derivation and analysis of circuit experiments.

EET215 - Introduction to Instrumentation

An introduction to the techniques of designing electronic instruments to measure physical quantities with the aid of transducers. Topics include analog and digital signal conditioning circuits, electronic filters, and various electronic sensors. Circuits will be designed and tested from mathematical models in order to transfer signals to either an analog or a digital format.

EET310 - Methods in Engineering Analysis

Introduction to matrix theory, classical first and second order transient analysis, active filter design and basic Z- and Fourier-transforms.

EET320 - Network Analysis

A calculus-based circuit theory course. Topics include the introduction to Laplace transforms and the use of Laplace transforms in the study of circuit analysis, transfer functions and frequency response. Circuit analysis programming is used to compare computer solutions with analytic solutions.

EET325 - Introduction to Electric Power

A study of three-phase circuits, transformers, DC machines, polyphase AC machines and single-phase AC machines.

EET365 - Linear Electronics II

This course is an introduction to the function of solid state devices. The emphasis is placed on the internal structure, function and limitations of linear devices such as diodes, transistors, power amplifiers, operational amplifiers and oscillators.

EET370 - Instrumentation Design I

A computer-based graphical programming environment for instrumentation design, control and testing. Mathematical models will be developed to design applications. The course offers students concepts of current industry trends in instrumentation, testing and control. A course project is developed to implement a practical instrumentation system.

EET400 - Senior Project Proposal

This senior course provides the student with an opportunity to integrate several concepts of different areas of the program and it allows him/her to pursue specialized interests. The student will submit a written proposal for a project. After approval of the project the student will be assigned a faculty advisor. Minimum requirements for the proposal are submission of a functional specification and time schedule for completion.

Course Descriptions

EET410 - Automatic Control Systems

This course covers theory and practice of control systems with emphasis on classical control theory and an introduction to the fundamentals of modern control. Students will analyze, design and synthesize continuous feedback control systems based on root locus, frequency response and state space methods. Students will become familiar with the analytical techniques and will be exposed extensively to the use of computers for analysis and design of control systems. Various control strategies will be discussed.

EET425 - Power System Analysis

A concise study of classic and modern topics related to the operation of power systems. Subjects covered in this course include analysis of steady state balanced 3-phase systems, transmission lines, power flow, system protection and controls. The laboratory component is mostly software based. Simulations of basic to advanced configurations will help the students investigate all the basic theoretical concepts.

EET426 - Power System Management

A study of various topics related to generation, transmission, distribution, and use of electric energy. The course references traditional (fossil fuels, hydro, nuclear) as well as renewable energy sources and covers subjects in power station management and electric energy market structure.

EET427 - Industrial Applications of Power Electronics

A study of AC-DC, DC-AC, DC-DC and AC-AC converters for typical residential, commercial, industrial and power utility applications, such as HVDC transmission, AC/DC motor drives, static VAR compensation and power quality control.

EET430 - RF Communications

Communication systems principles, including AM/FM modulation, AM/FM demodulation, transmitters, receivers, antennas, transmission lines, digital techniques and protocols.

EET450 - Senior Project

Employs the design, construction and analysis of an electronic device or instrument. Depending on the complexity of the project, total construction may not be required. With approval from the adviser, group projects may also be involved.

EET460 - Digital Signal Processing

Introduction to linear systems, digital filters and the Z-Transforms, and the Fast Fourier Transform. Fundamentals of Shannon's sampling theory and the interfacing of analog signals to microprocessor based systems for digital signal processing.

EET485 - Special Topics in EET

This course allows current topics in electrical engineering technology to be offered in a timely fashion. The topics are not covered in other courses and will not be regularly offered as a special topic; however, they are appropriate to a senior-level course. The course topic depends upon current trends in electrical engineering technology, interests of the student, and the instructor. This course is repeatable.

ELE-PreK thru Grade 4 Educ

ELE220 - Instruction and Assessment in Pre-K Settings

This course is designed to provide teacher candidates with in-depth instruction and authentic experience in developing curricula, which is multi-disciplinary and multidimensional. In this course teacher candidates will examine appropriate curriculum and assessment for pre-school children. They will examine young children's approaches to learning and effective teaching that enhances learning. The focus will be on planning, teaching and assessing key experiences that promote children's learning and development across all domains. Candidates will also gain experience in early childhood environmental design. Through hands-on experiential learning, candidates will construct an in-depth understanding of Pre K teaching and learning, including a variety of curricular approaches, the role of the learning environment, and the socially situated, play-based early learning that is developmentally, culturally and individually appropriate for the youngest learners.

Course Descriptions

ELE221 - Instruction and Assessment K-4

This course is designed to provide teacher candidates with the knowledge, skills, and dispositions necessary to create developmentally appropriate instruction and assessment activities for children in K through grade 4 classrooms. Topics covered include K through grade 4 curriculum models, developmentally appropriate practices, lesson planning, writing objectives, constructivist instructional strategies and assessment of student learning. Through class discussions, practice sessions, role-playing and microteaching, the teacher candidates will learn how to plan for and utilize strategies based on research in effective teaching, Pennsylvania Department of Education Academic Standards and standards set forth by the National Association for the Education of Young Children.

ELE300 - Emerging Literacy

The purpose of this course is to prepare early childhood teacher candidates to become facilitators of early language and literacy learning. The candidates will gain critical content knowledge in language acquisition as the basis for literacy development. The content of this class deals with concepts of emerging literacy and supports candidates to acquire strategies for developing high-quality, meaningful language and literacy experiences for young children from infancy through the first grade. This course will give candidates practicum experience as they design and implement literacy bags and conduct a case study with an individual young learner. In this study candidates will research appropriate practice and examine literacy development, assessment, and design/implementation of appropriate language and literacy learning activities.

ELE301 - Literacy Foundations I: Language Arts

In this course, teacher candidates learn how to teach reading writing, listening, speaking, viewing, and visually representing skills. In particular, course objectives focus on writing development and implementation in of emergent and early writing strategies and materials, using developmentally appropriate techniques that are professionally compatible with current research and practice. Theoretical orientations to literacy instruction, with a focus on writing, are introduced, analyzed, and evaluated. Best-practices that are aligned with these theories are examined in detail, and candidates are expected to demonstrate strategies through the use of lesson planning, presentations, and teaching in the field. Teacher candidates participate in university classroom and field experiences that provide them with the knowledge, pedagogy, and dispositions needed to support the English language arts, and in particular, writing skills, to preschool and early elementary children in a variety of classroom settings. The course is standards-based, supported by the Pennsylvania Department of Framework for Grades Prek-4, as well as the National Association for the Education of Young Children (NAEYC), and the Interstate Teacher Assessment and Support Consortium (InTASC).

ELE302 - Literacy Foundations II: Reading

This course is designed to build upon a scientific reading research base to develop the practice of teaching literacy to young children from preschool through grade four. Teaching strategies are based on theoretical orientations of emerging literacy; in which children's development from birth to preschool contribute to their literacy abilities. Candidates learn research-based best practices that cultivate early literacy development so that young children through grade four develop skill in phonemic awareness, phonics, vocabulary, comprehension, and fluency. Candidates learn how to assess, make instructional decisions, and provide interventions that will meet the needs of a diverse classroom population. The course is standards-based, supported by the Pennsylvania Department of Education standards for teacher preparation, as well as the International Reading Association (IRA), the National Association for the Education of Young Children (NAEYC), and the Interstate Teacher Assessment and Support Consortium (InTASC). Teacher candidates participate in university classroom and field experiences that provide them with the knowledge, pedagogy, and dispositions needed to support early literacy and to teach early literacy skills to preschool and early elementary children in a variety of classroom settings. In the required performance assessment project, candidates plan and implement a guided reading lesson in a K-4 classroom.

ELE310 - Teaching Pre K STEAM

The teacher candidate is introduced to how science, technology, engineering, creative arts, and mathematics (STEAM) skills develop in children between infancy and age 5 and how to support and assess this development. The candidate will research, plan, and lead small group STEAM activities with children in pre K settings. These activities will be planned according to the Project Approach, based on the interests of the young children as well

Course Descriptions

as the National STEM and Creative Arts Standards, NAEYC Standards and PA Early Learning Standards. The Project Approach involves 3 phases: Discovery, Investigation, and Conclusion; candidates will gain experience in using this cross-curricular approach to contextualize STEAM concepts and to create meaningful learning experiences for their young students. Additionally, this course views children as individuals who are socially and culturally situated, and as such identity and culture will be valued and included as part of the instructional planning, activities, and assessment.

ELE311 - Teaching Mathematics K-4

This course will allow students to develop the understanding, knowledge, and skills necessary to teach mathematics to young children. Students will become proficient in the problem-solving process and will come to understand mathematical reasoning in order to teach problem-solving and mathematical reasoning to young children. Lastly, students will plan, implement, and reflect on standards-based mathematics lessons which will be taught to young children in a local elementary school.

ELE321 - Teaching Children Science: Grades K-4

This course provides teacher candidates the science education knowledge, skills and dispositions expected of beginning elementary/early childhood teachers in self-contained classrooms. The course provides an overview of the nature of science, scientific inquiry and focuses on science process skill teaching strategies. Candidates learn and practice science teaching skills such as: creating a classroom environment conducive to scientific inquiry, designing science instruction, assessing student attainment of academic standards, and using the local community as a location and topic of classroom science instruction. The course assignments introduce students to the professional community of science education professionals and resources. Teacher candidates participate in university classroom and field experiences that provide them with the knowledge, pedagogy, and dispositions needed to teach in a variety of educational contexts.

ELE331 - Teaching Social Studies K-4

This course is designed to build upon a scientific base to the practice of teaching social studies to children from preschool through grade four. The foundations of the social studies are examined with an emphasis on the standards and themes sanctioned by the National Council of Social Studies. Candidates learn research-based best practices that promote the two main goals of the social studies; social understanding and civic awareness. Instructional strategies and resources for the constructivist social studies classroom will be discussed and demonstrated. Attention will be given to current trends and the present status of elementary social studies. The course is standards-based, supported by the Pennsylvania Department of Education standards for teacher preparation, as well as the National Council for Social Studies (NCSS), the National Association for the Education of Young Children (NAEYC), and the Interstate New Teacher Assessment and Support Consortium (INTASC). Teacher candidates participate in university classroom and field experiences that provide them with the knowledge, pedagogy, and dispositions needed to support social understanding and civic awareness to preschool and early elementary children in a variety of classroom settings.

ELE410 - Pre-K-4 Field Experience

This course is designed to provide candidates with practical experiences in two settings: An early childcare center (e.g., daycare, Headstart, nursery school, or Prek setting), as well as a K-4 early 6 elementary classroom. Pennsylvania Department of Education Field competencies, Level 3, provide the objectives of this course. Students are required to complete these competencies with 30-45 hours of observation and teaching under the guidance and observation of mentor teachers in the two Prek-4 settings. Current teaching technology and strategies to meet the needs of children in preschool and early elementary school settings will be researched, observed and discussed. Developmentally appropriate, best-practices for teaching young children are emphasized in the following areas: Planning and preparation, classroom environment, instructional delivery, assessment, and meeting the needs of diverse learners. Students will complete a mini-action research project, in which they assess learners to identify areas of need, plan and implement developmentally appropriate interventions, and use age-appropriate assessments to determine impact on student learning. University classroom seminars and field classroom teaching experiences are combined to give candidates an opportunity to discover their aptitude and interest in working with Pre-K-4 school children.

Course Descriptions

ELE411 - Field Experience K-4

This course is designed to provide students with practical experiences in a K-4 classroom. Pennsylvania Department of Education Field competencies, Level 3, provide the objectives of this course. Students are required to complete these competencies with 30-45 hours of observation and teaching under the guidance and observation of a mentor teacher in K-4 elementary classroom. Current teaching technology and strategies to meet the needs of children in grades K-4 will be researched, observed and discussed. Students will complete a mini-action research project, in which they assess learners in a K-4 classroom to identify areas of need, plan and implement developmentally appropriate interventions, and use age appropriate assessments to determine impact on student learning. University classroom seminars and field classroom teaching experiences are combined to give students an opportunity to discover their aptitude and interest in working with K-4 school children.

ELE461 - Student Teaching and School Law (Pre K-4)

This course is the capstone experience in CALU's teacher education program. Teacher candidates engage in a fifteen-week placement in a PreK-4 classroom with increasing levels of responsibility for planning, classroom environment, instructional delivery including diverse learners, and assessment while maintaining high levels of professional conduct. Teacher candidates complete an action research project where they will determine a target group of students, consult the literature, analyze student-learning data, create instructional plans, and reflect on impact on student learning. In addition, teacher candidates participate in practicum sessions that focus on research-based strategies.

ELM-Grades 4 thru 8 Education

ELM200 - Introduction to Middle Level Education (Grades 4 to 8)

This course is an introductory overview course in which teacher candidates are exposed to many topics that they will explore in depth in future specialization courses for the program. In the course, students will gain first-hand experiences with professional behaviors expected of middle level teachers. Thirty hours of field experiences are required, fulfilling the initial field requirement of the Early, Middle, and Special Education department. Course objectives, course outline, and the performance assessments reflect the ten standards for beginning teachers' licensing and development, written by the Interstate New Teacher Assessment and Support Consortium (INTASC), as well as the seven standards of the Association for Middle Level Education (AMLE).

ELM220 - Instruction and Assessment in Grades 4-8

This course is designed to provide teacher candidates with the theoretical and practical background necessary to develop instruction and assessment activities that meet Pennsylvania Department of Education Academic Standards as well as the standards set forth by the Association for Middle Level Education. This course includes topics such as developmentally appropriate practices, grade 4-8 curriculum models, constructivist instructional strategies, and assessment of student learning. Through various teaching and learning methodologies, teacher candidates will learn how to plan for and utilize strategies based on evidence-based research. Planning for instruction will be evidenced through development of lessons and/or unit plans, which reflect utility in inclusive and diverse settings.

ELM301 - Reading Methods, Assessments, and Interventions (Grades 4-8)

This course is designed to build upon a scientific base to the practice of teaching literacy to middle level students from grades four to eight, with an emphasis on comprehending a variety of texts in the content areas. Teaching strategies are based on theoretical and research-based assumptions that readers construct meaning as they decode, using what they know about print and the world to understand written text. Candidates learn how to assess, make instructional decisions, and provide interventions that will meet the needs of a diverse classroom population. The course is standards-based, supported by the Pennsylvania Department of Education standards for teacher preparation, as well as the International Reading Association (IRA), the Association for Childhood Education International (ACEI), the Interstate New Teacher Assessment Consortium (INTASC), and the National Middle School Association. Teacher candidates participate in university classroom and field experiences that provide them with the knowledge, pedagogy, and dispositions needed to teach literacy to middle school children in a variety of classroom settings.

Course Descriptions

ELM302 - Language Arts: Methods, Assessments, and Interventions

This is one of two courses that examine the development of literacy in children and adolescents from grades 4-8. Candidates are taught how to develop reading writing, listening, speaking and visually representing skills, with an emphasis on the development of writing skills, using an integrated approach that includes a wide variety of literature, as advocated by the Association for Middle Level Education, and consistent with the constructivist theory of teaching and learning. Theoretical orientations to literacy instruction, with a focus on writing, are introduced, analyzed, and evaluated. Practical implications of these theories are examined in detail, and students are expected to demonstrate strategies through the use of formal and informal assessment, lesson planning, presentations, and mini lessons. A performance assessment project that includes a field experience will be required.

ELM311 - Math Methods Assessment and Interventions

This course will allow students to develop the understanding, knowledge, and skills necessary to teach mathematics to young adolescents. Students will become proficient in the problem-solving process and will come to understand mathematical reasoning in order to teach problem-solving and mathematical reasoning to young adolescents. Lastly, students will plan, implement, and reflect on standards-based mathematics lessons which will be taught to young adolescents in a local middle school.

ELM321 - Teaching Children Science: Grades 4-8

This course provides teacher candidates with the science education knowledge, skills and dispositions expected of beginning Grade 4-8 teachers in discipline specific classrooms. The course provides an overview of the nature of science, scientific inquiry and focuses on science process skill teaching strategies. Candidates learn and practice science teaching skills such as: creating a classroom environment conducive to scientific inquiry, designing science instruction, assessing student attainment of academic standards, and using the local community as a location and topic of classroom science instruction. The course assignments introduce students to the professional community of science education professionals and resources. Teacher candidates participate in university classroom and field experiences that provide them with the knowledge, pedagogy, and dispositions needed to teach in a variety of educational contexts.

ELM331 - Social Studies Assessment and Interventions

This course is designed to build upon a scientific base to the practice of teaching social studies to children from fourth to eighth grade. The foundations of the social studies are examined with an emphasis on the standards and themes sanctioned by the National Council of Social Studies. Candidates learn research-based best practices that promote the two main goals of the social studies; social understanding and civic awareness. Instructional strategies and resources for the constructivist social studies classroom will be discussed and demonstrated. Attention will be given to current trends and the present status of elementary social studies. The course is standards-based, supported by the Pennsylvania Department of Education standards for teacher preparation, as well as the National Council for Social Studies (NCSS), the Association for Middle Level Education, and the Interstate New Teacher Assessment and Support Consortium (INTASC). Teacher candidates participate in university classroom and field experiences that provide them with the knowledge, pedagogy, and dispositions needed to support social understanding and civic awareness to middle school students.

ELM360 - Environment, Ecology and Nature-Study Education

This course explores educational strategies, practices and ethics for use when teaching people about the environment, ecology, and natural history of their local community. Course activities examine the complex relationship between humans and their environment from multiple perspectives. Historical, current and research-based approaches to public school student and citizen education provide the focus for an in-depth examination of the individual's role in contributing to the health, sustainability and mutual dependence between natural communities and human communities.

ELM411 - Field Experience 4-6

The candidate receives background and experience in working with children in grades 4 through 6 through on-site field experience in a public school classroom. Each candidate will work with a school-based mentor teacher while also concurrently participating in campus-based seminar sessions. These combined experiences will provide

Course Descriptions

candidates with multiple opportunities to further explore instructional strategies as they develop and teach formal lessons and conduct an individual case study of a young adolescent's instructional needs.

ELM412 - Field Experience 7 – 8

The candidate receives background and experience in working with children in grades 7 through 8 in the classroom setting. University classroom and school-based classroom teaching experiences are combined to give the candidate an opportunity to expand upon their knowledge base and apply methods that they have learned in university methods courses.

ELM415 - Middle Level Field Experience

This course is designed to provide students with practical experiences in a classroom in the middle school (grades 4-8). Pennsylvania Department of Education Field competencies, Level 3, provide the objectives of this course. Students are required to complete these competencies with 30-45 hours of observation and teaching under the guidance and observation of a mentor teacher in a Grades 4-8 classroom. Current teaching technology and strategies to meet the needs of young adolescents in Grades 4-8 will be researched, observed and discussed. Students will complete an Impact on Learning research project, in which they assess learners in a Grades 4-8 classroom.

ELM461 - Student Teaching and School Law (Grades 4-8)

This course is the capstone experience in CALU's teacher education program. Teacher candidates engage in a fifteen-week placement in a 4-8 classroom with increasing levels of responsibility for planning, classroom environment, instructional delivery including diverse learners, and assessment while maintaining high levels of professional conduct. Teacher candidates complete an action research project where they will determine a target group of students, consult the literature, analyze student-learning data, create instructional plans, and reflect on impact on student learning. In addition, teacher candidates participate in practicum sessions that focus on research-based strategies.

ENG-English

ENG100 - English Language Skills

This beginning course provides guided practice in writing and reading, with emphasis on the interrelationship of reading, thinking and writing. English Language Skills stresses fundamental principles of and attitudes toward writing, as well as how to put these principles and attitudes into practice. It emphasizes the ability to read correctly and to organize material effectively and, by adherence to the innate logic of language (revealed in its rules of grammar, syntax, punctuation and vocabulary choice), to express ideas clearly and precisely.

ENG101 - Composition I

Composition I is a sequel to English Language Skills. It provides guided practice in writing, with emphasis on thoughtful analysis of subject matter, clear understanding of the writing situation, flexible use of rhetorical strategies and development of stylistic options, particularly those related to an understanding of a variety of purposes and voices. ENG 101 continues the development of the essential writing, reading and thinking skills stressed in ENG 100.

ENG102 - Composition II

The sequence of Composition I – Composition II provides guided practice in writing, with an emphasis on more demanding writing situations. It continues the work begun in Composition I with more complicated rhetorical strategies and stylistic options, especially audience-centered considerations. ENG 102 introduces research and research writing at the undergraduate level.

ENG106 - Introduction to Poetry

An introduction to the elements of poetry, this course emphasizes close analysis and explication of selected poetry from a variety of poets.

ENG107 - Introduction to Fiction

An introduction to the elements of fiction, this course focuses on the close reading of selected short stories and novels by a variety of authors.

Course Descriptions

ENG108 - Introduction to Drama

This introduction to the basic elements of drama focuses on readings selected from works from the Greek Classical period to the Modern Age.

ENG110 - Introduction to Creative Writing

Introduction to Creative Writing presents creative writing as a process of creation, revision, expansion, transformation, and engagement, introducing the student writer to many of the elements of the craft of writing in the genres of fiction, drama, creative nonfiction, and poetry.

ENG112 - Myth, Magic, and Mysticism

The course is a study of the four basic paths into the unknown: magic, mysticism, fantasy and myth.

ENG127 - Woman as Hero

The course explores heroic roles assigned to women in literature, the contrast between reality and the literature, and the differences between fictional women created by male and female authors. An analysis of the reasons for these differences forms part of the subject.

ENG135 - Re-Reading Harry Potter

In Re-Reading Harry Potter, we will explore the literature that helped shape the Harry Potter series created by J.K. Rowling with the intention of better understanding her writing process and the imaginative world she has developed. We will also explore the larger socio-cultural themes that dominate her books, including racism, sexism, classism, and others social constructs and behaviors. In addition, students will be encouraged to think critically about their own responses to the series and how they have changed over time.

ENG136 - Women's Memoirs

In this course, we will critically read and analyze memoirs written by women with the objective of better understanding the main characteristics of the genre. We will also explore the larger socio-cultural themes that dominate the memoirs and the cultures and time periods in which they are written, including racism, sexism, classism, and others. In addition, students will be encouraged to think critically about their own responses to the assigned literature.

ENG137 - Northern Appalachian Literature

In Northern Appalachian Literature, we will critically read and analyze literature written by people from the northern Appalachian region of the United States with the objective of better understanding the culture of the area. We will also explore the larger socio-cultural themes that dominate this literature, including racism, sexism, classism, and other social constructs. In addition, students will be encouraged to think critically about their own responses to the assigned literature.

ENG148 - Horror in Literature

An examination of the tradition of horror literature in England and America from a literary, historical and psychological viewpoint, the course also emphasizes the sociological implications of the popularity of the form.

ENG150 - Baseball in Literature

This course requires the student to read, write and talk about a game that Steinbeck called a "state of mind," a game that is, in the words of Jacques Barzun, a way "to know America." Thus, students who work learn about both themselves and their country.

ENG152 - The Lord of the Rings

This course explores J.R.R. Tolkien's Lord of the Rings trilogy in light of its Medieval, Victorian, and early 20th century influences, as well as Tolkien's influence on popular culture in the present day.

ENG155 - Introduction to African American Literature

This course introduces a variety of African American texts that represent African American life, culture, and history. Students work with African American non-fiction, fiction, drama, and poetry to cultivate a deeper understanding of the diverse literatures and experiences of African Americans and their relations with other

Course Descriptions

American populations. The study surveys texts from the colonial period to contemporary times and analyzes them in historical, cultural, and critical contexts.

ENG156 - Introduction to Native American Literature

This course introduces a variety of Native American texts that represent Native people, culture, and history. Students work with traditional Native forms as well as fiction, drama, and poetry to cultivate a deeper understanding of the diverse literatures and cultures of Native peoples and their relations with immigrant populations of the Americas. The study surveys texts from pre-Columbian to contemporary times and analyzes them in social, historical, cultural, and critical contexts.

ENG178 - Literature and Film

A study of the relationship between literature and film and the artistic and technical processes of translating from one medium to the other. The course also investigates the influence of motion pictures on literary critics and writers.

ENG179 - Introduction to the Animated Film

This course provides a historical and international survey of the animated film from the late nineteenth century to the present day, emphasizing the unique characteristics of the medium across a wide range of cultures. The ways in which animation functions as both a global language while at the same time retaining specific cultural characteristics will also be explored. While this is not a production course, aspects of production and reception will both be covered.

ENG180 - Literature and Natural Environments

This course surveys fiction, poetry, drama, and nonfiction that represent humanity's relationship with Earth and nature. The course will investigate the evolution of the concept of the "natural" and the development of a variety of perspectives that inform writing about Earth and natural environments, such as utilitarian, pastoral, romantic, conservation, transcendental, naturalistic, and ecological, with particularly emphasis on the latter.

ENG181 - Cultures of American Humor

This course analyzes diverse American humorous texts in theoretical, social, cultural, and historical contexts. Students will survey a variety of textual forms—fiction, nonfiction, film, TV, stand-up, graphic texts, and so on—to ascertain what humor is, how it functions, and how it critiques the complexities of America's diverse social and cultural history.

ENG203 - Great Books

The texts and historical backgrounds of selections from the most highly regarded literature of the world are studied. The range is from the Classical Greek era to the 20th century.

ENG217 - Scientific and Technical Writing

This is a writing course that introduces students to the style, tone, techniques and formats used in scientific and technical documents and reports. Using interactive teaching strategies, students plan, structure, write, and evaluate a variety of scientific and technical papers and reports for multiple audiences.

ENG302 - British Literature II

This course is a survey of English literature from the Romantic poets to the present day.

ENG306 - Press Law and Media Ethics

This course helps student journalists understand not only what they can and cannot do by law, but what they should and should not do within commonly accepted standards of good taste and morality.

ENG308 - Research for Writers

For students in each of the professional writing concentrations, this course introduces students to basic library materials and techniques, on-campus resources, government documents, research libraries, advanced techniques of interviewing, document analysis, etc., and concludes with a pre-publication draft of a researched paper in the student's area of specialization.

Course Descriptions

ENG312 - Journalism III, Editing

This course emphasizes practical journalism. Journalism III teaches students how to edit and prepare materials for publication. Professional editing procedures are covered, ranging from rewriting, editing and proofreading to headline writing, layout and design.

ENG315 - Survey of American Women Writers

The importance of both text and method in the study of American women writers is emphasized in this course. Assigned readings and research workshops introduce students to a variety of texts and sources as well as methods for reading, discovering and interpreting writings. Integration of text and method is achieved through a series of writing and research projects that are tied to the assigned readings.

ENG320 - Multimedia Journalism

Multimedia journalism is a class that asks students to examine critically and evaluate how journalism is evolving because of multimedia and to learn through hands-on projects how to create multimedia journalism.

ENG334 - Reporting

ENG 334 is a professional-level course that introduces students to basic newsroom procedures and assignments.

ENG337 - Survey of American Literature I (to 1865)

A writing intensive course, American Literature I surveys canonical authors and works from pre-Columbian Native America to the American Civil War, studying writers, genres, and narrative forms that have contributed to America's diverse literary and cultural history.

ENG338 - Survey of American Literature II

The second course of the two-course survey begins with the literature of the Reconstruction period, Realism and later Naturalism and moves to the experimental writing of the 20th and 21st centuries, culminating in works by contemporary authors. The emphasis is on showing the development of an eclectic and uniquely American literature.

ENG345 - English Grammar and Usage

This course provides future English teachers, writing majors and other interested students with a sophisticated background in English grammar. The course covers a variety of grammatical theories, issues of mechanical correctness in writing and the sociology of usage.

ENG346 - History of the English Language

This course surveys the development of the language from its Germanic base to the emergence of American English. Explanations of sound shifts and foreign and social influences are covered.

ENG347 - Introduction to Linguistics

This course examines the several areas of language study: history of the language, phonology and morphology, grammars (traditional and modern), and contemporary American usage, dialects, lexicography and semantics.

ENG350 - Journalism Genres

Special Topics in Journalism Genres is a repeatable theoretical and hands-on course, in which students study one of the following genres: editorials and commentary, arts and entertainment reporting and criticism, public affairs reporting and analysis, environmental reporting and analysis, health and fitness reporting and analysis, technology reporting and analysis, or consumer and business reporting and analysis, or other genres. Students will read journalism articles in the genre, as well as report and write stories in that genre.

ENG351 - Publishing the Magazine

Students in this course publish a magazine, "The Inkwell." They contribute works of literature and photographs, edit the pieces, establish editorial policy and publish the magazine.

Course Descriptions

ENG352 - Studies in Writing

This course is a study in style, its definition, its analysis, and the techniques modern writers of creative nonfiction use to achieve it. Students analyze the work of such writers as Tom Wolfe, Joan Didion, Hunter Thompson and Truman Capote, then apply to their own prose the techniques these writers use.

ENG354 - Media History

A critical exploration of how American journalism evolved from colonial times to the present, analyzing the roles that political, philosophical, social, technological and economic forces play in the evolution of the media, particularly print and online media, and how the media, in turn, influence society.

ENG355 - Survey of African American Literature

This course introduces students to literary texts by and/or about African Americans and their experience over several centuries. The course features the significant literary contributions of African Americans to America's diverse cultural history. The course will also include several critical approaches to the analysis of this literature.

ENG367 - Journalism – News Writing

This course is an introduction to basic news gathering and news writing taught by in-class exercises early in the semester, followed by weekly assignments that require submission to the Cal Times newspaper.

ENG369 - Journalism – Feature Writing

Students learn feature writing and in-depth news reporting and write several articles, some of which are submitted to local media.

ENG371 - Critical Theory and Teaching of Literature

A required course for English majors in the Secondary English track, Critical Theory and the Teaching of Literature shows students how to relate contemporary literary criticism to the teaching of literature. The varieties of literary criticism covered include New Criticism, reader-response criticism, deconstructive criticism, psychological criticism, feminist criticism and New Historicism. The literature studied emphasizes items typically taught in secondary schools, including both canonical (e.g. Shakespeare's plays) and noncanonical (e.g., Young Adult literature and Multicultural literature) works.

ENG372 - Advanced Composition

Advanced Composition is an introduction to rhetorical theory as it concerns the nature of writing and the teaching of writing. This course also offers practical information about and experience with modern course design and pedagogy, as well as discussion of the politics of writing instruction in contemporary schools.

ENG375 - Advanced Writing

This course is concerned with helping students develop a more sophisticated style in using persuasion, exposition and argumentation.

ENG376 - Creative Writing Fiction

Techniques of fiction are studied and applied to the writing of short stories, and students are encouraged to use and shape their own experience, transmitting those everyday things around them into fictional realities.

ENG377 - Creative Writing Poetry

Aspects of poetry such as line length, rhythm, sound patterns, and imagery are discussed. Students will apply those techniques to their own experience and vision, developing a poetic voice or style.

ENG378 - Creative Writing: Drama

Writing techniques for the modern stage are covered; students progress from idea through written text to the production of a scene or a one-act play.

ENG415 - Chaucer

"The Canterbury Tales" and other works are studied.

Course Descriptions

ENG419 - Internship in Professional Writing

An internship is a 120-hour, work-based and academic experience, emphasizing learning in a professional setting. Internships are supervised by both a work-site supervisor and a faculty supervisor and are designed to give the student a broad understanding of the particular writing and professional practices of the internship sites.

ENG425 - Shakespeare

This course explores in considerable depth Shakespeare's plays and poetry in their cultural, literary and performative contexts, both contemporary and modern.

ENG430 - Adaptation of Literary Materials

Students learn how to write fiction, poetry, drama and/or screenplays based on another work, such as writing screenplays or plays based on novels, writing updated versions of classics, writing in response to visual art, or telling traditional stories from altered perspectives.

ENG448 - Practical Criticism

An introduction to the theories comprising major schools in literary criticism, this course provides practice in applying these theories to literary analyses.

ENG481 - Old and Middle English Literature

An in-depth look at literature of the period, this course examines perhaps "Beowulf", the Old English elegy, verse romances, the lyric or medieval drama.

ENG484 - Studies in 19th Century English Literature

This course emphasizes the poetry of Keats, Shelley and Byron; the critical writings of Blake, Wordsworth and Coleridge; and the essays of Lamb and Hazlitt. It traces for the student the mutual evolution of literary forms and cultural, social and philosophical upheavals. It places particular emphasis on the essence of the Romantic movement: the spirit of individual liberty.

ENG485 - Studies in 20th Century British Literature

This course examines contemporary trends in literature, such as inter-textuality, ethical issues, major figures (i.e., Conrad, Greene, Woolf, Orwell and Burgess), WW I poetry, drama or the novel.

ENG487 - American Literary Genres

English 487 surveys canonical authors and works in selected genres or special topics in American literature study, which may include the short story, novel, poetry, drama, nonfiction, humor, travel writing, transatlantic writing, period literature, and ethnic literatures.

ENG489 - Studies in English Literary Genres

English 489 is an in-depth study of a particular genre of English literature or a comparative study of more than one genre. Genres covered may include epic poetry, lyric poetry, the short story, the 19th-century novel, the 20th-century novel, modern poetry, drama, nonfiction and film.

ENG495 - Seminar in Creative Writing

This is intended to be a final polishing course in creative writing, where students write and revise fiction, poetry, or drama, preparing a professional-level work.

ENG496 - Writing for Publication

Students analyze regional and national markets and refine their work for publication. They are expected to publish at least one work during the semester.

ENG499 - English Studies Capstone Class

This course for English majors is required for every English Department track: creative writing; journalism; language and literacy; and literature. The course will give majors from any track opportunities to demonstrate their application of the knowledge and skills developed through the undergraduate curriculum, particularly in the major and the General Education Program. Emphasizing written and oral performance at the professional level,

Course Descriptions

the course will ask students to show proficiency in academic analysis and synthesis of English studies concerns while also addressing the social relevance and community implications of such concerns.

ENG-English

ENG100 - English Language Skills

This beginning course provides guided practice in writing and reading, with emphasis on the interrelationship of reading, thinking and writing. English Language Skills stresses fundamental principles of and attitudes toward writing, as well as how to put these principles and attitudes into practice. It emphasizes the ability to read correctly and to organize material effectively and, by adherence to the innate logic of language (revealed in its rules of grammar, syntax, punctuation and vocabulary choice), to express ideas clearly and precisely.

ENG101 - Composition I

Composition I is a sequel to English Language Skills. It provides guided practice in writing, with emphasis on thoughtful analysis of subject matter, clear understanding of the writing situation, flexible use of rhetorical strategies and development of stylistic options, particularly those related to an understanding of a variety of purposes and voices. ENG 101 continues the development of the essential writing, reading and thinking skills stressed in ENG 100.

ENG102 - Composition II

The sequence of Composition I – Composition II provides guided practice in writing, with an emphasis on more demanding writing situations. It continues the work begun in Composition I with more complicated rhetorical strategies and stylistic options, especially audience-centered considerations. ENG 102 introduces research and research writing at the undergraduate level.

ENG106 - Introduction to Poetry

An introduction to the elements of poetry, this course emphasizes close analysis and explication of selected poetry from a variety of poets.

ENG107 - Introduction to Fiction

An introduction to the elements of fiction, this course focuses on the close reading of selected short stories and novels by a variety of authors.

ENG108 - Introduction to Drama

This introduction to the basic elements of drama focuses on readings selected from works from the Greek Classical period to the Modern Age.

ENG110 - Introduction to Creative Writing

Introduction to Creative Writing presents creative writing as a process of creation, revision, expansion, transformation, and engagement, introducing the student writer to many of the elements of the craft of writing in the genres of fiction, drama, creative nonfiction, and poetry.

ENG112 - Myth, Magic, and Mysticism

The course is a study of the four basic paths into the unknown: magic, mysticism, fantasy and myth.

ENG127 - Woman as Hero

The course explores heroic roles assigned to women in literature, the contrast between reality and the literature, and the differences between fictional women created by male and female authors. An analysis of the reasons for these differences forms part of the subject.

ENG135 - Re-Reading Harry Potter

In Re-Reading Harry Potter, we will explore the literature that helped shape the Harry Potter series created by J.K. Rowling with the intention of better understanding her writing process and the imaginative world she has developed. We will also explore the larger socio-cultural themes that dominate her books, including racism, sexism, classism, and others social constructs and behaviors. In addition, students will be encouraged to think critically about their own responses to the series and how they have changed over time.

Course Descriptions

ENG136 - Women's Memoirs

In this course, we will critically read and analyze memoirs written by women with the objective of better understanding the main characteristics of the genre. We will also explore the larger socio-cultural themes that dominate the memoirs and the cultures and time periods in which they are written, including racism, sexism, classism, and others. In addition, students will be encouraged to think critically about their own responses to the assigned literature.

ENG137 - Northern Appalachian Literature

In Northern Appalachian Literature, we will critically read and analyze literature written by people from the northern Appalachian region of the United States with the objective of better understanding the culture of the area. We will also explore the larger socio-cultural themes that dominate this literature, including racism, sexism, classism, and other social constructs. In addition, students will be encouraged to think critically about their own responses to the assigned literature.

ENG148 - Horror in Literature

An examination of the tradition of horror literature in England and America from a literary, historical and psychological viewpoint, the course also emphasizes the sociological implications of the popularity of the form.

ENG150 - Baseball in Literature

This course requires the student to read, write and talk about a game that Steinbeck called a "state of mind," a game that is, in the words of Jacques Barzun, a way "to know America." Thus, students who work learn about both themselves and their country.

ENG152 - The Lord of the Rings

This course explores J.R.R. Tolkien's Lord of the Rings trilogy in light of its Medieval, Victorian, and early 20th century influences, as well as Tolkien's influence on popular culture in the present day.

ENG155 - Introduction to African American Literature

This course introduces a variety of African American texts that represent African American life, culture, and history. Students work with African American non-fiction, fiction, drama, and poetry to cultivate a deeper understanding of the diverse literatures and experiences of African Americans and their relations with other American populations. The study surveys texts from the colonial period to contemporary times and analyzes them in historical, cultural, and critical contexts.

ENG156 - Introduction to Native American Literature

This course introduces a variety of Native American texts that represent Native people, culture, and history. Students work with traditional Native forms as well as fiction, drama, and poetry to cultivate a deeper understanding of the diverse literatures and cultures of Native peoples and their relations with immigrant populations of the Americas. The study surveys texts from pre-Columbian to contemporary times and analyzes them in social, historical, cultural, and critical contexts.

ENG178 - Literature and Film

A study of the relationship between literature and film and the artistic and technical processes of translating from one medium to the other. The course also investigates the influence of motion pictures on literary critics and writers.

ENG179 - Introduction to the Animated Film

This course provides a historical and international survey of the animated film from the late nineteenth century to the present day, emphasizing the unique characteristics of the medium across a wide range of cultures. The ways in which animation functions as both a global language while at the same time retaining specific cultural characteristics will also be explored. While this is not a production course, aspects of production and reception will both be covered.

Course Descriptions

ENG180 - Literature and Natural Environments

This course surveys fiction, poetry, drama, and nonfiction that represent humanity's relationship with Earth and nature. The course will investigate the evolution of the concept of the "natural" and the development of a variety of perspectives that inform writing about Earth and natural environments, such as utilitarian, pastoral, romantic, conservation, transcendental, naturalistic, and ecological, with particularly emphasis on the latter.

ENG181 - Cultures of American Humor

This course analyzes diverse American humorous texts in theoretical, social, cultural, and historical contexts. Students will survey a variety of textual forms—fiction, nonfiction, film, TV, stand-up, graphic texts, and so on—to ascertain what humor is, how it functions, and how it critiques the complexities of America's diverse social and cultural history.

ENG203 - Great Books

The texts and historical backgrounds of selections from the most highly regarded literature of the world are studied. The range is from the Classical Greek era to the 20th century.

ENG217 - Scientific and Technical Writing

This is a writing course that introduces students to the style, tone, techniques and formats used in scientific and technical documents and reports. Using interactive teaching strategies, students plan, structure, write, and evaluate a variety of scientific and technical papers and reports for multiple audiences.

ENG302 - British Literature II

This course is a survey of English literature from the Romantic poets to the present day.

ENG306 - Press Law and Media Ethics

This course helps student journalists understand not only what they can and cannot do by law, but what they should and should not do within commonly accepted standards of good taste and morality.

ENG308 - Research for Writers

For students in each of the professional writing concentrations, this course introduces students to basic library materials and techniques, on-campus resources, government documents, research libraries, advanced techniques of interviewing, document analysis, etc., and concludes with a pre-publication draft of a researched paper in the student's area of specialization.

ENG312 - Journalism III, Editing

This course emphasizes practical journalism. Journalism III teaches students how to edit and prepare materials for publication. Professional editing procedures are covered, ranging from rewriting, editing and proofreading to headline writing, layout and design.

ENG315 - Survey of American Women Writers

The importance of both text and method in the study of American women writers is emphasized in this course. Assigned readings and research workshops introduce students to a variety of texts and sources as well as methods for reading, discovering and interpreting writings. Integration of text and method is achieved through a series of writing and research projects that are tied to the assigned readings.

ENG320 - Multimedia Journalism

Multimedia journalism is a class that asks students to examine critically and evaluate how journalism is evolving because of multimedia and to learn through hands-on projects how to create multimedia journalism.

ENG334 - Reporting

ENG 334 is a professional-level course that introduces students to basic newsroom procedures and assignments.

Course Descriptions

ENG337 - Survey of American Literature I (to 1865)

A writing intensive course, American Literature I surveys canonical authors and works from pre-Columbian Native America to the American Civil War, studying writers, genres, and narrative forms that have contributed to America's diverse literary and cultural history.

ENG338 - Survey of American Literature II

The second course of the two-course survey begins with the literature of the Reconstruction period, Realism and later Naturalism and moves to the experimental writing of the 20th and 21st centuries, culminating in works by contemporary authors. The emphasis is on showing the development of an eclectic and uniquely American literature.

ENG345 - English Grammar and Usage

This course provides future English teachers, writing majors and other interested students with a sophisticated background in English grammar. The course covers a variety of grammatical theories, issues of mechanical correctness in writing and the sociology of usage.

ENG346 - History of the English Language

This course surveys the development of the language from its Germanic base to the emergence of American English. Explanations of sound shifts and foreign and social influences are covered.

ENG347 - Introduction to Linguistics

This course examines the several areas of language study: history of the language, phonology and morphology, grammars (traditional and modern), and contemporary American usage, dialects, lexicography and semantics.

ENG350 - Journalism Genres

Special Topics in Journalism Genres is a repeatable theoretical and hands-on course, in which students study one of the following genres: editorials and commentary, arts and entertainment reporting and criticism, public affairs reporting and analysis, environmental reporting and analysis, health and fitness reporting and analysis, technology reporting and analysis, or consumer and business reporting and analysis, or other genres. Students will read journalism articles in the genre, as well as report and write stories in that genre.

ENG351 - Publishing the Magazine

Students in this course publish a magazine, "The Inkwell." They contribute works of literature and photographs, edit the pieces, establish editorial policy and publish the magazine.

ENG352 - Studies in Writing

This course is a study in style, its definition, its analysis, and the techniques modern writers of creative nonfiction use to achieve it. Students analyze the work of such writers as Tom Wolfe, Joan Didion, Hunter Thompson and Truman Capote, then apply to their own prose the techniques these writers use.

ENG354 - Media History

A critical exploration of how American journalism evolved from colonial times to the present, analyzing the roles that political, philosophical, social, technological and economic forces play in the evolution of the media, particularly print and online media, and how the media, in turn, influence society.

ENG355 - Survey of African American Literature

This course introduces students to literary texts by and/or about African Americans and their experience over several centuries. The course features the significant literary contributions of African Americans to America's diverse cultural history. The course will also include several critical approaches to the analysis of this literature.

ENG367 - Journalism – News Writing

This course is an introduction to basic news gathering and news writing taught by in-class exercises early in the semester, followed by weekly assignments that require submission to the Cal Times newspaper.

Course Descriptions

ENG369 - Journalism – Feature Writing

Students learn feature writing and in-depth news reporting and write several articles, some of which are submitted to local media.

ENG371 - Critical Theory and Teaching of Literature

A required course for English majors in the Secondary English track, Critical Theory and the Teaching of Literature shows students how to relate contemporary literary criticism to the teaching of literature. The varieties of literary criticism covered include New Criticism, reader-response criticism, deconstructive criticism, psychological criticism, feminist criticism and New Historicism. The literature studied emphasizes items typically taught in secondary schools, including both canonical (e.g. Shakespeare's plays) and noncanonical (e.g., Young Adult literature and Multicultural literature) works.

ENG372 - Advanced Composition

Advanced Composition is an introduction to rhetorical theory as it concerns the nature of writing and the teaching of writing. This course also offers practical information about and experience with modern course design and pedagogy, as well as discussion of the politics of writing instruction in contemporary schools.

ENG375 - Advanced Writing

This course is concerned with helping students develop a more sophisticated style in using persuasion, exposition and argumentation.

ENG376 - Creative Writing Fiction

Techniques of fiction are studied and applied to the writing of short stories, and students are encouraged to use and shape their own experience, transmitting those everyday things around them into fictional realities.

ENG377 - Creative Writing Poetry

Aspects of poetry such as line length, rhythm, sound patterns, and imagery are discussed. Students will apply those techniques to their own experience and vision, developing a poetic voice or style.

ENG378 - Creative Writing: Drama

Writing techniques for the modern stage are covered; students progress from idea through written text to the production of a scene or a one-act play.

ENG415 - Chaucer

"The Canterbury Tales" and other works are studied.

ENG419 - Internship in Professional Writing

An internship is a 120-hour, work-based and academic experience, emphasizing learning in a professional setting. Internships are supervised by both a work-site supervisor and a faculty supervisor and are designed to give the student a broad understanding of the particular writing and professional practices of the internship sites.

ENG425 - Shakespeare

This course explores in considerable depth Shakespeare's plays and poetry in their cultural, literary and performative contexts, both contemporary and modern.

ENG430 - Adaptation of Literary Materials

Students learn how to write fiction, poetry, drama and/or screenplays based on another work, such as writing screenplays or plays based on novels, writing updated versions of classics, writing in response to visual art, or telling traditional stories from altered perspectives.

ENG448 - Practical Criticism

An introduction to the theories comprising major schools in literary criticism, this course provides practice in applying these theories to literary analyses.

Course Descriptions

ENG481 - Old and Middle English Literature

An in-depth look at literature of the period, this course examines perhaps "Beowulf", the Old English elegy, verse romances, the lyric or medieval drama.

ENG484 - Studies in 19th Century English Literature

This course emphasizes the poetry of Keats, Shelley and Byron; the critical writings of Blake, Wordsworth and Coleridge; and the essays of Lamb and Hazlitt. It traces for the student the mutual evolution of literary forms and cultural, social and philosophical upheavals. It places particular emphasis on the essence of the Romantic movement: the spirit of individual liberty.

ENG485 - Studies in 20th Century British Literature

This course examines contemporary trends in literature, such as inter-textuality, ethical issues, major figures (i.e., Conrad, Greene, Woolf, Orwell and Burgess), WW I poetry, drama or the novel.

ENG487 - American Literary Genres

English 487 surveys canonical authors and works in selected genres or special topics in American literature study, which may include the short story, novel, poetry, drama, nonfiction, humor, travel writing, transatlantic writing, period literature, and ethnic literatures.

ENG489 - Studies in English Literary Genres

English 489 is an in-depth study of a particular genre of English literature or a comparative study of more than one genre. Genres covered may include epic poetry, lyric poetry, the short story, the 19th-century novel, the 20th-century novel, modern poetry, drama, nonfiction and film.

ENG495 - Seminar in Creative Writing

This is intended to be a final polishing course in creative writing, where students write and revise fiction, poetry, or drama, preparing a professional-level work.

ENG496 - Writing for Publication

Students analyze regional and national markets and refine their work for publication. They are expected to publish at least one work during the semester.

ENG499 - English Studies Capstone Class

This course for English majors is required for every English Department track: creative writing; journalism; language and literacy; and literature. The course will give majors from any track opportunities to demonstrate their application of the knowledge and skills developed through the undergraduate curriculum, particularly in the major and the General Education Program. Emphasizing written and oral performance at the professional level, the course will ask students to show proficiency in academic analysis and synthesis of English studies concerns while also addressing the social relevance and community implications of such concerns.

ENS-Environmental Science

ENS101 - Introduction to Environmental Science

The broad field of environmental management includes human population growth, soil, land and energy use, water and air pollution, and agencies and laws associated with the above topics. No one area is covered in depth. Rather, the student is introduced to each problem, its source, current corrective measures, and possible future technology.

ENS399 - Conservation Biology

This course will broadly cover the multidisciplinary field of conservation biology. The course will focus on the historical context of this emerging field and the deviation from traditional natural resource management. The course will explore the impact of humans on biodiversity, both in the destruction of it and in the maintenance of what is left. The role of government, non-government organizations, and citizens will be studied.

Course Descriptions

ENS423 - Wildlife Management Techniques

This course will cover selected techniques commonly used by wildlife biologists. Techniques used to encounter mammals, birds, reptiles and fish will be covered. Important techniques covered include aging and sexing of game species, habitat measurement and evaluation, population analysis, and analysis of food habits. The lecture portion will provide an introduction to those techniques while the lab portion will provide practical use and application of selected techniques.

ENS424 - Fisheries Management

A combination of lectures, lab, and field trips will emphasize fisheries biology and management in North America, including both freshwater and marine systems. Lectures will include fisheries resources, aquatic habitats, population dynamics, laws and regulations, aquaculture, conservation, and current fisheries issues. Labs and field trips will emphasize research methods and harvest and habitat management techniques.

ENS425 - Principles of Aquaculture

This course is designed to provide students with an understanding of the philosophies and concepts of aquaculture. Major emphasis will be placed on the impact that aquaculture has in North America, but additional global issues will be incorporated into the course. Topics to be covered include water treatment systems; recirculating and flow through aquaculture systems; integrated aquaculture; finfish and shellfish aquaculture; fish health and disease; and the economics and politics of aquaculture.

ENS435 - Natural Resource Law and Policy

This course will focus on the history of current federal laws, policies, and programs, and include discussions of the roles of various resource management agencies. The course will focus on related natural resources administration and policies in the United States but will include aspects of international law and policy as they affect North America's resources. The course will cover the historical context of U.S. natural resource policy including the history of land acquisition and disposition by the federal government and the creation of the public domain including the National Parks, National Forests, Wildlife Refuges, and Bureau of Land Management Lands.

ENS440 - Environmental Pollution Control

A comprehensive study of environmental pollution to include its major sources, control and management, and the impacts from environmental toxins, contaminants and pollutants on humans and our environment. An emphasis will be given to the technologies involved in the abatement, treatment, and monitoring of environmental pollutants. Specific topics will include: land, air, water and noise pollution.

ENS475 - Wetlands Ecology

A coordinated lecture/laboratory approach that will emphasize wetlands within the continental United States. The course will provide a background in both historical and modern wetland issues; characteristics of freshwater, estuarine and marine wetland types, including important plants and animals of each; processes of wetland determination and delineation; regulatory framework of wetlands protection ; and procedures involved in wetland restoration and conservation. T

ENS480 - Topics in Field Biology

A specialized off-campus residential program which emphasize ecology, behavior and the natural history of organisms in their natural environments. Students will be trained in a variety of methods used in field biology and have the opportunity to contribute to original research projects. Program focus will vary, depending on the length of the course and the site at which the course is offered. Course may be repeated as the topic/site changes.

ENS492 - Animal Population Dynamics

This course is designed to provide students with an understanding of theoretical and applied aspects of animal population dynamics. The course will examine variation in population size and sex/age composition, reproduction and mortality, and quality and condition of animals in populations. Emphasis will be placed on principles and techniques used by wildlife ecologists to quantify and predict populations of vertebrate animals. The lecture portion of the course will include lecture and discussion on issues and concepts in population dynamics. The lab portion of the course will emphasize application of common techniques and models used by wildlife population ecologists.

Course Descriptions

ENS495 - Experimental Design and Analysis

This class will help prepare students to design, conduct and evaluate scientific research. Class work will focus on the theoretical and applied basis of experimental design, sampling theory and sampling designs, data collection and analysis (using statistical software), and the proposal and evaluation of research studies.

ESP-Special Education

ESP101 - Exceptional Child I

Exceptional Child I is the first of a two-course introductory sequence to children with disabilities and to the field of special education. This course examines the range of high-incidence disabilities in children and their broad sociological, educational, and vocational implications. Specifically, the sequence develops competencies in such areas as the historical development of services for individuals with disabilities, legislation and litigation affecting the delivery of services, definitions and classification of disabilities, the impact of inclusion programs, preschool and post-school programs, family services, and program modifications and teaching techniques for children with disabilities, all within an applied behavior analysis context.

ESP200 - Exceptional Child II

Exceptional Child II is the second of a two-course introductory sequence to children with disabilities and to the field of special education. This course continues the examination of lower-incidence disabilities, such as hearing and visual impairments, physical disabilities, and dual-sensory impairments. This course continues the development of competencies in the definitions and classification of disabilities and provides further examination of the development and implementation of individualized educational programs.

ESP210 - Special Education Foundations and Collaboration

This course is designed to provide information and skills necessary for accommodating exceptional learners in a variety of school arrangements. The primary focus is foundations and characteristics of special education and students with exceptionalities and collaboration/consultation for the successful inclusion of students with exceptionalities into the inclusionary classroom.

ESP211 - Special Education History, Theory and Exceptionality

This course is designed to provide information and skills necessary for individuals interested in the philosophy found within special education identification and practices. The course also serves to provide information regarding the definition, prevalence, etiology, characteristics, and general educational practices as they relate to individuals with exceptionalities.

ESP301 - Behavior Principles I

Behavior Principles I is the first of a two-semester introduction to the professional discipline of applied behavior analysis. Applied behavior analysis is an educative approach with three fundamental characteristics that is always responsive to some form of human problem. It restructures the problem, such as underdeveloped academic skills or socially undesirable responses, into behavior(s), and it applies the principles of behavior to change these problematic behaviors. In the process, it identifies important functional relationships contributing to an expanding technology of human behavioral change.

ESP311 - Assessment and Positive Behavior Interventions

This course is required for all education or related services majors and is intended to provide future teachers with the fundamental knowledge, skills, and disposition: how to administer, score, and interpret both norm-referenced and criterion-referenced assessment devices; how to design appropriate learning environments to promote positive learning and reduce interfering behaviors; and how to design and implement schoolwide and classroom positive behavior interventions and supports.

ESP312 - Applied Behavior Analysis for Special Educators

This course is designed to provide a strong foundation and knowledge of basic principles of learning through the introduction of Applied Behavior Analysis, the science and technology of behavior. The focus is on current practices for group / individual data collection, program selection, and implementation. Basic research design, positive practices, group contingency, and behavior reduction techniques are emphasized. [At least 30 hours of field experience are required.]

Course Descriptions

ESP339 - Special Education Field Experience I

The Special Education Field Experience I is a course taken by students majoring in Special Education. Students spend 45 hours in a school setting to gain experience with students with disabilities. This will be a collaborative experience between the student, university supervisor, and collaborating teacher. The collaborating teacher certified in special education and at least two years experience teaching students with disabilities. While fully immersed in the school-based setting, university students may observe, assist, tutor, instruct, assess, and/or manage students. Within the experience students will reflect and self-critique their current skills, knowledge, and disposition related to all school-age students they encounter.

ESP401 - Behavior Principles II

Behavior Principles II is the second of a two-semester introduction to the professional discipline of applied behavior analysis.

ESP411 - Special Education History, Theory and Exceptionality

This course is designed to provide information and skills necessary for individuals interested in the philosophy found within special education identification and practices. The course also serves to provide information regarding the definition, prevalence, etiology, characteristics, and general educational practices as they relate to individuals with exceptionalities.

ESP418 - Advanced Evidence Based Practices for Secondary Inclusion

This course serves to provide and prepare special education teachers to use research and strategy based interventions and plan instruction of adolescents in grades 7-12 who receive special education services and may be included in the general education classroom. The course focuses on how to effectively apply the use of evidence-based practices in several curricular areas with an emphasis on the critical areas of English, Mathematics, Science, and Social Studies.

ESP419 - Evidence Based Practices for K-12 Inclusion

Evidence-Based Practices for K-12 Inclusion is offered to K-12 majors the semester prior to their student teaching experience and is a methodology course for pre-service education teachers. The purpose of the course is to prepare pre-service teachers to provide evidence-based language arts and math instruction to students with high and low incidence disabilities in inclusion settings. An emphasis is placed on results of research and proven methods of instruction for teaching reading and math to students with cognitive, physical, social, behavioral, and language-based disabilities. The course stresses a behavioral approach to teaching, as well as the development and implementation of intervention strategies for various populations of students with exceptionalities in inclusion settings. Additional topics include modifications and adaptations of materials, effective teaching, learning strategies, lesson planning, assessment, and individualized education programs.

FIN-Finance

FIN301 - Financial Management

The purpose of this course is to have students learn the basic financial principles and practices necessary to manage the business firm. The course will cover the tools and techniques used by the financial managers for financial analysis and planning, valuation of financial assets, financing decisions, and Investment decisions. Topics include time value of money, risk and returns trade-off, valuation of financial assets, calculation of cost of capital, capital budgeting and other subjects.

FIN302 - Advanced Financial Management

A continuation of FIN 301. An intensive study of capital budgeting, capital structure, working capital management, leasing vs. buying, distribution in shareholders, mergers, bankruptcy, multinational finance and analysis of cases relating to financial decisions of firms.

FIN304 - Personal Finance

A guide to personal finance to best meet one's objectives and make financial decisions easier. Topics include: budgets, major purchases, use of credit and bank loans, insurance, real estate and investment in securities, taxes and estate planning.

Course Descriptions

FIN305 - Investments Management

This course covers the most common concepts, theories and skills used in financial investment management. Topics include but are not limited to financial assets (i.e. stock and bond), portfolio theory, behavioral finance, fundamental analysis, technical analysis, asset allocation, etc. Current financial market events will be discussed in class. Stock virtual trading will be used to enhance learning.

FIN311 - Financial Markets and Institutions

Description and analysis of major financial institutions and money and capital markets. Determination and Structure of interest rates, derivative security markets, major sources of uses of funds by major financial institutions and impact of government regulations are discussed.

FIN325 - Series 7 Exam Prep

This course provides students with the qualifications necessary in General Securities Representative Qualification Exam (Series 7 Exam), in order to make different types of trades with all types of general securities, excluding commodities and futures. The exam is administered by the Financial Industry Regulatory Authority (FINRA). It is the most commonly required registration in the U.S. financial securities industry. The course covers equity, debt, mutual funds, variable insurance products, limited partnerships and derivative securities, operations of the primary and secondary markets, securities analysis, and the rules and regulations that govern business conduct in financial securities industry. This class will get students ready to take the Series 7 exam once they are hired by a financial company.

FIN331 - International Finance

This course is designed to teach the fundamental economic and financial issues faced by multinational corporations. Topics covered will include international monetary system, balance of payments, foreign exchange market and theories, currency futures and options, currency risk management, and international financial markets.

FIN335 - Risk Management

This course is designed to provide students with a broad coverage of various aspects of risk management used in financial industry. For each type of risk, it addresses its concept, usage, risk measurements, and its basic quantitative and/or qualitative skills. Topics include, but are not limited to, risk management industry, theories and measurements of risk, types of risks (i.e. market risk, interest rate risk, credit risk, operational risk, etc.), the tools and instruments used in risk management, related regulations and practice in various financial institutions.

FIN341 - Entrepreneurial Finance

This course addresses the financial aspects of entrepreneurship: the financial managerial skills and various financing strategies. Compare to well-established corporations, early stage ventures face higher level of operational uncertainty and greater financing difficulty. In this course, students are introduced to the financial analytical skills that are most needed for new entrepreneurial ventures, such as financial ratio analysis, cash management, and financial statement projection. They will also get to know various funding sources, for example: venture capital, crowdfunding (part of FinTech ecosystem), alternative financing etc.

FIN371 - Introduction to Fintech

Advancements in technology play an increasingly influential role in all aspects of the field of finance, enabling new and existing players to disrupt entire business models across all sectors of the industry. Financial technology, also known as fintech, is an industry sector composed of companies that use technology to make financial services more efficient. Examples include crypto currencies like Bitcoin, blockchain based clearing houses, and mobile phone based payment systems. The Financial Technology sector is booming as financial firms, investors, consultants, entrepreneurs, and other potential employers alike ask questions including: What are the main innovations? How mature is the technology? Who are the key players? What is driving growth in this sector? This course provides insights into this financial technology revolution, and its many opportunities for disruption, innovation, and career advancement and employment.

FIN420 - Securities Industry Essentials Exam Prep

This course prepares students with the requisite knowledge and a better understanding of the topics tested on the Securities Industry Essentials (SIE) Examination, the first-level test of 9 different securities licensing exams

Course Descriptions

(including Series 6, 7, 22, 57, 79, 82, 86/87, 99). The SIE exam is the only securities licensing test that opens to college students while in college. It could greatly increase job placement opportunities. This course provides a comprehensive understanding of the various investment instruments that are available to individual and institutional investors. The topics will include, but not be limited to, introduction of securities markets, investment vehicles (such as equity and debt securities), alternative investments, investment strategies, basic economic theory, and the industry rules and regulations governing the securities industry.

FIN421 - Series 7 Exam Prep

This course provides students with the qualifications necessary in General Securities Representative Qualification Exam (Series 7 Exam), in order to make different types of trades with all types of general securities, excluding commodities and futures. The exam is administered by the Financial Industry Regulatory Authority (FINRA). It is the most commonly required registration in the U.S. financial securities industry. The course covers equity, debt, mutual funds, variable insurance products, limited partnerships and derivative securities, operations of the primary and secondary markets, securities analysis, and the rules and regulations that govern business conduct in financial securities industry. This class will get students ready to take the Series 7 exam once they are hired by a financial company.

FIN492 - Finance Internship

The student is placed with a business firm, bank, government agency or nonprofit organization performing finance-related tasks. The internship experience offers a practical training ground for students that supplements academic training by permitting them to apply the theories, concepts and techniques learned through their other coursework to address actual problems in a real business environment.

FIT-Fitness

FIT100 - Introduction to Fitness

This course is an introductory overview of fitness and the fitness industry. Students will be exposed to current practices within the fitness industry. Students will also gain an understanding of wellness and the wellness lifestyle. This course serves as a prerequisite for all courses within the curriculum.

FIT115 - Applied Anatomy and Physiology in Wellness and Fitness

This course is a continuation of Human Anatomy and Physiology I for Wellness and Fitness professionals. Continuing the exploration of the human body, this course provides an in-depth examination of the skeletal, nervous and muscular systems. Students will learn the organization and physiology of these systems especially as they relate to human movement and physical activity. Particular attention will be paid to surface anatomy, skeletal landmarks, muscle tissue structure, and synovial joint structure. The major articulations of the body will also be explored along with the muscles related to the movement of these articulations. Application of anatomical and physiological concepts to practical issues in fitness and wellness will be made throughout the course. Students will explore human anatomy utilizing 3D interactive models.

FIT125 - Fundamentals of Speed Training

This course is designed to provide students content related to the ever-growing specialization in speed training. Students will be exposed to content from the National Association of Speed and Explosion (NASE), and at the close of the course will be prepared to sit for their certification to become a Speed and Explosion Specialist. All aspects of speed training will be explored, including mechanics, training, and program design. The course will provide an entry-level understanding of biomechanics and exercise physiology as they pertain to improving athletic performance. Additionally, practical applications will be presented pertaining to proper warm up procedures, drills and exercises and sample programs that can be immediately applied upon completion of the course.

FIT250 - Current Topics and Strategies for Youth Fitness

This course will focus on developing the skills that will benefit individuals who are ages 6-18 by providing knowledge and skills necessary to promote and maintain fitness. Students will be exposed to topics that impact this population, including skill development, long-term impact of the sedentary lifestyle and the development of a healthy lifestyle. Special emphasis will be placed on specific training regimens, current fitness trends for today's youth, and program development.

Course Descriptions

FIT300 - Business Aspects of Fitness

A comprehensive discussion of the pragmatic approach to conducting business in the fitness industry. The course focuses on key elements within the business structure, including marketing, facility management, accounting, budgeting, change management and the creation of additional profit centers. Additionally, students will identify key partners in running a successful business.

FIT305 - Motivation in Wellness and Fitness

The art of motivating people to begin and/or maintain physical activity and a healthy lifestyle is a challenging style that fitness professionals must develop. This course is designed to allow students to implement strategies to motivate clients to begin and/or maintain wellness and fitness lifestyles. Motivational concepts like creating habits, setting goals, creating self confidence through positive self talk and attitude, and creating an encouraging fitness environment are all discussed.

FIT325 - Integrated Personal Fitness Training

A comprehensive view of personal fitness training with a focus on assessment and developing customized fitness programs. The course will orient the student to the basics of the revolutionary exercise programming strategies of the Optimum Performance Training™ model.

FIT335 - Integrated Personal Fitness Program Design

This course will introduce the revolutionary exercise programming strategies of the Optimum Performance Training™ model specifically for the fitness and wellness professional. The student will receive a detailed insight into designing safe and effective exercise programs for any personal training client. This course is linked to FIT 325.

FIT350 - Fitness for Special Populations

An in-depth analysis of the fitness needs of individuals from special populations. Particular attention will be placed on legislative initiatives and their effect on fitness professionals and the individuals with special needs whom they serve.

FIT380 - Wellness and Fitness for the Aging Population

This course will focus on developing the skills that will assist individuals who are aging by providing knowledge and skills necessary to promote and maintain fitness. Students will be exposed to special topics impacting this population. Special emphasis will be placed on adapting activities and strategies for leading groups.

FIT401 - Leadership Concepts and Actions in Wellness and Fitness

Leadership is always an action, and sometimes a position. This course will guide students to learn about leadership styles, concepts and actions. Building upon the leadership concepts presented, students will be challenged to identify and further develop personal leadership traits, philosophy, vision and skills. Students will be asked to reflect on different leadership scenarios including ethical, conflict resolution, and team building situations found within the fitness and wellness industry.

FIT405 - Wellness Seminar I

This course examines current trends in wellness and prevention across the spectrum and throughout the lifespan. Traditional and nontraditional approaches are considered.

FIT410 - Wellness Seminar II

This course is designed as a continuation of Wellness Seminar I. A major focus of the course will be the continued adoption and adaptation of the wellness lifestyle. Students will be required to complete a community/service learning project as a culminating activity in the course/program.

FIT420 - Trends and Issues in Fitness

An analysis of professional fitness trends as well as preventative care health issues from historical, contemporary and futuristic viewpoints with implications for professional fitness practice in the health and wellness delivery system.

Course Descriptions

FIT425 - Evaluating Research in Fitness and Wellness

This course is designed to teach students to become knowledgeable consumers of research in order to keep current as a professional in the fitness and wellness industry. Emphasis is placed on developing library research skills and critically analyzing research.

FIT430 - Applications in Fitness and Wellness Research

This course is a continuation of FIT 425 whereas the student will blend the compiled information of the aforementioned course and apply it to complete the objectives as noted above. Continued emphasis is placed on developing library research skills, critically analyzing research, and becoming a knowledgeable consumer of research to stay current as a fitness and wellness professional. Different types of research, particularly descriptive and experimental, are presented.

FIT450 - Advanced Techniques Endurance Training

This course is designed to provide students with a greater understanding of endurance training. Students will further explore human exercise physiology as it relates to endurance activities. Emphasis will be placed on nutrition, energy systems/expenditure and management of acute training variables.

FIT499 - Exercise Science Internship

This course is designed as a culminating experience for students desiring a clinical internship. Students will be assigned to an internship site based on their individual needs and preferences. Students will work with professionals in various fitness and wellness arena facilities as well as selected non-traditional sites.

FRE-French

FRE101 - Elementary French I

For the student without previous knowledge of French. The development of the fundamentals of correct idiomatic French. Instruction in basic audio-lingual comprehension, sentence structure, reading, writing and speaking. Classroom instruction is supplemented by laboratory study and practice.

FRE102 - Elementary French II

A continuation of French 101.

FRE203 - Intermediate French I

A continuation of French 102.

FRE204 - Intermediate French II

Continuation of French 203. Oral-aural work continues but is accompanied by a development of reading skill through discussion of selected prose and poetry.

FRE311 - French Conversation, Composition and Phonetics I

Cultural themes as a basis for idiomatic conversation and discussions. Written compositions are assigned to teach the student how to write correct French. The course also provides a systematic study of the sounds and sound patterns of the French language.

FRE312 - French Conversation, Composition and Phonetics II

Continuation of French 311 on a more advanced level as reflected in conversation, composition and exercises in phonetic transcription.

FRE341 - 17th Century and Classical Age

This course surveys the evolution of French culture from the early 17th century or the Baroque (1600-1640) to the classical period (1640 to the end of the century). The course seeks to introduce the student to the history of French thought in the Splendid Century. While it follows sociological, political, philosophical and historical developments to a certain degree, its primary emphasis is on the artistic domains of literature, music, architecture and the visual arts of the period. In so doing, this course illustrates the ways in which France has been influenced by its rich cultural heritage.

Course Descriptions

FRE342 - 18th Century and Enlightenment

This course surveys the evolution of French culture throughout the Age of Enlightenment, when scientific discovery and new historical methods acted as agents of change upon the traditional foundations of belief. We will consider how these changes affected French thought, especially in the artistic domains of literature, music, architecture and the visual arts of the period. The course will introduce the student to this age of criticism and reconstruction, an age viewed as the crisis of the European mind, which gave birth to the philosophe, or philosopher, one who was not only involved with the theories but with social reform as well. These reforms in human institutions and thought will be shown to terminate in the revolution of 1789 and the end of the Ancient Regime.

FRE343 - Age of French Romanticism

This course surveys the evolution of French culture throughout the Romantic movement, which permeated the sensibility of the young in France and which reached a true flowering in the 19th century, particularly from 1820 to 1845. Both the precursors and the masters of this movement are considered through a study of the artistic expression of the times.

FRE344 - The Age of French Realism: The Second Empire to the Aftermath of the Franco-Prussian War

This course surveys the evolution of French culture during the Age of Realism, including the Franco-Prussian War, positivism and its aftermath. This period encompasses the dictatorship of Napoleon III, a monarchy marked by material success among the middle class and by disappointment and pessimism among thinkers, writers and artists. This course considers the artistic achievements of the period within the framework of the sociological, political and historical setting. It studies certain schools of art (Realism, Impressionism and Naturalism) and seeks to illustrate how these movements of artistic expression manifested themselves in the principal works of literature, philosophy, music and the visual arts. This course is taught in English.

FRE345 - Birth of Modern French Culture in the Arts 1900-World War II

This course surveys the evolution of French culture from 1900, the time of the Belle Epoque, or Beautiful Period, at the turn of the century, to the advent of the Second World War. While the course follows the sociological, political and historical developments of the period, it puts emphasis on the artistic ramifications of this period of conflict and rapid change. The interwar years are treated in all their artistic output, especially in interwar theater, fiction and the presence of the school of Surrealism in poetry, fiction, theater and art. This course is taught in English. .

FRE346 - Contemporary French Culture/Arts

This course surveys the evolution of French culture from the Occupation and Vichy Regime in France to the present day. It seeks to introduce the student to the literature, philosophy, music, films and visual arts of the period, which reveal the rich cultural heritage of France. As an orientation to the cultural arts, consideration will be given to the impact which important geographical, social and historical elements had upon them.

FRE347 - Francophone Africa

This course examines Francophone Africa from a literary, socio-political, and artistic perspective. The focus is on representative works illustrating the African traditions and identity embodied in the concept of "Négritude." It also looks closely at French colonization in Africa and the transition from Pre-Independence to Post Independence.

FRE348 - Francophone Canada

This course examines Francophone Canada from a literary, socio-political, and artistic perspective. The focus is on representative works illustrating the French Canadian language and culture. It also looks closely at the Quebec separatist movement and the Quiet Revolution, a period of intense socio-political and cultural change.

FRE421 - Survey of French Literature I

An introduction to French literature from the Middle Ages to 1800 through an examination of representative novels, plays and poems of the period.

Course Descriptions

FRE422 - Survey of French Literature II

An introduction to French literature from 1800 to the present through an examination of representative novels, plays and poems of the period.

GCM-Graphics and Multimedia

GCM180 - Multimedia Foundations

This course focuses on the fundamental concepts of multimedia technology and typical components including hardware, software, peripheral devices, conventional photography/scanned images, digital photography, bitmapped and vector based image creation and editing, web pages, video, animation, 3D images, and audio. The application of multimedia in business, marketing, education, entertainment and training will be explored. Practical hands-on assignments will be used to reinforce learning.

GCM211 - Screen Printing Techniques

This course defines and analyzes the process of screen printing, and is an introduction to the various applications of screen printing. Student-designed activities are supported by exercises that provide quality and control for the printing process. Emphasis of the course is centered on establishing repeatability of the printing process by controlling variables; digital design and imaging; single and multiple color image design, conversion and transfer; sheet-fed manual and semi-automatic presswork; flat substrate and textile printing applications of simple and complex close register line images.

GCM220 - Black and White Photography

This course emphasizes techniques involved in monochromatic still photography and introduces color photography. It covers the basic aspects of picture taking, photographic composition, digital camera operation, tonal correction, and digital output.

GCM225 - Digital Layout and Design

In this course student will focus on presentation of design elements and principles used to produce various layouts for printing production and digital display. The individual must strive to develop harmonious relationships between these design elements and principles and various printing and digital applications through practical activity assignments. The fundamentals of producing digital layouts for newspaper, magazine, direct mail, poster, web site, digital display and point of purchase advertising are considered. Use of computers for electronic/desktop publishing is emphasized. Production and practical application assignments are to be performed in conjunction with theory explanations as out of class activities.

GCM240 - Electronic Desktop Publishing

This course provides an in-depth study into the electronic desktop publishing systems and their concept of architecture, operation, networking, financing and design role in the publishing industry. It covers the basic aspects of graphic designing, creating page layouts, scanning of text and continuous tone photographs, connectivity, telecommunications, imagesetting, and encryption of data. Each student will experience hands-on activities with microcomputers utilizing high-end design, draw, paint, scanning and integrated page layout software packages.

GCM300 - Digital Photography

This course emphasizes techniques involved in color imaging and digital image manipulation by means of a computer. It will focus on developing the necessary skills to perform digital scanning, digital photography, and preparing images for output.

GCM302 - Lithographic Techniques

An in-depth study of the lithographic process focusing on line and halftone reproduction of graphic materials. Assigned projects require students to learn the operations of a lithographic press through hands on activities and simulator exercises to reinforce lecture presentations. Production workflow is analyzed and evaluated through class projects. Substrates and inks are studied to show the effect on specific projects, and specific problems related to each.

Course Descriptions

GCM311 - Advanced Screen Printing Techniques

A study of the techniques used for transfer of line and tonal images on a variety of substrates commonly used in the screen printing field. Each student has the opportunity to identify, calibrate and print upon selected substrates. The student generates specifications, estimates, and procedures for the production of self-directed screen printed products. Ultraviolet curing theory and practice, statistical process control, and current trends in screen printing are analyzed for application through student coursework.

GCM320 - Digital Video

This course explores digital video from the inception of an idea to the delivery of the finished video. Students will develop and use their understanding of video concepts, storytelling, camera use, video editing and exporting to create videos for the Internet, multimedia presentations and video broadcasts. Source footage comes from photos, previously shot footage or footage shot using the University's equipment or the student's camera and is edited on cross platform systems using commercial video editing software.

GCM330 - Flexography and Package Printing Processes

This course provides an in-depth study of the processes and techniques involved in the printing and converting of packaging and labeling materials. Laboratory applications include the design, preparation and flexographic printing and converting of various paper, foil and plastic substrates. Emphasis is placed on establishing repeatability of the printing process by controlling variables. Methods and techniques of quality assurance are implemented as an integral part in the production of flexographic printed products.

GCM331 - Web Publishing

This course examines web publishing and what makes an accomplished web designer. Students will design, develop, evaluate, and validate web pages that include HTML/XHTML language syntax, dynamic scripting, and server-based support and incorporate elements such as animations, sounds, and video. Dynamic tools and techniques such as XML, CSS, PHP, AJAX, JavaScript and Java, are highlighted.

GCM340 - Animation and 3-D Imaging

This course deals with the use of computers to create and animate three-dimensional appearing objects. Topics will include production strategies, basic modeling concepts, rendering, lighting, virtual cameras, and animation.

GCM342 - Estimating and Cost Analysis

A critical examination of the operations involved in the production of graphic materials for the purpose of determining costs of the operations to be included. The procedures necessary to assemble this information to produce estimates of typical printing matter are discussed. The identification and study of cost centers as they relate to the hour costs and ultimately to the selling price are examined. Students are required to prepare a number of cost estimates for the cost.

GCM365 - Color Imaging

Primary emphasis is placed on developing an understanding of the nature of light, the nature of color and its relation to the print reproduction process. Topics related to color perception, the human visual system, color communication and color management are presented. Digital pre-media, color correction and digital asset management concepts are introduced. The use of various color control devices is discussed and employed in the laboratory. Special techniques required to prepare projects, manipulate the images and produce them by conventional and digital methods are also covered through hands-on development.

GCM370 - Advanced Lithographic Techniques

A continuation of GCM302 Lithographic Techniques, building on and expanding topics covered, and introducing advanced topics. Ink color trapping theory is studied and put into practice in multicolor print projects. Multi-color images such as duotones and full color images studied in other classes are further explored by actual print projects using them. Students learn the importance of accurate proofing and incorporate proofing steps into lab projects. Quality Control devices are studied and used on all projects. Imposition theory is put into practice and advanced imposition techniques are studied. Impact of imposition on finishing and binding operations is studied. Advanced operations such as varnish treatments, metallic ink use, diecutting, variable data and images, and

Course Descriptions

complex folding are studied and incorporated into projects as possible. Hard cover book binding techniques are studied as are modern coating techniques such as aqueous and UV coatings.

GCM406 - Digital Workflow and Print Technology

This course will provide the student with knowledge of the components and terminology associated with digital printing and workflow technology, serving as a basis for understanding a variety of digital printing applications. Through a series of research, laboratory and computer-based activities, the student will experience graphical user interfaces and various computer peripherals used to support digital printing and imaging. Variable data printing and multi-channel applications are investigated.

GCM410 - Digital Portfolio

The course focuses on the integration of multimedia components including conventional photography/scanned images, digital photography, stock art/images, animation, sound and videography for the purpose of achieving effective assessment portfolios. Emphasis will be placed on the process of integrating the assessment components using various hardware platforms and software tools, and incorporating basic image manipulation. As a terminating project, the student will create and master a CD-ROM based professional digital portfolio. Students should have a resource bank of materials suitable for inclusion in a professional digital portfolio. They must have a working knowledge of computer operating systems for this course.

GCM420 - Technical Studies in Graphic Communications

This course involves, but is not limited to, directed study, special projects, institutes, or workshops in graphics and multimedia. Subject areas are organized according to student needs and will be designed to cover theory and/or practices going beyond the scope of regular coursework. Course content is planned cooperatively between the student(s) and the instructor. A course contract is prepared and will include: the objectives to be achieved, the procedures to be followed, and special conditions, the expected findings, and specifications for the evaluation of activities.

GCM445 - Print Production Planning and Control

This course focuses on the application of printing production management and operations concepts and techniques. It is concerned with long-term issues of strategic importance such as equipment investment, plant layout and organizational structure. It emphasizes items of day-to-day administrative importance: production planning, scheduling and control; inventory control and purchasing; production cost analysis, quality control and management.

GCM470 - Web Offset

This course is a comprehensive study of the web offset printing industry and covers both heat-set and non heat-set printing. The student will study all aspects of pre-press, press, and post press activities that are unique to web offset printing. The course includes the design and printing of two magazine format products to be printed on a heat-set web offset press and a non heat-set web offset press.

GCM485 - Graphics Seminar

This is an all-encompassing seminar-type course designed to provide graduating seniors in graphic communication with opportunities to enhance their knowledge base in the following areas: process photography/photographic techniques, lithographic applications, layout and design, estimating /cost analysis, paper/ink, electronic imaging, desktop publishing, screen printing and flexography. Additionally, students will be exposed to selected visitation sites, guest lecturers from the field, and an exploration of current problems and issues relating to the graphic communications industry. Each student is required to do a major research paper on a particular problem or issues relating to the graphics industry.

GCM495 - Graphic Communications Internship

The Graphic Communications Technology internship is designed to allow students to gain practical employment experience and to build upon the fundamental knowledge and skills that they developed in earlier courses. Student interns will expand their basic knowledge and skills through research efforts, problem solving, and practical applications in a print manufacturing technology-related research or business environment. Students participating in an internship program gain valuable hands-on experience in solving technical problems and in

Course Descriptions

working with people in a real-world setting. Student interns are placed with an organization, which most nearly approximates employment goals. If this is not possible, students are placed in some type of graphics environment, which is available at the time. The intent of the internship is to provide students with practical work experience in an environment in which they will be dealing with real problems requiring real solutions in a relatively short time frame.

GEO-Geography

GEO100 - Introduction to Geography

This course introduces students to regional differences throughout the world in terms of land forms, climates, soils and vegetation as well as population characteristics and economic activities. Representative areas, such as western Europe, Russia, Japan and Latin America, are developed.

GEO102 - Geographic Systems for Elementary Education

The geography component focuses on basic geographic literacy, physical characteristics of places and regions, human characteristics of places and regions, and the interactions between places and people.

GEO105 - Human Geography

The course provides insights into the existing patterns and distributions of various social groups. Broad outlines of human evolution, development and demographic patterns are emphasized.

GEO150 - Introduction to Tourism Studies

An overview of the tourism industry is emphasized. Topics include introductory principles, measuring and forecasting demand, tourism planning, tourism marketing, tourism development, and the role of the geographer.

GEO155 - Hospitality Industry and Operations

The course provides an introduction to the broad world of hospitality services and its relationship to the tourism industry. The course will provide an overview of the history, direction, and organizational structures of the hospitality industry and its role in the global tourism industry at various geographical scales. The nature and scope of this industry and basic operational concepts will be examined. Principles of sustainable operations will be emphasized.

GEO205 - World Cities Geography of Tourism

The geography of tourism in selected cities of the world with an emphasis on form and function is covered. Topics include an analysis of resources for tourism, the organization of related land-use patterns, and developmental processes.

GEO220 - Geography of North America

This course will lead the student on an investigation of the key environmental, cultural, economic, and political issues that face North America and Pennsylvania. Course materials will provide a larger context for understanding the patterns and processes shaping people and places in North America presently. There are in-depth discussions of the historical processes that have helped to shape each region in North America and Pennsylvania. As the world continues to globalize there are ever-increasing economic and cultural linkages among places in North America that are essential to investigating and describing every "corner" of the continent.

GEO221 - Geography of Drugs

This course examines international drug trade from the perspectives of historical, social, cultural, and economic geographies. The course will explore supply and demand relationships between the major world drug production regions and their consumers. Historical and contemporary trafficking relationships will be explored. Concepts of urban geographies of the western world with an emphasis on North America and Europe will be compared to socio-economic and geopolitical characteristics of the developing world. Implications for public health for producers and consumers are emphasized. Regulation, criminalization, and legalization issues and trends will also be explored from the perspective of community health and wellness.

Course Descriptions

GEO277 - Casinos and Gaming Entertainment

Casinos and gaming entertainment are a growing sector of the tourism and hospitality industries. This course examines the history and development of gaming and casino operations. Managerial, technical, and operational concepts of casinos and gaming entertainment will be reviewed. Other topics will include regulatory issues and implications for game protection. Within a global context, the socio-cultural, environmental, and economic impacts of casinos and gaming entertainment will be examined. Responsible gaming operations and management will be emphasized.

GEO325 - Geography of Europe

This course is a study of forces that have shaped the human landscape of western Europe. National and regional disparities ranging from land relief and climate to social and economic phenomena are studied.

GEO328 - Geography of Latin America

This course is a regional analysis of the physical and cultural environments that make the human landscape. Present Latin American society is studied through a historical perspective.

GEO330 - Meetings Expositions Events and Convention Operations

Through a global approach, this course examines the structure and role of conventions and destination management at various geographical scales. The course content will explore the theories and practices relevant to successful conventions and the role these play in destination management. Strategies required for successful planning, development, implementation, and evaluation of conventions will be introduced. Issues will be considered from the perspectives of the service providers, host community, and visitors.

GEO340 - Historical Geography

This course is a study of the interrelationships of the natural and cultural environments and the historical development of the cultural landscape. Historical development of the United States is emphasized.

GEO351 - Research Methods for Tourism Studies

This course will lay a foundation for senior-level course work in the tourism studies concentration. Secondary research techniques will be reviewed. Qualitative, quantitative and observational methodologies will also be examined. The focus will be practical skill development for data collection, analysis and interpretation.

GEO352 - Hotels Resorts and Lodging

This course provides an understanding of the hotel, resorts, and lodging sector of the tourism industry within a geographical context. This sector's growth and development, planning, design, and operations will be reviewed. The course will also review sustainable practices, industry opportunities, and future trends.

GEO358 - Comprehensive Tourism Planning

Students will become familiar with the process of tourism planning as a mechanism to sustainable tourism development. An understanding of the principles, practices and procedures of tourism planning at various geographical scales will be introduced. The student will apply concepts of tourism planning through experiential activities, which includes the submission of a written tourism plan.

GEO360 - Emergency Management

This course examines the emergency management process as it relates to both natural and technological (human-induced) hazards. Topics covered in the course include the history of emergency management in the United States and the four phases of the disaster life-cycle model (mitigation, preparedness, response and recovery). These concepts will prepare the student for understanding how disaster events can be managed in order to reduce losses. The course will incorporate analyses of case studies to display alternative solutions to disaster problems and provide valuable lessons for facing future threats.

GEO383 - Dark Tourism and Extreme Topics

This course explores some of the more extreme phenomenon of the tourism industry, which is one of the world's largest and fastest growing industries. This course will focus on growing special interest markets within the tourism industry with an emphasis on more extreme topics that touch upon death, destruction, and the macabre.

Course Descriptions

In this course, students study the impacts of dark and extreme tourism development on the culture, society, economies, and the environment at different geographical scales.

GEO426 - Impacts and sustainability of Tourism

This course will cover the principles of sustainability and sustainable tourism development. Material will cover economic, social, cultural and environmental impacts of tourism. Case examples will be used to illustrate the characteristics, methods of measurement, management and evaluation of sustainable tourism.

GEO474 - Developing the Master Plan

The course examines planning as a process. Attention is focused on the elements and activities necessary to prepare and implement a comprehensive plan. The course provides an opportunity for the student to apply acquired planning skills to specific urban and regional problems.

GEO479 - Internship

The internship provides the student with the opportunity to apply classroom theory to realistic, professional-level situations. It is intended to give the student a concentrated practical experience in a professional organization. The concepts and experiences acquired in the classroom are honed and fine-tuned at this level to prepare students for their career undertaking.

GET-General Engineering Tech

GET101 - Introduction to Engineering Technology

This course is the first course in the engineering technology core and is intended to introduce incoming freshmen to engineering technology. It will introduce the student to the various field of engineering technology study and present an overview of a career in engineering technology. The course will focus on the fundamental principles that cross the boundaries of engineering technology curricula and will demonstrate how mathematics and physical sciences are integrated into solutions of problems. This course will also introduce the student to computer aided drafting.

GET130 - Introduction to Engineering Technology

This course covers engineering technology fields such as computer, electrical, industrial, mechanical, mechatronics and robotics and their relation in sharing a set of common foundation concepts and skills. The intent of this course is to introduce the beginning engineering technology student to the world of engineering technology. Included topics for this course: survey of engineering technology fields and sample problems, case studies, terminology and units of measurement, problem solving/decision making, design processes, data collection and interpretation, technical calculator usage, drawing concepts, fabrication/prototyping basics, communication skills, and team work. Through a series of hands-on projects, the student will also be introduced to a number of modern software tools as used in various engineering technology fields.

GET140 - High Tech Systems

Modern society relies on high-tech systems for agriculture, communications, manufacturing, transportation and similar applications. One facet of these systems is based essentially on the Internet and mobile technologies, and this course serves as an introduction to the principles and methods used in modern hightech systems. Topics covered include a study of the fundamentals of electricity and electronics; the construction and control of simple circuits; the definition, types and uses of modern communications and networking equipment; and the use of computer technologies and smart devices in modern operations. The focus is the network of systems, including physical devices, autos, vehicles, appliances, homes, and other items embedded with electronics, software, sensors, actuators, and the network connectivity which enables these objects to connect, exchange and respond within systems.

GIS-Geographic Information Sci

GIS222 - Geo-Business

Spatial patterns associated with the location, distribution and consumption of goods and services are studied. Emphasis is placed on techniques for site selection, marketing and spatial analysis through the use of geotechnology.

Course Descriptions

GIS311 - Geographic Information Systems

This course provides an analysis of different methods and techniques of representing geographic data through the use of various manual and computer-based technologies. The focus is on the processes involved in the collection, compilation and display of geographic data within a database.

GIS314 - Spatial Land Data in the Oil and Gas Industry

This course provides an analysis of different concepts and techniques in representing land data through spatial technology. The students will examine land documents and input, edit and analyze them using geographic information systems. Students will also learn some of the pitfalls with land data including accuracy.

GIS413 - Environmental Applications in GIS

This course is tailored to introduce environmental issues to students within a spatial framework, using geographic information science. GIS and its impact in the natural and social sciences has grown dramatically over the years and its use has become pervasive in environmental disciplines. The course will cover the general concepts of GIS use and introduce the material in exercises to demonstrate practical applications of GIS for environmental problems. Students will have exposure to hands-on applications related to natural resource management, contaminant fate and transport, land use, and remediation techniques.

GMS-General Military Science

GMS101 - General Military Science 101

GMS 101 introduces you to the personal challenges and competencies that are critical for effective leadership. You will learn how the personal development of life skills such as goal setting, time management, physical fitness, and stress management relate to leadership, officership, and the Army profession. The focus is on developing basic knowledge and comprehension of Army leadership dimensions, attributes and core leader competencies while gaining a big picture understanding of the ROTC program, its purpose in the Army, and its advantages for the student.

GMS102 - Foundations of Leadership

GMS 102 overviews leadership fundamentals such as setting direction, problem-solving, listening, presenting briefs, providing feedback, and using effective writing skills. Cadets explore dimensions of leadership values, attributes, skills, and actions in the context of practical, hands-on, and interactive exercises.

GMS201 - General Military Science 201

GMS 201 explores the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and two historical leadership theories that form the basis of the Army Leadership Requirements Model (trait and behavior theories). Cadets practice aspects of personal motivation and team building in the context of planning, executing, and assessing team exercises and participating in leadership labs. Focus is on continued development of the knowledge of leadership values and attributes through an understanding of Army rank, structure, and duties, and basic aspects of land navigation and squad tactics. Case studies provide tangible context for learning the Soldier's Creed and Warrior Ethos as they apply in the Contemporary Operating Environment (COE).

GMS202 - Applications of Leadership and CBT PWR

GMS 202 examines the challenges of leading teams in the complex operational environment. The course highlights dimensions of terrain analysis, patrolling, and operation orders. Further study of the theoretical basis of the Army Leadership Requirements Model explores the dynamics of adaptive leadership in the context of military operations. GMS 202 prepares cadets for GMS 301. Cadets develop greater self awareness as they assess their own leadership styles and practice communication and team building skills. Case studies give insight into the importance and practice of teamwork and tactics in real-world scenarios.

GMS301 - Military Science Leadership

You are challenged to study, practice, and evaluate adaptive team leadership skills as you are presented with the demands of the ROTC Leader Development and Assessment Course (LDAC). Challenging scenarios related to small unit tactical operations are used to develop self awareness and critical thinking skills. You will receive systematic and specific feedback on their leadership abilities.

Course Descriptions

GMS302 - Military Science Leadership

This is an academically challenging course in which you will study, practice, and apply the fundamentals of Army leadership, officership, Army values and ethics, personal development, and small unit tactics at the team and squad level. At the conclusion of this course, you will be capable of planning, coordinating, navigating, motivating and leading a team or squad in the execution of a tactical mission during a classroom PE, a Leadership Lab, or during a Situational Training Exercise (STX) in a field environment. Successful completion of this course will help prepare you for success at the ROTC Leader Development and Assessment Course (LDAC) which you will attend next summer at Fort Lewis, Wash. This course includes reading assignments, homework assignments, small group assignments, briefings, case studies, and practical exercises, a mid-term exam, and a final exam. You will receive systematic and specific feedback on your leader attributes values and core leader competencies from your instructor and other ROTC cadre and MS IV cadets who will evaluate you using the ROTC Leader Development Program (LDP) model.

GMS401 - Military Science Leadership

GMS 401 is a practical application of adaptive leadership. Throughout the semester, students are assigned the duties and responsibilities of an Army staff officer and must apply the fundamentals of principles of training, the training management, the Army writing style and military decision making to weekly training meetings. During these weekly training meetings, the student will plan, execute and assess ROTC training and recruiting events. Students will study the special trust proposed to Army officers by the US Constitution and the President of the United States--a special trust given to no other civilian professions. Students will study how Army values and leader ethics are applied in the Contemporary Operating Environment and how these values and ethics are relevant to everyday life. The student will study the Army officer's role in the Uniform Code of Military Justice, the counseling of subordinates, administrative actions and the management of an Army Officer's career. Students will be given numerous opportunities to train, mentor and evaluate underclass students enrolled in the ROTC Basic Course while being mentored and evaluated by experienced ROTC cadre. The GMS 401 course is designed to include multiple opportunities for student-centered learning, to include, but not limited to student reading assignments; homework assignments; participation in small group assignments, practical exercises and case studies; student-delivered briefings and operations orders; and a variety of student assessments such as quizzes, a mid-term and a final exam. In addition, MSL 401 students are rotated through a variety of leadership positions that support a variety of ROTC battalion training and recruiting events throughout the semester where the student will receive detailed and constructive feedback on his/her leader attributes and core leader competencies from experienced cadre.

GMS402 - Military Science Leadership

GMS 402 explores the dynamics of leading in the complex situations of current military operations in the Contemporary Operating Environment (COE). You will examine differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. You will also explore aspects of interacting with non government organizations, civilians on the battlefield and host nation support. The course places significant emphasis on preparing you for BOLC II and III, and your first unit of assignment. It uses case studies, scenarios, and "What Now, Lieutenant?" exercises to prepare you to face the complex ethical and practical demands of leading as a commissioned officer in the United States Army. This semester, you will 1) Explore military professional ethics and ethical decision making facing an officer; 2) Gain practical experience in cadet battalion leadership roles; 3) Demonstrate personal skills in operations and communications; 4) Evaluate and develop MSL III small unit leaders and examine issues of force protection in the COE; 5) Prepare for the transition to a career as an Army officer.

GMS-General Military Science

GMS101 - General Military Science 101

GMS 101 introduces you to the personal challenges and competencies that are critical for effective leadership. You will learn how the personal development of life skills such as goal setting, time management, physical fitness, and stress management relate to leadership, officership, and the Army profession. The focus is on developing basic knowledge and comprehension of Army leadership dimensions, attributes and core leader competencies while gaining a big picture understanding of the ROTC program, its purpose in the Army, and its advantages for the student.

Course Descriptions

GMS102 - Foundations of Leadership

GMS 102 overviews leadership fundamentals such as setting direction, problem-solving, listening, presenting briefs, providing feedback, and using effective writing skills. Cadets explore dimensions of leadership values, attributes, skills, and actions in the context of practical, hands-on, and interactive exercises.

GMS201 - General Military Science 201

GMS 201 explores the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and two historical leadership theories that form the basis of the Army Leadership Requirements Model (trait and behavior theories). Cadets practice aspects of personal motivation and team building in the context of planning, executing, and assessing team exercises and participating in leadership labs. Focus is on continued development of the knowledge of leadership values and attributes through an understanding of Army rank, structure, and duties, and basic aspects of land navigation and squad tactics. Case studies provide tangible context for learning the Soldier's Creed and Warrior Ethos as they apply in the Contemporary Operating Environment (COE).

GMS202 - Applications of Leadership and CBT PWR

GMS 202 examines the challenges of leading teams in the complex operational environment. The course highlights dimensions of terrain analysis, patrolling, and operation orders. Further study of the theoretical basis of the Army Leadership Requirements Model explores the dynamics of adaptive leadership in the context of military operations. GMS 202 prepares cadets for GMS 301. Cadets develop greater self awareness as they assess their own leadership styles and practice communication and team building skills. Case studies give insight into the importance and practice of teamwork and tactics in real-world scenarios.

GMS301 - Military Science Leadership

You are challenged to study, practice, and evaluate adaptive team leadership skills as you are presented with the demands of the ROTC Leader Development and Assessment Course (LDAC). Challenging scenarios related to small unit tactical operations are used to develop self awareness and critical thinking skills. You will receive systematic and specific feedback on their leadership abilities.

GMS302 - Military Science Leadership

This is an academically challenging course in which you will study, practice, and apply the fundamentals of Army leadership, officership, Army values and ethics, personal development, and small unit tactics at the team and squad level. At the conclusion of this course, you will be capable of planning, coordinating, navigating, motivating and leading a team or squad in the execution of a tactical mission during a classroom PE, a Leadership Lab, or during a Situational Training Exercise (STX) in a field environment. Successful completion of this course will help prepare you for success at the ROTC Leader Development and Assessment Course (LDAC) which you will attend next summer at Fort Lewis, Wash. This course includes reading assignments, homework assignments, small group assignments, briefings, case studies, and practical exercises, a mid-term exam, and a final exam. You will receive systematic and specific feedback on your leader attributes values and core leader competencies from your instructor and other ROTC cadre and MS IV cadets who will evaluate you using the ROTC Leader Development Program (LDP) model.

GMS401 - Military Science Leadership

GMS 401 is a practical application of adaptive leadership. Throughout the semester, students are assigned the duties and responsibilities of an Army staff officer and must apply the fundamentals of principles of training, the training management, the Army writing style and military decision making to weekly training meetings. During these weekly training meetings, the student will plan, execute and assess ROTC training and recruiting events. Students will study the special trust proposed to Army officers by the US Constitution and the President of the United States--a special trust given to no other civilian professions. Students will study how Army values and leader ethics are applied in the Contemporary Operating Environment and how these values and ethics are relevant to everyday life. The student will study the Army officer's role in the Uniform Code of Military Justice, the counseling of subordinates, administrative actions and the management of an Army Officer's career. Students will be given numerous opportunities to train, mentor and evaluate underclass students enrolled in the ROTC Basic Course while being mentored and evaluated by experienced ROTC cadre. The GMS 401 course is designed to include multiple opportunities for student-centered learning, to include, but not limited to student reading

Course Descriptions

assignments; homework assignments; participation in small group assignments, practical exercises and case studies; student-delivered briefings and operations orders; and a variety of student assessments such as quizzes, a mid-term and a final exam. In addition, MSL 401 students are rotated through a variety of leadership positions that support a variety of ROTC battalion training and recruiting events throughout the semester where the student will receive detailed and constructive feedback on his/her leader attributes and core leader competencies from experienced cadre.

GMS402 - Military Science Leadership

GMS 402 explores the dynamics of leading in the complex situations of current military operations in the Contemporary Operating Environment (COE). You will examine differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. You will also explore aspects of interacting with non government organizations, civilians on the battlefield and host nation support. The course places significant emphasis on preparing you for BOLC II and III, and your first unit of assignment. It uses case studies, scenarios, and "What Now, Lieutenant?" exercises to prepare you to face the complex ethical and practical demands of leading as a commissioned officer in the United States Army. This semester, you will 1) Explore military professional ethics and ethical decision making facing an officer; 2) Gain practical experience in cadet battalion leadership roles; 3) Demonstrate personal skills in operations and communications; 4) Evaluate and develop MSL III small unit leaders and examine issues of force protection in the COE; 5) Prepare for the transition to a career as an Army officer.

GTY-Gerontology

GTY100 - Introduction to Gerontology

An introduction to the field of aging for majors and non-majors. A general overview of the psychological, biological, cultural and behavioral aspects of late life.

GTY200 - Aging in American Society

This course reviews the physical, social and cultural aspects of aging within the context of contemporary demographic and historical variables. Students will assess the impact of aging on the individual, the family, the workplace, the community and the U.S. society as a whole. Theories about roles and adjustments in later life are examined from a cross-cultural perspective to determine their relevance for both rural and urban settings.

GTY300 - Aging Policies and Services

This course provides a review of the public policies that have the greatest influence on the lives of older persons and those that have been promulgated especially because of concern for older persons. The major policies affecting older Americans are discussed in detail. The course will also discuss the evolution of policies as an outgrowth of developments in our society and the processes by which policies are introduced, debated, and established. The course will also examine the controversies, choices, and decisions involved in current policy debates and examine ways in which practitioners in aging can be involved in the policy process.

GTY310 - Aging and the Family

Overview of the theory/research on families in later life, including a synthesis and review of existing literature, identification of research issues and needs and implications of this information for practitioners, researchers, and family members.

GTY315 - Practicum in Gerontology

Exploration of the professional skills required to work in the field of gerontology and the positions available through working in such an agency under the joint supervision of a community partner and gerontology faculty member.

GTY320 - Alternatives in Long Term Care

Exploration of the current and emerging options for older adults needing long-term care, including institutional and community-based approaches.

Course Descriptions

GTY330 - Dying, Death and Bereavement

Introduction and survey of the current issues, concepts and practices of the social and psychological aspects of dying, death and bereavement.

GTY340 - Diversity in Aging

This course is designed to provide an understanding of the diversity among aging individuals and subgroups in this country and in other countries around the world. The course surveys aging in this country and around the world with a view toward identifying commonalities and varieties of the aging experience; demographic features; values; kinship; economics; policies; and political, religious and educational roles.

GTY350 - Ethical Issues in Aging

This course examines the difficult and perplexing issues facing those who work in the field of gerontology or those who are involved in the care of older adults from a personal perspective. Issues such as competence, independence, informed consent, managed risk, surrogate decision making, rational suicide and patient autonomy are examined. The course also helps students to develop a personal, professional, ethical framework within which to consider legal and ethical issues in working with older adults.

GTY380 - Wellness and Aging

This course examines the prevention or moderation of age-related physical changes and shows ways in which individuals can have greater personal control over the individual aging process by directing attention to significant lifestyle modifications and preventive health care strategies. The course also considers the psychological and social implications of age-related changes for human behavior.

GTY400 - Adult Development and Aging

Introduction to psychology of aging. An overview of later life cognitive processes including intelligence, learning, memory, problem solving, and creativity. Examination of adult socialization, personality adjustment, psychopathology, and death.

GTY410 - Research Methods in Gerontology

This course presents information and requires completion of assignments designed to develop the skills gerontologists need: 1) to formulate research questions and determine the method(s) of investigation likely to obtain the most meaningful results; 2) to identify literature relevant to one's study, read it critically and summarize the pertinent findings; and 3) to write research proposals related to aging. Emphasis is placed on developing library research skills, critically analyzing research and becoming a knowledgeable consumer of research.

GTY430 - Seminar in Gerontology

For advanced gerontology students to intensively examine and discuss selected aging subjects. Topics chosen by instructor; research paper/project required.

GTY440 - Internship

Development of the professional skills required to work in the field of gerontology through working in an agency under the joint supervision of a community partner and gerontology faculty member.

HIN-Harrisburg Internship

HIN374 - Harrisburg Internship Assignment

This internship gives selected students an opportunity to work in various state government offices, including the Governor's office, the Senate and the House of Representatives.

HIN375 - Harrisburg Internship

This course is completed in conjunction with HIN 374.

HIN376 - Public Policymaking

This seminar is completed in conjunction with HIN 374.

Course Descriptions

HIS-History

HIS101 - United States History to 1877

American history from the Pilgrims to the age of modern industry: the Colonial heritage, American Revolution, the emergence of a new nation, westward expansion, Civil War and postwar Reconstruction.

HIS102 - United States History since 1877

The emergence of modern America, its achievements and its problems: prosperity and depression, war and social unrest, World War I through the Vietnam era and beyond, and the computer age and its challenges.

HIS104 - History of Western Society to 1500

Western society from its origins in the Near East to the period of Absolutism in Europe.

HIS106 - History of Western Society Since 1500

This course covers Western society from the Enlightenment to the present. This course is a survey lecture course with class discussion encouraged. The course is intended to impart a basic knowledge of historical events crucial to the development of western civilization from the Enlightenment through the present day.

HIS111 - World Civilization to 1500

The process and interplay of the major world cultures in their evolution: Indian, Muslim, East Asian (China, Korea, Japan), Slavic, Western European, Latin American and African.

HIS112 - World Civilizations since 1500

Significant factors influencing change in the world's major cultural areas: industrialization and urban conflict, the democratic revolution, and the rise of charismatic leaders from Napoleon to Hitler.

HIS200 - History of Pennsylvania

The history of Pennsylvania from Colonial times to the present: the changes involved in social, economic and political life are treated from internal and external points of view.

HIS240 - History of the Cold War

The origins and continuance of Soviet-American rivalry since World War II. Confrontation in Europe; NATO; the Warsaw Pact; the growing nuclear arsenal; regional conflict in Africa, Latin America and Asia; the Congo, Angola, Cuba, Iran, China and Vietnam; the politics and leadership of both nations; the emergence of Russia as a global power.

HIS288 - Local History

An introduction to the location, evaluation, and significance of local history by using the problem-solving and genealogical approach. Specific topics are analyzed in order to get to know at firsthand the importance of local and family history.

HIS295 - The Craft History

This course acquaints students who are considering history as a major or minor field of study with basic historiography and historical methodology. Students receive a hands-on introduction to historical research and writing, and learn about various schools of history to prepare them for upper-level history courses.

HIS303 - Military History through Wargaming

This course uses military simulations (usually referred to as "war games") to examine the military side of history. The war games involved are complex simulations which allow both recreations of historical battles and also the exploration of what might have happened had historical events turned out differently. Students will study and discuss the conflicts under consideration in class before and after each simulation/game session, and will prepare written reports analyzing how their simulations of the battles worked out, why, and what they did right and wrong.

HIS304 - The Great Depression and World War II

The stresses and strains of the 1930-1945 period of United States history using recent trends in scholarship.

Course Descriptions

HIS305 - Contemporary U.S. History

The unprecedented changes that have occurred in the United States since the end of World War II.

HIS308 - History of American Constitution

The growth of the American constitutional system, with special emphasis on those aspects of constitutional growth that relate closely to the fundamental structure of American government and social order.

HIS310 - Christianity to 1500

This course explore Christianity's role in transforming western society from earliest times to the fifteenth century, through study of its belief system, the growth of monasticism and the institutional church, issues of dissent and reform, and more.

HIS311 - Public History

This course is an overview of the methods and arenas of the public historian. Through hands-on experience in labs focused on such areas as museum design, collection development, museum education, archival management, historical preservation and historical editing, the student will gain an understanding of the challenges and rewards of the public historian.

HIS312 - Women in Europe

A study of the lives and attitudes of women living in ancient and medieval times, from classical Greece to late medieval northern Europe. Social, cultural, religious, economic and political matters will be discussed, with special consideration given to the role women played in the shaping of Western civilization.

HIS314 - History of Scientific Thought and Technological Innovations

This course explores scientific thought and technological innovations throughout Western history, from ancient civilizations through the modern era. The course focuses on how science and technology have impacted societal change, including military innovations, political and economic revolutions, religious and philosophical thought, and labor relations.

HIS315 - Christianity since 1500

This course explores Christianity's role in western society from the time of the Reformation to the present day, through study of its belief system, the impact of the Protestant Reformation, the reaction of Christianity to challenges such as the Enlightenment and the revolutions of the eighteenth through the twenty-first centuries, issues of dissent and reform, and more.

HIS316 - 20th Century U.S. Foreign Policy

This course traces the political and social history of U.S. foreign affairs from the Spanish-Cuban-American war to the modern War on Terrorism. Readings consist of a mixture of primary and secondary readings. The course traces the evolution of US foreign policy and attempts to analyze the causes of this evolution.

HIS317 - African American History to 1877

This course explores great western African civilizations, the three continents involved in the transatlantic slave trade with special attention on the middle passage. Particular attention will be paid to African retention, African-Americans and the Colonial period and the new nation, the construction of race, the peculiar institution of slavery, free black populations, black resistance to subjugation, abolitionism, gender dynamics, blacks during the Civil War and the Reconstruction eras. The course also offers analysis of African-American literature, spirituals and other cultural manifestations.

HIS318 - African American History since 1877

The course surveys African-Americans in the aftermath of Reconstruction and during the Nadir period, the Great Migration, black urbanization, black cultural manifestations and movements, the rise of black protests, the Civil Rights and Black Power movements, and African-American involvement in 20th century war efforts and postindustrial America. This course also examines themes of identity, gender dynamics, leadership, pan-Africanism, nationalism, American politics and economic issues as they all pertain to African-Americans. Additionally, this course will examine the massive African-American literary canon, as well as two of the most

Course Descriptions

significant cultural epochs, which include the proliferation, demise, and legacy of the Harlem Renaissance, as well as the permanence of hip-hop.

HIS320 - The Anatomy of Dictatorship

The basic, social, economic, psychological and political elements that make up the modern dictatorship.

HIS322 - History of Religious Persecution in the U.S.

Religious tolerance and religious persecution have been recurring themes in U.S. history; from the first encounters with Native Americans to continuing controversies over school prayer, religion has played a major role in the development of American culture. This class will examine the diverse groups that sought to practice their religions freely in the U.S. and how they suffered forms of persecution; it will also explore the meaning of the First Amendment and claims of religious freedom.

HIS323 - World Environmental History

Traces the impact of the environment and environmental change on major world cultures and historical events from the Stone Age to the present through the examination of select case studies; explores the impact of different modes of production; the Columbian exchange; and different cultural conceptions of civilization.

HIS324 - The History of Women, Gender and Sexuality in the Modern World

This class will look at comparative women's history, focusing on topics such as sexuality, marriage, beauty and motherhood. Examples will be drawn from all over the world - and from various time periods from 1300 to the present.

HIS325 - Women in U.S. History

A study of women's lives in America from the Colonial era until the present, this course places special emphasis on non-elite women, whose lives have often been hidden or devalued in the annals of history. Topics explored include reform, abolition, political activism, working conditions and contemporary issues.

HIS327 - History of the Civil War and Reconstruction

The American Civil War is the most critical event in the creation of the United States. This watershed ended forever the practice of chattel slavery that had significantly shaped the country. The South as a distinct region changed considerably due to the war in ways that reverberate to the 21st Century while the North also embarked on a new course forward. The process of reuniting the country proved almost as divisive and the war itself. Reconstruction was a complex period that reveals a great deal about 19th Century America. This course examines the history of this national crisis and evaluates how it shaped the nation as a whole.

HIS329 - History Internship

Application of historical methodologies to various professional environments, under faculty supervision.

HIS331 - Ancient Greece

This course provides an overview of the history of ancient Greece, from its earliest foundations in Minoa, through Mycenae, the Greek Dark Age, archaic Greece, classical Greece and the Hellenistic period.

HIS333 - Film and History

Film in History is a course that assesses the important political, economic and cultural roles that film and the film industry play in the world. This study of cinema includes the importance of film in shaping our attitudes toward history as well as its central place in determining the visual language of cultures.

HIS341 - Early Middle Ages

This course traces the story of civilization and culture from late antiquity to the beginnings of the High Middle Ages and the First Crusade.

HIS342 - High and Late Middle Ages

This course will focus on the development of the civilization of medieval Europe from approximately AD 1100 to 1500, with supporting material both before and after the period.

Course Descriptions

HIS345 - Rise and Expansion of Islam

This course traces the history of the Islamic world from its foundation by Muhammad in the seventh century to the last siege of Vienna in the 17th century. Emphasis is on the Near East, Europe and North Africa and on interactions between the Muslim and Christian worlds.

HIS347 - History of Race and Ethnic in the United States

This course focuses on the changing ethnic and racial make-up of the American population from colonial times to the 20th century. We will consider who came to America and why, how people define their own ethnicity and the ethnicity of others, how ethnicity and race relate to each other, and how cultural diversity has shaped life in the U.S.

HIS348 - History of American Sport

This course offers the history of sport as a subject for scholarly study. It presents sport as a pervasive facet of our popular culture, as a social institution, as an arena of human activity, as drama, even spectacle. The course emphasizes the history of sport as a study of cultural values and value conflict, and also examines the relationship of sport to social change. It investigates, among other things, the literature of sport, the economics of sport, and the influence of modern sport on our language, politics, religion and education.

HIS350 - Adolf Hitler

The philosophical and psychological elements of Adolph Hitler's life that led to the rise of National Socialism, and its impact upon the western world.

HIS352 - Native American history to 1850

A survey of the history of Native Americans. The class will focus on the major tribal groups that interacted with and impacted the course of American history. We will look at various aspects of Indian life such as gender divisions, political expression, and social organization. A major point of the course will to be recognize the contributions of native peoples in shaping the development of the American nation.

HIS353 - Native American history from 1850

A survey of the history of Native Americans. The class will focus on the major tribal groups that interacted with and impacted the course of American history. We will look at various aspects of Indian life such as gender divisions, political expression, and social organization. A major point of the course will to be recognize the contributions of native peoples in shaping the development of the American nation.

HIS355 - US Civil Rights Movement

This course will explore the modern Civil Rights Movement in the United States as a component of the larger Black Freedom Movement, which spans from Africans' arrival in North America until today. Scholars throughout multiple disciplines consider the Civil Rights Movement in the US to be the most significant social movement of the 20th century, which students will evaluate. In analyzing the Civil Rights Movements, students will gauge major organizations, events, theaters, national and local leaders. Important victories, legislation and legacies will also be explored. The course will pay special attention to the social categories of gender, class, race, region and age/youth. The latter portion of the course will explore the long-term and immediate legacies of the Civil Rights movement such as its impact on the Women's Movement, Chicano Movement, LBGT Movement and Black Power Movement.

HIS356 - History of Colonial and Revolutionary America

The founding centuries of our nation shaped the course of the United States. The combination of native inhabitants and immigrants created a unique society which experimented with new ideas for the future. The course will explore American history from the arrival of Europeans to the closing days of a successful rebellion against Britain.

HIS366 - History of Modern Latin America

The emergence of modern Latin America from independence to Castro; economic and social development of the region in the 20th century; struggle for social justice among diverse cultures; conflicts within Latin American political life; military dictatorships; parliamentary democracy; guerrilla warfare; and counter terrorism.

Course Descriptions

HIS369 - The Legacy of Vietnam

The main goal of this course is to get you to think critically about the Vietnam War. The first portion of this course will explore the origins, escalation and conclusion of American involvement in the Vietnam "War" from roughly 1945 to 1975 through lectures, readings, discussions and oral interviews of war veterans. The second portion of this course will consider the political, social and economic aftermath of the war on both the US and Vietnam. The course examines these ramifications mainly through the lens of film(dramatic and documentary) and assigned readings. Furthermore, the course will also explore Vietnam's continuing relevance today. Specifically, the course will address the lessons and legacies of the war and why they continue to influence American thinking and foreign and military policy. Additionally, students will consider historical debates about how the war should be interpreted.

HIS375 - History of Pittsburgh

Examines the history of the City of Pittsburgh from 1750 to the present. The course focuses on the evolution of Pittsburgh first into a quintessential industrial city, then into a pioneer renaissance city, and finally into a postindustrial, service-oriented city. Therefore, the course affords a unique urban perspective on the social, spatial and political implications of both industrialism and post-industrialism.

HIS379 - Special Problems in History

Topical historical studies determined by departmental faculty.

HIS380 - Readings in African American Studies

This course will examine the history and evolution of the discipline, key scholars, ideas, themes, central disciplinary questions and debates, and prominent theoretical and methodological frameworks used by scholars of African-American Studies (or alternatively Black Studies, Diasporic Studies Africana Studies and African Studies). Students will also evaluate social and political thought and literary, cultural, and aesthetic forms of expression. In all, students will acquire the necessary skills to critically engage each other on the interdisciplinary scholarship within African American Studies.

HIS402 - History of the Nineteenth Century United States

This course focuses on major events and trends in United States in the 19th century. Major topics of study include slavery, abolitionism, the Civil War, industrialization and reform.

HIS410 - Crusades

This course examines the wars fought by Christians in defense of Christendom, from the confrontation between the Byzantines and Arabs in the seventh century to the siege of Vienna in 1683. Special attention is paid to expeditions to the Holy Land in the 11th, 12th and 13th centuries.

HIS416 - History of Britain

This course explores political, social, religious, cultural and military developments in the British Isles from the Anglo-Norman period to the modern era.

HIS420 - Renaissance and Reformation in Europe

This course is a study of the Renaissance and the Reformation in Europe from the 14th to 16th centuries, with an emphasis on the Italian Renaissance, northern humanism, and the appearance and character of the principal branches of Protestantism.

HIS422 - History of the Antebellum South

The American South is a distinct region that played a major role in the history of the country. The south was wealthy, powerful and unique. The idea of chattel slavery evolved in the American South and caused the entire nation to debate the values and beliefs that they would live by. In the years leading up to the Civil War the south came to define itself as a region with particular politics, economy, and social and racial structure. This course examines the history of that uniqueness and evaluates how it shaped the nation as a whole.

Course Descriptions

HIS423 - History of the American West

The United States had a concept of "the west" or the frontier through much of its history. The region outside of civilization played a powerful role in shaping a growing nation and became a distinct region with its own politics, economy and culture.

HIS430 - Topics in Modern Asian Cultural History

This course focuses on the modern Asian cultural histories of India, China and Japan. Major topics include Hinduism, Buddhism, Daoism, Legalism, Confucianism, Islam, Bushido, Shintoism, Jainism, imperialism (and Anti-Imperialism) and industrialization and their impact on Asian culture and politics.

HIS435 - History of Law

This course will trace the origins of Western law from the Roman Republic's Law of the Twelve Tables to the American Articles of the Confederation. Students will gain an understanding of Roman, feudal, Canon, English common, German, French and Spanish legal traditions.

HIS440 - U.S. at War: 19th century

This class examines the principal causes for U.S. foreign wars (declared and undeclared) in the 19th century and the lasting consequences of those engagements, including political, legal, social, cultural, and economic factors. Students will study competing historical explanations for America's foreign wars, drawing their own conclusions about the efficacy of waging war. In addition to personal narratives of soldiers in combat, the class will focus on changes to society on the home front, racial or gender discrimination, war opposition, media portrayals, and the war's effect on U.S. territorial expansion or foreign policy.

HIS441 - U.S. at War: 20th Century

This class examines the principal causes for U.S. foreign wars (declared and undeclared) in the 20th century and the lasting consequences of those engagements, including political, legal, social, cultural, and economic factors. Students will study competing historical explanations for America's foreign wars, drawing their own conclusions about the efficacy of waging war. In addition to personal narratives of soldiers in combat, the class will focus on changes to society on the home front, racial or gender discrimination, war opposition, media portrayals, and the war's effect on U.S. foreign relations.

HIS445 - Social History

This course is a study of the lives of ordinary Americans throughout the history of the exploration, colonization, inception and proliferation of the United States. It will mainly focus on the adjustment of American communities and social groups (encompassing dynamics of immigration, race, ethnicity, gender, class, age and region) surrounding major wartime eras in U.S. history.

HIS491 - Readings in History

This course presents a series of guided readings in history, with emphasis given to the significant trends in the writing of history and historical scholarship since the mid-twentieth century.

HIS495 - Seminar in History

This course is a study of historians and their writings; changing interpretations of major topics in history; and historical research and writing.

HON-Honors

HON100 - Honors and University Orientation

This course provides the Honors student with a fairly comprehensive introduction to University life in general and the Honors Program in particular. Practical matters, including a comprehensive review of the Honors Program curriculum, requirements to remain in the program, advisement and registration procedures to be followed, and an elaboration and description of ancillary University services available to the student, are covered. The meaning and function of a university, the importance of the liberal/general education part of the curriculum, the relationship between the university and society, and current issues affecting the academy are addressed through selected readings and discussion. Also, students will be required to establish a portfolio that will be maintained throughout the undergraduate experience.

Course Descriptions

HON150 - Honors Composition I

As an introduction to university level writing and critical thinking, this course rehearses and refines students' abilities to construct argumentative essays incorporating secondary research, classical argumentation, and rhetorical analysis. The course involves significant reading assignments and is organized thematically to include British, American, and/or world literature, studies of historical periods or events, studies of philosophical questions or problems, or investigations of political and/or cultural importance. As preparation for college and professional writing, students will also practice appeals to authority and differing audiences as well as revising and critiquing their own writing and that of others.

HON187 - Research Methods

This course acquaints students with basic research methodology. Students will learn how to find information and evaluate and use it effectively. Students receive a hands-on introduction to research and writing and learn about various research approaches, preparing them for upper level courses. Prerequisite: Honors student or permission of the director of Honors and the instructor of record.

HON200 - Honors Research Practice I

This course is intended for undergraduate Honors students in the second year. It builds on concepts introduced in HON 100 and HON 250, and it should serve as preparation both for the Honors Thesis Project (HON 499) and for other research projects related to Honors coursework or major coursework.

HON201 - Topics in Quantitative Problem Solving

This course will provide the student with an application-oriented, investigative quantitative problem-solving curriculum. Drawing from diverse disciplines in the fields of mathematics, engineering, the physical and life sciences, business, finance, computer science, and/or the social sciences, students will use technology and cooperative group work to solve real-life problems and gain a greater understanding and appreciation for quantitative analysis. This course is repeatable.

HON210 - Honors Introduction to Disciplinary Research in Mathematics and Quantitative Literacy

This course will make use of disciplinary norms and may explore any topic arising in the study of mathematics, the science of numbers and their operations, interrelations, combinations, generalizations, and abstractions and of space configurations and their structure, measurement, transformations, and generalizations. Each course will focus on a specific topic, discipline, and area of scholarship as selected by the instructor. No prior experiences with the topic and discipline is necessary, as the course will serve as an accelerated introduction to both. The course is repeatable with the permission of the instructor.

HON215 - Honors Introduction to Disciplinary Research in Technological Literacy

This course will make use of disciplinary norms and may explore any topic arising in learning and knowing how to use tools, resources, processes and systems to change or to control the natural and artificial environment, thus altering the human condition. Each course will focus on a specific topic, discipline, and area of scholarship as selected by the instructor. No prior experiences with the topic and discipline is necessary, as the course will serve as an accelerated introduction to both. The course is repeatable with the permission of the instructor.

HON220 - Introduction to Disciplinary Research in the Social Sciences

The course will make use of disciplinary norms and may explore any topic arising in the disciplines such as psychology, anthropology, sociology, social work, economics, archaeology, political science, linguistics, etc. Each course will focus on a specific topic, discipline, and area of scholarship as selected by the instructor. No prior experience with the topic and discipline is necessary, as the course will serve as an accelerated introduction to both. The course is repeatable with permission of the instructor.

HON225 - Honors Introduction to Disciplinary Research in the Fine Arts

This course will make use of disciplinary norms and may explore any topic arising in disciplines such as art, dance, music, theatre, film, etc. Each course will focus on a specific topic, discipline, and area of scholarship as selected by the instructor. No prior experiences with the topic and discipline is necessary, as the course will serve as an accelerated introduction to both. The course is repeatable with the permission of the instructor.

Course Descriptions

HON230 - Introduction to Disciplinary Research in the Humanities

The course will make use of disciplinary norms and may explore any topic through a combination of any of, but not limited to, the following mediums: literature, fine arts, writing, photography, music, theater, film, graphic arts. Each course will focus on a specific topic, discipline, and area of scholarship as selected by the instructor. No prior experience with the topic and discipline is necessary, as the course will serve as an accelerated introduction to both.

HON235 - Honors Introduction to Disciplinary Research in the Natural Sciences

The course will make use of disciplinary norms and may explore any topic arising in disciplines such as (but not limited to) biology, chemistry, physics, earth sciences, environmental science, etc. Each course will focus on a specific topic, discipline, and area of scholarship as selected by the instructor. No prior experiences with the topic and discipline is necessary, as the course will serve as an accelerated introduction to both. The course is repeatable with permission of the instructor.

HON240 - Honors Introduction to Disciplinary Research in Public Speaking

This course will make use of disciplinary norms and may explore any topic arising in disciplines such as rhetoric, public speaking, and the history and theory of rhetoric, etc. Each course will focus on a specific topic, discipline, and area of scholarship as selected by the instructor. No prior experiences with the topic and discipline is necessary, as the course will serve as an accelerated introduction to both. The course is repeatable with the permission of the instructor.

HON245 - Honors Introduction to Disciplinary Research in Health and Wellness

This course will make use of disciplinary norms and may explore any topic arising in the study of health and wellness such as physical, emotional, social, spiritual, intellectual, and environmental health. Each course will focus on a specific topic, discipline, and area of scholarship as selected by the instructor. These will include at least one of the following emphases: eating and exercising toward a healthy active lifestyle, building healthy relationships, understanding and preventing disease, explaining alcohol and drug use and abuse, making healthy choices, and building healthy communities. No prior experiences with the topic and discipline is necessary, as the course will serve as an accelerated introduction to both. The course is repeatable with the permission of the instructor.

HON250 - Honors Composition II

Building on the skills learned in HON 150, this course shifts the focus to responding to the ideas of others and includes preparation and presentation of a major research project. The course involves significant reading assignments and is organized thematically to include British, American, and/or world literature, studies of historical periods or events, studies of philosophical questions or problems, or investigations of political and/or cultural importance.

HON270 - Global Transitions II

This trans-disciplinary course rooted in the history of humankind is the second in a two-semester sophomore sequence on the origin, nature, accomplishments and failures of the diverse complex societies of this planet. This panoramic investigation focuses on two major themes: 1) human interactions with the natural world, and 2) the ways that human societies have changed, grown apart from one another, re-established contact, and influenced one another. This course covers events from approximately 1300 C.E. to the present. Global Transitions since 1300 is a standalone course and need not be taken in conjunction with Global Transitions to 1300.

HON300 - Honors Research Practice II

This course is intended for undergraduate Honors students in the third year. It builds on concepts introduced in HON 100, HON 200, and HON 250, and it should serve as preparation both for the Honors Thesis Project (HON 499) and for other research projects related to Honors coursework or major coursework.

HON320 - Topics in Self and Society

This course is an interdisciplinary examination of the relationship between the self and society with the specific topic of each offering determined by the instructor. The selected topic may be explored through a combination of any of, but not limited to, the following approaches: history; political science; sociology; psychology; anthropology;

Course Descriptions

economics; linguistics; archaeology; communications; ethnic, race, and gender studies; law; social work; and urban and rural studies. This course is repeatable.

HON325 - Topics in Education

This course provides students with an examination of issues relating to varying approaches to and impacts of education with a specific topic chosen by the instructor. The selected topic may be explored through a combination of any of the following approaches: use of multiple instructional strategies, varied methodologies, and pedagogy; the history and/or philosophy of education; epistemology; and educational anthropology. This course is repeatable.

HON330 - Topics in Culture and Society

Culture is not a new idea, and its meaning is a subject of debate. This course employs culture (and its political uses) as a lens through which to examine topics and texts in a range of disciplines from the social sciences, to media studies, to the humanities. In the process, this course examines some of the most pressing issues of today and the past. This course is repeatable.

HON335 - Topics in Science and Technology

This course is an interdisciplinary foray into the hard sciences. It does not presume a prior extensive knowledge of chemistry, biology, physics, mathematics, the environmental sciences, applications of technology and/or the philosophy or history of science. The course defines science and technology, their terminology and method of inquiry, the philosophical ideas underlying scientific inquiry, and how humans value them. Various topics, especially from the physical sciences, may be examined with an emphasis on the specific ways scientific inquiry tries to understand our experience, whether it reflects universal rationality or particular cultural concerns, whether it offers understanding of nature or only control of (some) natural processes, and what impacts – both positive and negative – the application of technology has. This course is repeatable.

HON340 - Topics in Arts and Humanities

Each class will focus on a specific topic selected by the instructor. The selected topic may be explored through a combination of any of, but not limited to, the following mediums: literature, the fine arts, creative writing, photography, the graphic arts, music, theatre and film. This course is repeatable.

HON450 - Honors Study Tour

Each class will be closely linked to a short-term study tour, either in the United States or abroad, and focus on a specific topic selected by the instructor. The purpose of this course is to provide students with experiential hands-on learning. In addition, this course will expose students to diverse academic and socio-cultural experiences, better preparing them for the community within which they will play a future role. This course is repeatable.

HON490 - Honors Research Seminar

This course is intended for undergraduate students at any stage of the University Honors Program who wish to develop an independent research project within their major or related to Honors coursework. Scientific work, research papers, creative efforts, service projects, are just some of the possible research projects. Each project will be tailored to the individual student, will involve close collaboration with a faculty member, and should ultimately be presented publicly or published.

HON499 - Honors Thesis

The senior Honors project serves as the capstone of the University Honors Program. Under the supervision of a faculty adviser of the student's choice, the Honors student seeks to make a substantive contribution to the discipline. Considerable latitude in the form of the contribution is permitted. Empirical and historical research as well as creative products are all appropriate. A reader/reviewer is assigned to independently pass judgment on the student's scholastic effort. An oral defense, demonstration, or display of the completed honors project is required.

Course Descriptions

HRM-Human Resource Management

HRM300 - Principles of Human Resource Management

Principles of Human Resource Management prepares students to work within diverse organizations. It helps them to better understand the responsibilities and skills required to be successful in an HR position. It also introduces them to the basic concepts of HR Management so that they can identify and/or implement best practices with regard to policies and procedures. It sets the foundation for future coursework in HR management and also prepares any student for working with people.

HRM310 - Compensation Management

An examination of the general structure of an organization and the rewards employees seek in exchange for the efforts and contributions they provide. Topics to be offered include people and word rewards, a motivating work environment, government and market influences, job contract analysis, developing pay structures, pay for performance, employee benefits, and administration of the compensation plan.

HRM322 - Human Resource Information Systems

This course is designed to provide an introduction to the use of technology in the administration of human resources, and how new technologies can contribute significantly to the efficiencies in the management of a company's human capital. It is designed to help students understand the integration of technology into the human resource department. It will address the strategic needs of organizations and how they are met through the use of human resource information.

HRM330 - Labor Relations

This course provides background and insight into the many areas and processes of labor relations. Students analyze and evaluate the role and effectiveness of labor organizations in today's society. Students compare and evaluate the impacts and effects of labor organizations on both (unionized and non-unionized) organizations and employees. Although focused on current United States labor relations practices, global labor relations are also discussed. The course offers students the opportunity to explore labor organizations' influence on social, political, legal, economic, technical, cultural and global environments.

HRM340 - Managing Risks Associated with Human Resources

This course is designed to address business management risk issues specific to human resources. Students will evaluate risk from the perspective of HR management. Through this course, students will identify potential human-related risks associated with health, safety, security, and privacy and work to develop policies and procedures to mitigate risk. Students will learn how to conduct a workplace investigation once a potential breach occurs. Additionally, they will develop policies and procedures aimed at preventing and/or minimizing HR risk.

HRM400 - Human Resources Strategy and Planning

This course examines human resource management from a strategic perspective. It focuses on the major aspects of how an organization manages its people strategically, i.e. the strategies used for human resource acquisition and placement, the strategies used for maximizing human resource productivity, and the strategies used to maintain human resources. The course also examines the traditional human resource functions of recruitment, selection, training, compensation, and performance appraisals from a strategic perspective.

HRM410 - SHRM-CP/SHRM-SCP Certification Preparation

The Society of Human Resource Management (SHRM) sets the industry standard for HR practitioners in today's workplaces. This course is intended for senior-standing HR students and/or non-traditional students interested in sitting for the SHRM-CP exam. The Cal U BSBA – HR Concentration is certified by SHRM so that students are able to sit for the exam provided they meet the following requirements: 500 hours of HR work experience (can be an internship) and senior standing. The course will cover SHRM competencies covered in the Body of Competency and Knowledge. It is a structured explanation of each competency as well as study tips and tricks within the Learning System. Completion of this course does not guarantee success on the SHRM-CP or SHRM-SCP, rather it helps students prepare for the exam. Course content reflects the SHRM Body of Competency and Knowledge. This course of study will in no way guarantee or assure success on the SHRM-CP® or SHRM-SCP® exam. Students must use the most recent edition of the SHRM® educational products for this course, and may not use outdated materials.

Course Descriptions

HRM462 - Global Workforce Management and Change

This course equips students with the ability to recognize the diversity in the global workforce that firms face in today's increasingly complex and unstable world. It provides a comprehensive understanding of the ways multinational firms can successfully integrate and draw on the talent available around the world. This course provides a framework within which to understand the legal, regulatory and business challenges of managing a global workforce. In an increasingly globalized labor market, managers must understand these challenges as they coordinate work practices across countries and prepare individuals for global assignments. The course includes a comparison of international labor markets in terms of costs, demand/supply, culture and law. Current events and case studies are used to illustrate issues faced by multinational firms including performance management, outsourcing, offshoring, and industrial relations.

HRM492 - HRM Internship

The student is placed with a business firm, bank, government agency or nonprofit organization performing human resource management-related tasks. The internship experience offers a practical training ground for students that supplements academic training by permitting them to apply the theories, concepts and techniques learned through their other coursework to address actual problems in a real business environment.

HSC-Health Science

HSC110 - Anatomy and Physiology I

This course entails the study of the structures and functions of the human body. The course takes a systematic, level of complexity approach, beginning on the sub-cellular level and progressing to the study of entire organ systems. Specific systems that are studied include the integumentary, cardiovascular, lymphatic, gastrointestinal, respiratory, urinary, endocrine, and reproductive.

HSC115 - Current Health Issues

Current Health Issues is a course designed to convey information concerning the individual's role in establishing a healthful lifestyle as well as encouraging prevention of disease and a focus on healthful living. The basic themes from the text include personal responsibility, a commitment to prevention, practical applications of knowledge, and a focus on behavioral change.

HSC120 - Human Anatomy and Physiology II With Lab

This course, a continuation of Human Anatomy and Physiology I, entails the study of the structures and neuromuscular functions of the human body. The course takes a systematic approach to the study of the anatomy and physiology of the bones, joints, muscles and nerves. Laboratory experiences reinforce the didactic portion with prosected human cadavers, human skeletons, and a variety of anatomical models.

HSC210 - Culturally Competent Community Health

This introductory course explores the complex determinants of health and strategies to improve the health of communities. Learners will explore community and public health theories and principles that are useful for the delivery of health care for all individuals. Learners will examine current delivery systems in the U.S. and will be introduced to the major areas of public health, epidemiology, health care management, environmental and social/behavioral health.

HSC225 - Medical Terminology

The study of medical terminology introduces students to the language of medicine. Students will gain an understanding of basic elements, rules of building and analyzing medical words, and medical terms associated with the body as a whole. Using a systems-approach, the student will define, interpret, and pronounce medical terms relating to structure and function, pathology, diagnosis, and clinical procedures, oncology, and pharmacology. In addition to medical terms, common abbreviations applicable to each system will be interpreted.

HSC250 - Nutrition for Health and Wellness

This introductory course is designed to provide learners with a basic understanding of nutritional principles including the energy metabolism, digestion, absorption, and transport of nutrients. Additionally, the course will provide information on the role of macronutrients and micronutrients. Weight management and nutrition throughout the lifespan will be discussed.

Course Descriptions

HSC275 - Functional Kinesiology

The biomechanics of motor performance. Prepares students to analyze movement in order to teach, correct or improve human performance.

HSC290 - Therapeutic Modalities

The course entails the study of mechanisms of pain management and mediation, and the theory and practice of therapeutic modalities including, but not limited to, superficial heat, cold electrotherapy, compression traction and massage. The student will be able to explain the theory behind the use of electromagnetic and acoustic modalities and demonstrate the proper application of therapeutic modalities.

HSC310 - Special Populations and Pathology of Disease

This course examines the disease process on the system level as well as specific needs of physically active individuals considered a special population or with known disabilities. Special emphasis is placed upon pathologies commonly encountered in the ambulatory care setting. Students will also investigate the basic concept of disease and the impact the disease has on the well-being of an individual. In this class, students will engage in an intensive writing assignment to evaluate current trends in pathology and management of disease or disability and how this may be altered in physical activity.

HSC315 - First Aid and Personal Safety

First Aid and Personal Safety is a course designed to convey information to understand the cause-effect, prevention and treatment of emergency situations. This course is recommended to all students, especially students in the teacher education program. Two year certification if offered by the American Heart Association.

HSC325 - Physiology of Exercise

The course covers the scientific theories and principles underlying strength, muscular endurance, cardiovascular endurance, flexibility, training and conditioning in human movement.

HSC360 - Holistic and Alternative Medicine

This course explores and introduces the learner to complementary and alternative medicine (CAM) treatments and therapies, covering a broad range of healing philosophies. Topics include but are not limited to; traditional Chinese medicine, aroma therapy, chiropractic, reflexology, herbal medicine, etc. The role of the naturopathic physician will be explored within this course. Students will examine methods of delivery, safety, practitioner expertise, cost, and effectiveness of. This is a writing intensive course which students will select a CAM therapy or treatment of their choice to explore more. Students will construct a CAT paper to demonstrate their understanding of the topic they choose.

HSC425 - Health Science Capstone

Students will produce a major culminating piece of academic work that synthesizes health science concepts and/or a career path. This will take the form of a research activity including original research, creation of an educational resource or other extensive produced work that is approved by the course instructor. Additionally, students will outline a career path in the health sciences, develop a resumes, practice interviewing skills and learn necessary skills and etiquette for networking as a professional.

INT-Global Studies

INT157 - American Military Experience in Global Context

This course provides students the opportunity to explore and research the personal and historical American military experience in a global context.

INT200 - Introduction to International Studies

An interdisciplinary course introducing students to the broad and varied approaches to international studies.

INT300 - Special Problems in International Studies

Topical study of contemporary and historical issues in International Studies determined by program faculty.

Course Descriptions

INT-International Studies

INT157 - American Military Experience in Global Context

This course provides students the opportunity to explore and research the personal and historical American military experience in a global context.

INT200 - Introduction to International Studies

An interdisciplinary course introducing students to the broad and varied approaches to international studies.

INT300 - Special Problems in International Studies

Topical study of contemporary and historical issues in International Studies determined by program faculty.

ITE-Industrial Technology

ITE110 - Technical Drawing I

A beginning course with major emphasis on assignments and problems in the following areas: the graphic language, mechanical drawing, lettering, geometric constructions, sketching and shape description, multi-view projection, sectional views, auxiliary views, dimensioning, axonometric projection, oblique projection, and perspective drawing.

ITE115 - Interpreting and Sketching of Technical Drawings

This course is designed for students need skills in reading and interpreting technical drawings as well as skills in technical sketching. In addition, this course is designed to prepare students for advanced technical drawing and CAD courses. Throughout the course, emphasis is placed on the understanding and use of geometric constructions, sketching and shape description, orthographic multi-view projection, sectional views, auxiliary and other ancillary views, the interpretation of various types of drawings for specialized fields of drafting, and inch, decimal and metric measuring/dimensioning methods.

ITE123 - Introduction to CAD/GIS

The student will be introduced to various methods and techniques associated with computer-aided drafting (CAD) and geographical information systems (GIS). Students will use CAD and GIS software and hardware to create and explore a variety of models. Specifically, students will use GIS components to represent geographic data using both manual and computer-assisted technologies. The focus will be on the collection, compilation and display of geographic data within a database.

ITE135 - Digital Electronics

An introduction to the theory and application of logic gates, Boolean algebra, combinational logic, sequential logic, shift registers, counters, and arithmetic circuits. Laboratory experiments provide experiences with digital integrated circuits, circuit behavior and digital troubleshooting techniques. Laboratory exercises reinforce the theoretical concepts by providing hands-on experience with digital integrated circuits and digital troubleshooting equipment.

ITE151 - 3D Printing

3D printing covers a variety of processes whereby a part or parts may be created direct from a computer design. This saves a great deal in terms of time, materials and labor. This course acquaints students with the common processes, procedures and materials used in modern additive manufacturing using this technology. Further, this technology is being applied to a greater number of applications with wide-ranging societal impacts and implications.

ITE165 - Machine Processing I

An introduction to machine tool processes with discussions of basic foundry (metalcasting). Operations and techniques investigated include the following: sand molds, gating systems, patterns castings, metal solidification, layout, tool geometry, lathe work, milling, shaping, drilling, cut-off tools, bench work, precision and semi-precision measuring instruments, CNC mill and lathe, and lab safety.

Course Descriptions

ITE181 - Materials Technology I

A study of the theory and application of materials and materials testing used in a wide variety of industrial applications. Study includes the chemical, physical, mechanical and dimensional properties of metallic materials, plastics, and ceramics. Sufficient background in general chemistry is included to provide the proper foundation for the various concepts being presented in class.

ITE218 - Descriptive Geometry and Surface Development

This course will investigate the theory of projection to the fullest extent with emphasis on the manipulation of points, lines, and planes in space. The practical application of this theory will be shown in surface development problems.

ITE223 - Intermediate CAD/GIS

The student will be introduced to advanced methods and techniques associated with computer-aided drafting (CAD) and geographic information systems (GIS). The GIS portion will focus on the collection, compilation and display of geographic data within remote sensing software and an advanced geographic information system software package. Students will create their geo-technology application project using geographic information systems and remote sensing. The CAD portion will focus on the creation and manipulation of geographic maps and surveys and the incorporation of geographic data in various applications using a CAD software package.

ITE250 - Introduction to Automation

This course provides a variety of introductory experiences in industrial automation. Instruction will include theoretical applications as well as practical, hands-on laboratory applications in robotics, automatic guided vehicles (AGVs), computer-aided drafting (CAD), machine vision, automatic identification and programmable logic controllers (PLCs). Students learn what automation is, its advantages and disadvantages, and how it is applied.

ITE251 - Product Design and Development

This course focuses on product design and development, examining the relationship between aesthetics, industrial design and the use of technology to create possible new ideas and solutions. Students are introduced to the fundamentals of design and how these function as elements in both large and small projects from custom to mass-produced goods. Instructional materials and case studies will be presented on the history of design, design concepts, modelling, aesthetics, safety, ergonomic and economic considerations will be presented. This course will help the student develop a better understanding of product design processes and practices.

ITE301 - Safety Supervision

The first portion of the course will investigate safety analyses and management of industrial and commercial systems, working with governing agencies, and the safety systems approach. The students will make observations in an industrial setting, evaluations, and development of recommendations, and a presentation to the management of the observed company.

ITE305 - OSHA General Industrial Safety

The purpose of the course is to provide instruction to entry-level workers and students on general safety and health. The course will be offered in either as a traditional "in-class" or an "on-line" teaching environment. Students enrolled in the traditional class/course (face to face) are eligible for an OSHA 30 hour General Industry Outreach Training card. Those enrolled in the "on-line" version of the course are not eligible. This course emphasizes hazard identification, avoidance and control. Topics covered include the following: introduction to OSHA, the OSHA Act/general duty clause, inspections, citations and penalties, record-keeping, walking and working surfaces, mean of egress and fire protection, electrical hazards, personal protective equipment, respiratory protection, hearing protection, machine guarding, hazard communication, chemical safety, lockout/tagout, confined space hazards, welding brazing and cutting hazards, asbestos awareness, hazardous materials, industrial hygiene, and ergonomics.

ITE311 - Ergonomics

This course introduces techniques and procedures for developing and applying the principles of human factors and ergonomics to system design and the systematic analysis, identification and evaluation of human-machine

Course Descriptions

systems. Current advances in practical bio-mechanics and ergonomics in industry in combating musculoskeletal injury and illness will be discussed.

ITE315 - CAD II

This course is an extension of Computer-Aided Design into three-dimensional representations. Unlike traditional CAD that focuses on wire-frame and orthographic/isometric drawings, this course focuses on solid models of various components and assemblies. The concepts of rendering, animating and properties analysis are introduced.

ITE341 - Quality Control

An introduction to the methods used in analyzing quality control, this course's topics include a study of the fundamentals of statistics and probability, the construction and use of control and attribute charts, the definition and use of acceptance criteria, and the use of computers in modern quality control operations. An overview of the role of the quality control department of a manufacturing facility will be presented.

ITE342 - Quality Planning and Analysis

This course builds on the techniques learned in Quality Control and applies those techniques to an industrial organization in a practical way. The student will learn the basics of the six sigma approach to quality and the use of quality functional deployment to identify customer needs. Students will study how a quality plan can be developed and implemented. The course will apply quality to all aspects of the organization, including personnel, shop floor operations, the supply chain, and products and services.

ITE366 - CAM I (Computer-Aided Manufacturing-Mastercam)

An introductory course in computer-aided manufacturing using Mastercam software, this upper-level CNC programming course relates to manual programming techniques developed in Numerical Control Programming I. This course requires the use of a graphics-based language (Mastercam) to create basic geometric elements. Geometric elements are used to create tool-cutter paths necessary to establish machining coordinates for both CNC machining (mill) and turning (lathe) centers.

ITE375 - Principles of Production

An introduction to the methods used in analyzing the production flow from raw materials to the finished products. Topics covered include a study of operations types, operations layout, decision analysis, work measurements, production and inventory control, scheduling and waiting line analysis. An overview of the role of production management will be presented.

ITE385 - Industrial Cost Estimating

An introduction to the methods used to cost and budget a production organization, this course covers some accounting basics, cost accounting, the time value of money and cost estimating as related to industrial operations.

ITE416 - Introduction to Finite Element Analysis

This course will use a PC-based CAD program and finite element software program to introduce the concepts of mathematical modeling and engineering analysis. The student will create a solid model of a component and transform that model into a finite element model. The students will then apply the appropriate boundary condition to the model and find the solution to the problem. The student will also be introduced to the concepts of bottom-up and top-down solid modeling and will perform simple structural analyses using the generated finite element model.

ITE417 - Parametric Design using Inventor

This course presents the advanced features of solid modeling where dimensions in a component and an assembly are replaced with parameters. This permits the creation of a single component/assembly model that may be used for multiple items in a family by redefining the parameters of the component/assembly. Parameters may also be used to define an item for analysis or to test a particular concept with particular dimensions to insure that the product is safe and useful. Students will learn the procedure for transforming a solid model into a parametric model and the procedures for changing and maintaining the parameters for an instance of an item.

Course Descriptions

ITE420 - Production Analysis

An introduction to the methods used in analyzing the production flow from raw materials to the finished product. Topics covered include a study of the major manufacturing processes, materials handling, plant layout, operations analysis, industrial engineering, inventory control and shipping. An overview of the role of production management as it relates to the various areas of an industrial environment will be presented.

ITE460 - Principles of Manufacturing

An introduction to the methods used in manufacturing processes, this course includes a study of the manufacturing ability, fabricability and marketability of manufactured products. Problems encountered by production managers in changing raw materials into a consumable product are discussed. The use of personal computers for the solution of manufacturing problems is included.

ITE461 - Supply Chain Fundamentals

A key item in the management of a manufacturing operation is the making of intelligent decisions. The manufacturing planning and inventory control systems provide the information to efficiently manage the flow of materials, effectively utilize people and equipment, coordinate internal activities with those of suppliers, and communicate with customers about market requirements. This course will provide an overview of the basic principles of production and inventory control, including MRP, JIT, master scheduling, capacity planning, demand management, and the integration of these basic principles.

ITE462 - Inventory Scheduling and Planning

This course will be the second course taken by students in the general area of production and inventory control. Focus of this course is on the various techniques for material and capacity scheduling. Included will be detailed descriptions of material requirements planning (MRP), capacity requirements planning (CRP), inventory management practices, and procurement and supplier planning. Topics include recognizing techniques and practices of inventory management, the mechanics of the detailed material planning process, the planning operations to support the priority plan, and the planning procurement and external sources of supply.

ITE471 - Project Management

Operations and projects differ in that operations are ongoing while projects are temporary. A project, by its very nature, is also unique and requires particular knowledge of how the components combine to form an integrated whole. This course will introduce the student to the field of project management and will present an overview of the body of knowledge necessary for successful project management. The course will focus on the fundamental principles that cross the boundaries of projects and will demonstrate how project management techniques can be applied to a wide variety of disciplines. This course will also introduce the student to computer methods for solving project management problems.

ITE475 - Computer Integrated Manufacturing

Computer-integrated manufacturing is the expansion of computers from the shop floor into the other aspects of the manufacturing enterprise. All of the data necessary to control the shop process may not be available on the shop floor. Such areas as accounting, inventory, shipping and purchasing have data that can influence what happens on the production floor. Also, the general concepts of production and inventory control must be considered. This course will bring together all of the individual parts of the organization to show how they can impact what is manufactured and how it is manufactured.

ITE476 - Lean Enterprise

Production systems consist of more than the machines that produce the consumer products. Other parts of the business operation contribute to the production and must be included in any discussion.

ITE481 - Concepts and Issues in Technology Management

This course combines the elements of Technology Management, providing the participant with the opportunity to study concepts and issues typically encountered by an industrial technologist. This multi-disciplinary course is intended as an overview of Technology Management as a discipline with emphases on the operation and performance of technological systems in industry and their effect on people and the environment. Also, the potential and limitations of the future developments in technological systems and their use in industry is

Course Descriptions

discussed. Diversified approaches will be used to explore some crucial contemporary industry concepts and issues including problem solving and role-playing in various industrial settings and situations.

ITE495 - Technology Management Internship

Student interns work with an industrial organization which most nearly approximates their goals for employment. The intent of the internship is to provide students with practical work experience in an environment in which they will be dealing with practical problems requiring real solutions in a relative short time frame. Working with the Internship Center, advisor and department chairperson approval are required before course enrollment. Credit for this course shall be awarded as one academic credit for each 40 hours of internship work. During the internship, students will be limited to three weeks of activities in one discipline area. For the purposes of this internship, a discipline area is defined as an area of industrial work that would normally be taught by one undergraduate course.

ITE499 - Research Project

This course is designed to provide supervised research experience in initiating, designing, analyzing, documenting and presenting original research in an area of interest to the student. This course is to be completed under the supervision and direction of a faculty member who will work with the student to develop an appropriate topic and methodology for investigation.

JUR-Jurisprudence

JUR310 - Medieval Jurisprudence

The course examines the dynamic evolution of legal theory and jurisprudence from the early to latter Middle Ages. Beginning with Augustine's inquiry into the nature of free will, human action and personal responsibility, the course will then weave its way into early themes and threads of natural law tradition. Concepts of justice and injustice will be fully assessed as well as early commentary on the nature of an unjust law and civil disobedience. The second part of the course will intensely examine the jurisprudence of Thomas Aquinas especially as espoused in his Treatise on Law.

JUR320 - Anglo-American Jurisprudence

The primary aim of this course is the introduction of mainline American theories of law and jurisprudence from its common law roots to the founding period of this nation. At issue is the evolution of our current legal institutions and principles. How does a body of law and practice become fully ensconced into the dynamism known as America? How does the English system influence the American model? The course looks at legal definitions, legal procedures and processes, common law principles, the role of judge, jury and the tribunal, the pedagogy of legal education, the types of legal professions common to Western democracies as well as the development of ecclesiastical, equitable, civil and criminal systems. Finally, the course examines some of the more influential thinkers in law and jurisprudence at the time of this nation's founding including Locke, Mill and Jefferson

JUR340 - Natural Law Jurisprudence

The role of natural law jurisprudence is undeniably influential in the American experience. This course examines from whence natural law reasoning comes; its major tenets and principles; its fundamental propositions and content as well as the various schools that adhere to this form of jurisprudence. Serious attention will be given to the often distinct ideas of nature, naturalism and the natural law. Course will commence with an attentive look at Ciceronian thought on this form of jurisprudence; evaluate formulators of natural law reasoning such as Augustine, and then turn to its chief architect, namely Thomas Aquinas. Course will weigh and assess how natural law jurisprudence impacted early American foundational thinkers like Locke and Jefferson and how it's continuously courses its way into contemporary case decisions.

JUR350 - Positivism, Legal Realism and Critical Legal Studies

This course evaluates and critiques contemporary models of jurisprudence and schools of legal thought. In contrast to the natural law tradition, positivism exerts a self justification for any law simply any enactment. A close look at how positivism has inexorably changed the nature of American jurisprudence is posed and debated. In Legal Realism, the argument that law has a transcendence is fully challenged by its allocation to economic might and power. Realists argue that law reflects the power of the ruler rather than some perennial truth. In Critical

Course Descriptions

Legal Studies, another school vastly distinct from ancient and medieval models emerges. Adherents to this school of jurisprudence claim law is simply a political reflection by the dominant forces.

JUR360 - Law and Economics

This course evaluates the interplay between economic impacts and legal rule making, promulgation, case law and decision as well as legal institutions. Efficiency criteria act as a guide for decision makers in formal legal institutions and the course weighs diverse factors that seek to measure the economics of law and jurisprudence. This methodology is employed as it applies to torts, property, contract, criminal and antitrust law. Specific case studies that evaluate the economic impacts of law and legislation will be considered.

JUR370 - Law and Religion

The course delves into the role religion has played in the development of the Western jurisprudence and its corresponding legal systems. The course will more narrowly analyze constitutional implications of the Free Exercise Clause and the Establishment Clause of the First Amendment. A variety of judicial, historical and theoretical readings will be assigned to illustrate historical tensions between law and religion in the United States including, but not limited to, the establishment of religion in early America; the role of religion in the abolitionist movement; government aid or endorsement of religion in education; and government intervention in family medical decisions as well as consent or coercion in public employment as regards abortion.

JUR380 - Rights, Just Action and the Responsible Citizen

Course examines the idea of a legal "right". What are the bases for these sorts of rights and how can these rights be justified are the essential queries. If rights can be properly defined, the course then defines how these rights play out in human action. Course evaluates how a legal right may or may not be consistent with traditional and contemporary notions of justice and just action. As corollary, the evaluation prods the perennial question whether a legal right may or may not be just and uses theories of justice to reach that conclusion. Finally, after considering the nature of a legal right and just human action, the course considers how individual citizens may live consistently with these notions of a legal right when others may or may not agree with that right.

JUR390 - Virtue and Law

If the primary aim of law is to make the human actor good, then the connection between virtue and law is undeniable. That is the chief end of this course- to study and critique how law and lawmaking should propel individual citizens to a productive and virtuous life. Course commences with an examination of how early thinkers, such as Plato and Aristotle, saw this correlation and moves to the present where various thinkers still see the complete integration of law and the virtuous human life. Various modern problems, whereby law fails in this task, and promotes vice instead, will be scrutinized.

JUR400 - Law, Conscience and Personal Integrity

How law and conscience depend upon one another is a primary aim of this course. Put another way, can law be always obligatory or binding on a party who may or may not disagree with the end and aim of a particular law? Can an unjust law be forcibly applied to a person who clearly objects? In this course, the idea of the law's binding force, as applied to personal conscience, is weighed heavily. How conscience reconciles with a particular law inevitably becomes a problem of personal integrity and character. The final portion of the course will analyze how personal integrity can be challenged by the application of laws and provides an ethical framework for a reconciliation of these two competing forces.

JUR410 - Legal and Moral Ethics

A seminal question in the history of jurisprudence is: whether there is a connection or interplay between law and morality? This course looks closely at the problem from two perspectives. First, how does a lawyer, judge, or a lawmaker maintain an ethical compass and how do professional associations groups seek to instill an ethical and moral approach in its members? Second, the more theoretical problem, of the two, is whether the law can ever identify a common morality upon which a law and a legal system can be built. How moral positions, such as same sex marriage, abortion, euthanasia, and the like, can be compatibly assessed in light of law and jurisprudential theory rest centrally in the course purpose.

Course Descriptions

JUR420 - Research Methods in Law and Jurisprudence

This course is designed to teach students to use a law library, perform legal research, analyze legal problems, and write a legal memorandum. Students are taught to locate and use primary, secondary and computer assisted legal research (CALR) legal research sources to solve legal problems, including federal and state cases, digests, statutes, regulations, treatises, encyclopedias, law reviews, citators, and practice works. Course also focuses on materials both unique and essential to the field of jurisprudence.

JUR430 - Legal Writing

Course serves as an overview of legal writing techniques. Aside from the historic expectations on the quality and style of writing exposition, the course examines the more typical legal writing products, including but not limited to: research papers and memoranda, case briefs and legal opinions. Writing projects will gradually increase in length and complexity; and participants will be expected to hone these research and writing skills both individually and in groups. Course will culminate in the preparation of significant memoranda.

JUR440 - Legal Advocacy and Persuasion

Course covers two essential skills in the world of jurisprudence: persuasive writing and oral advocacy. Course coverage includes audience identification and assessment, techniques of factual integration into arguments, the methodology of legal writing as persuasion, as well as stylistic suggestions on clear and lucid legal exposition. In addition, the course considers how to argue with authority in legal document by using precedent and aligned legal authority. In the area of oral argument, the course provides a host of opportunities for legal oratory including tribunals and hearings, staged appellate experiences, hypothetical representation and other oral argument. Specific techniques regarding oral persuasion in legal advocacy will be stressed.

JUR499 - Senior Thesis in Jurisprudence

The course is the capstone of studies in jurisprudence and is required for all senior level students. Thesis construction requires significant research and writing. Course requires that the student work with a faculty member on a mutually agreed upon thesis topic and completes an approved written thesis. Work involves advanced literature search, composition of a scholarly product, oral presentation and defense, and production of a bound written thesis.

JUS-Criminal Justice

JUS101 - Introduction to Criminal Justice Studies

The course covers the nature, scope and impact of crime in the United States; independent and interdependent operations and procedures of police, courts and corrections; and introductory theories of crime and delinquency. The course introduces the justice model in a systematic way whereby students delve into the numerous components of the justice system, including law enforcement, legal and judicial process and correctional operations. Career opportunities will be fully covered throughout the course.

JUS102 - Introduction to Law Enforcement

An introduction to the law enforcement system in America, which is the gateway to the criminal justice process, this course covers topics such as the historical foundations of police processes, occupational roles and tasks of law enforcement, and the nature and designs of typical, as well as innovative, police systems. Perennial problems of policing, particularly as it relates to community interaction, are also essential components of the course.

JUS103 - Correctional Systems

Course examines the management, structure and organizational design of correctional institutions. Correctional planning, construction, program evaluation and community interaction will be considered, and improvement strategies for correctional operations will be debated and critiqued. The course provides a broad overview of the correctional system which incarcerates and confines, treats and reclaims criminal personalities, and protects and serves the state and the community by removing threats to the social order.

JUS104 - Introduction to Security

The various dimensions of security include physical, personal, and operational measures. Security professionals must not only prevent unauthorized access to equipment, installations, material, and documents; and safeguard against espionage, sabotage, damage, and theft, but protect VIPs from kidnapping and assassination and

Course Descriptions

employees from discussing operational plans from the workplace. All public, private, corporate, and government agencies face new and complex security challenges across the full spectrum of operations. Globalization and new security threats challenge security operations, and could include the control of populations, information dominance, multinational and inter-agency connectivity, anti-terrorism or counter terrorism, target hardening, VIP protection and the use of other physical-security assets as a versatile force multiplier. This course will prepare the security and justice professional to operate in any environment that requires a need for complex coordination and security measures.

JUS105 - Introduction of Forensics

Forensic science is the use of science in a court of law and encompasses various scientific disciplines. This course is an introduction to the field of forensic science. This course is designed to expose students to various methodologies and applications used in the forensic context, which involves the collection, examination, evaluation and interpretation of evidence. Topics discussed include crime scene investigation, collection and categorization of physical evidence, the physical properties of glass and soil, instrumental analysis, hair, fiber and plant evidence, forensic serology, arson evidence, DNA evidence, fingerprints, tool and firearm marks, and document and voice analysis.

JUS201 - Criminal Investigation

This course is a comprehensive examination of civil and criminal investigations in both public and private modes, including most major felony processes and relevant civil actions. Focus is on the fundamentals of the investigative process and the range of skills necessary for successful performance and management of investigations, including evidence gathering and analysis, witness assessment, field techniques, and linkage between investigative and prosecutorial agencies.

JUS211 - Organized Crime

This course covers the historical, criminological/theoretical, legal, investigative, and juridical aspects of domestic and transnational organized crime. It includes traditional organized crime such as La Cosa Nostra, as well emerging nontraditional associations such as outlaw motorcycle groups and relationships with terrorist organizations. Studies will blend the scholarship surrounding organized crime with practical, contemporary investigative tools used to combat associated criminal activity such as racketeering, narcotics and dangerous drugs, syndicated gambling, and public corruption.

JUS215 - Victimology

This course will examine issues surrounding the central character in a criminal act – the victim. Contents are designed to develop an understanding of what it means to be victimized, including the physical, psychological and economic impact of crime upon victims, their families and society in general. Special consideration will be given to specific victim populations (i.e., survivors of homicides, sexual assault and family violence), secondary victimization by the criminal system, victim assistance program, and future trends in this field. A full review of how the American justice system has responded to the needs of victims is part of the course content and includes a look at victim testimony at sentencing and parole and probation hearings, victim notification, Megan's Law, victim advisory and protection services, and other means in which the judicial system assures victim participation during the adjudicative phase.

JUS220 - High Technology Crime Investigations

High Technology Crime Investigation is an emerging area within the criminal justice/security discipline. This course exposes students to the legal and technical aspects of high technology crime. Students are able to learn and apply their knowledge and skills to identify and address the risks and damages associated with high technology crimes, including high-tech frauds, email-based crimes, high-tech vice crimes, hackers, terrorists, pedophiles, and online child enticement. High-tech intelligence gathering and online resources are also covered.

JUS225 - Private and Corporate Investigations

This course is a comprehensive examination of the private investigation profession, often glamorized in the media, but little understood in actuality. Investigative techniques utilized in corporate and private venues will be covered, as well as the legal and moral considerations private investigators are likely to encounter. In addition, students will learn the value of the Internet in conducting investigations.

Course Descriptions

JUS265 - Report Writing for Criminal Justice Professionals

This course examines the characteristics and importance of good report writing within the criminal justice system. Reports used in law enforcement and security, the courts, and corrections are explained and discussed. Elements of composition, required substance, proper and improper conclusions, and descriptions of persons and property are explained. Practice in writing reports is emphasized and proficiency must be demonstrated.

JUS309 - White Collar Crime

This course considers crimes committed by corporations as well as white-collar criminals: how such crimes are defined; who commits or is victimized by them; which moral, ethical, legal and social contexts promote them; and how society responds. Procedural and policy considerations in the investigation and enforcement of relevant statutes will also be covered, including the concept of legal privilege, the role of the grand jury and other pretrial processes, evidentiary questions, litigation strategies, and potential sanctions and other punishments.

JUS331 - Juvenile Justice System

This course covers the juvenile justice system, with special emphasis on the way it procedurally differs from adult offender adjudication. The parts of the juvenile justice system, hearings, due process standards and constitutional mandates are fully reviewed. Status offenders and other youth classifications are considered together with a historical summary of juvenile court philosophy. New trends in the procedural disposition of juveniles, especially transfer to adult jurisdiction, types of punishment, suitability of the death penalty, are discussed.

JUS335 - Corporate Security Law

A focused examination familiarizes students with the origins and development of private security, with an emphasis on defining security's role in the administration of justice, its historical underpinnings, types of security services in the American marketplace, and the legal aspects of private-sector justice. Further considerations are regulation, licensing, the civil and criminal liability of security personnel, and the ongoing constitutional debate that surrounds private security enforcement. Exactly how private-sector justice operatives are legally liable for their conduct, as contrasted with the public justice official, is a major feature of the course design.

JUS345 - Probation and Parole

This course examines the theory and practices of probation and parole with juvenile and adult offenders, including release philosophy, bail and petition, hearings on grant, revocation or denial, alternative community-based corrections, and legal issues that emerge in award revocation or imposition of probation and parole.

JUS361 - Court Systems

An examination of the American judicial system, highlighting state, local, and federal court systems, including an assessment of their hierarchy, subject matter and personal jurisdiction, this course will also review judicial reasoning, judicial process, and the chief personnel responsible for judicial operations. More particularly, the course will expose the various phases inherent in civil and criminal litigation, including the concepts of jurisdiction, venue, parties and the pleadings that guide advocacy.

JUS365 - Mock Trial Concepts

Courtroom procedures used in criminal and civil trial courts are studied as students examine the courtroom environment through guided reading and critical evaluation of a mock trial case study. Students are expected to participate in simulated mock trial proceedings in the classroom with an emphasis on the roles of law enforcement, attorneys, prosecutors, forensics, and expert witnesses in the trial process. This course requires both independent work product and team collaboration. It is recommended for students pursuing careers in legal fields, law enforcement, and forensics.

JUS375 - Criminal Law

An introduction to substantive criminal law that reviews the social, philosophical and legal foundations of criminal codification, the course also covers the historical development of criminal law in the U.S. Other subject matter includes parties to crimes, including principals/accessories, criminal capacity, criminal elements (e.g., mensrea and actusreus), and the specific crimes against person, property and public order. Lastly, the course captures criminal law from the defendant's perspective by reviewing the accused's mental states, potential defenses and uses of mitigation.

Course Descriptions

JUS376 - Criminal Procedure

Criminal Procedure is the study of the criminal justice process including the law of arrests, search and seizure; the making of bail; adjudication; pretrial and post-trial activities; and the nature of plea bargaining. Substantial emphasis is given to the constitutional protections afforded through the Bill of Rights, particularly the 4th, 5th, 6th, 8th and 14th. This course deals extensively with case law applications of these principles and the role of judge and jurist in the crafting of criminal process standards. This is a writing intensive course. Prerequisite: JUS 101 or permission of the instructor. (3 crs.)

JUS380 - Crime Scene Imaging

This course is designed to expose students to the crime scene imaging process while learning traditional film, video and digital imaging techniques. Techniques and methods of crime scene imaging focus on practical exercises as well as general viewpoints of crime scene documentation. Topics include the fundamentals of photographing scenes from general to specific utilizing the overall, middle range and close-up "three-step" method. Crime scene imaging techniques, both basic and advanced, will be discussed and practiced while photographing mock crime scenes. The advanced technique of crime scene imaging includes the use of digital cameras; the digital darkroom; crime scene panorama; creation of court charts; and the enhancement and analysis of latent prints, footwear, tire impressions, questioned documents, security video image enhancement and restoration, etc.

JUS385 - Violence and the Media

This course will analyze media violence and its potential influence on various audiences. Specific variables will be examined in relation to aggression and consequently, violence. Violence will be examined within different media contexts - including news, film, television, pornography, advertising and Internet. The daily repetition of media violence will also be examined as it promotes the normalization and legitimization of violent behaviors. This course will also examine violence and aggression in relation to its historical, cultural, and contemporary influences and sources.

JUS394 - Problems in Policing

This course involves discussion and study of specific problems of law enforcement and policing in contemporary American society. It emphasizes the development, nature and function of law enforcement as it relates to public criminal justice rather than private sector justice. Topical coverage consists of ethics, corruption, deadly force and civil liabilities, and other dilemmas commonly faced in the modern police system.

JUS395 - Death Penalty

An examination of death penalty policies in the American justice system from a legal, ethical and jurisprudential perspective, this course includes analysis of case and statutory law, the principles of due process, and appellate rights.

JUS397 - Law and Evidence

This course is a comprehensive review of evidentiary principles and reveals how judges and trial lawyers actually think about evidentiary rules - particularly the Federal Rules of Evidence. It will show how evidentiary issues arise before and during trial. The course will logically track the stages of a trial, from the opening statement(s) through direct examination, cross examination and closing arguments. Students will be required to advocate their respective case utilizing the evidentiary principles in a real criminal court environment and must use due diligence in preparing their respective roles.

JUS399 - Selected Topics in Criminal Justice

Focused examinations of an emerging and dynamic problem or issue are in the study and practice of criminal justice. Special subject matter not ordinarily covered in the existing curricula can be presented by interested faculty. Examples include but are not limited to: alternative punishment schemes, euthanasia and mercy killing, civil disobedience and the rule of law, minorities in the justice system, affirmative action policy, and police use of force and women in criminal justice.

Course Descriptions

JUS400 - Foreign Study in Law and Justice

This course provides students with a culminating opportunity to learn about and apply their content specific knowledge within the employment setting and/or abroad. Students will gain discipline perspective as well as be able to apply their knowledge gained in the field criminal justice to the vast agencies within the justice system. This course is an educational experience that contributes to the methods of inquiry that are employed within the coursework and it facilitates civic engagement on regional, state, national and global levels.

JUS405 - Cyber Security

Many aspects of our lives rely on the Internet and computers, including digital media communications (email, cell phones, texting, social media), government records, financial information, personal medical record. How are the data and the computer systems on which that data resides kept safe? The increasing volume and sophistication of cyber security threats including cyber terrorism, targeting phishing scams, identity theft, and other online vulnerabilities-demand that we remain vigilant about securing our homeland, computer systems and personal information. Cyber security is an emerging area within the criminal justice/homeland security discipline. This course is designed to expose students to legal and technical aspects of cyber security. Students are able to learn and apply their knowledge and skills to identify and address the risks and damages associated with, digital fraud and cyber crimes, including computer crime, cyber terrorism, identity theft, cyber hacking and cyber virus and malicious code.

JUS410 - International Security Issues

The globalization of societies and fluid/political conditions and the growth of radical extremist groups has placed international security problems right at our door step. Our national security concerns are intertwined with our homeland security concerns. The dangerous security threats as a result of war/civil wars, terrorism, democratization, economic conditions, transnational crimes, corruption, or toxic leadership within the international community, will have a direct or indirect impact on US interests, safety, and security, to include our responsibility to protect the helpless and innocent. This course is designed to introduce the dimensions of the concept of Human Security, contemporary security issues, and problems that affect the international and homeland security arena. It is heavily weighted toward analyzing, evaluating and developing security tactics and techniques that can protect against, or mitigate the residual effects of political violence, low intensity conflicts, transnational crimes, leadership and corruption, coups, assassinations, public demonstrations and uprising, and terrorism. Fundamentally, this course is designed to acquaint the student with the complexity of these problems; techniques for examining and evaluating these problems, and then pursuing "security measures" to protect, mitigate, defend, and preempt the effects of these problems.

JUS415 - Multiculturalism and the Criminal Justice System

This course will focus on cultural needs of law enforcement to operate in a heterogeneous society with a high level of professionalism. It covers issues related to improve police performance in dealing with individuals from different ethnic backgrounds, classes, religions, and races in the United States. Students will be given case studies related to different groups in the American Society and how law enforcement agencies handled and/or should have handled such cases.

JUS429 - Terrorism

This course examines current terrorism, its origins and ideological bases, with particular attention to its relation to political institutions and the criminal justice process. Specific attention is given methods and means of the terrorist, motivations and modus operandi trends and predictability, and law enforcement's multifaceted reactions to its many devious forms. Legislative efforts to curb the scourge of terrorism are also highlighted.

JUS430 - Criminal Intelligence Analysis

This course will focus on the intelligence function and its use in crime analysis. It will introduce students to analytical techniques and solutions to everyday law enforcement crime analysis problems. Special attention will be given to understanding crime patterns and trends. Cases related to terrorism, organized crimes, white-collar crimes and street crimes will be analyzed and discussed. Intelligence methods of data collection and analysis will be explored and applied to crime analysis.

Course Descriptions

JUS435 - Countering Terrorism

The global threat of terror crime as a result of politics, radicalization, and recruitment for terrorism has grown significantly. New counter terrorism tactics and new forms of corroboration are critical to combat a very unpredictable and skilled criminal. Law enforcement and military professionals are depending on the community as the public citizen to play an integral role in the quest to combat terror crime. This course will explore a new philosophy, new techniques, and new strategies of fighting terror crime. The course will discuss the role of police and the community by integrating new practices and new forms of inclusion with respect and leadership to form a stronger strategy to combat terror crime.

JUS440 - Military Criminal Justice

This course examines criminal justice in the military. Students will be exposed to the historical underpinnings justifying the need for an independent and separate system of justice for members of the armed forces and will learn about military crimes and procedure. Courts-martial will be a central focus of the course, which will incorporate the composition of the military equivalent of a jury, trial courts, and civilian appellate review. Contemporary aspects of military justice—to include special extraterritorial jurisdiction over civilians and the prosecution of enemy combatants and terrorists before military commissions—will also be covered. Finally, students will study the special nuances of military police, U.S. federal agents that investigate crimes involving the military, and the rights of service members.

JUS455 - Legal Traditions

This course encompasses a complete examination of the law, its origins, roots and underpinnings in a jurisprudential context. Coverage includes a focused examination of classical, medieval and contemporary legal thinkers. Problems of personal privacy, sexual freedom, procreative control, the imposition of penalties and notions of good will be considered. Course participants will consider these questions: What is law? Is law related to religion and morality? What are the foundations of law in Western culture? Can law, ethics and morality be differentiated? How can a legal system be just? Can law shape morality or does morality shape law? How does Western legal tradition resolve ethical questions, such as abortion, suicide, euthanasia and the death penalty? Is there a unified vision of law that consists of the good, of virtue and the idea of justice?

JUS465 - Justice Practices

An advanced course designed for students to apply legal theory and knowledge in a simulated trial courtroom environment. Students will be expected to work extensively on case preparation and oral argument and witness presentation, to participate in group activity and team building, and to compete in mock trial proceedings in real courtrooms. Students will function as attorneys, lay witnesses, and/or expert witnesses including forensic experts in conformity with learned rules of evidence and trial procedure. Each year alternates between civil and criminal trial mock trial proceedings.

JUS466 - Leadership and Ethics in Criminal Justice

This course introduces the individual principles and theories of effective leadership and ethics specific to criminal justice and professional security organizations. This is a special type of leadership and ethics designed specifically for the professional working in a dynamic and hostile environment. It is common for public service professionals in the first responder, law enforcement, corrections, security or any professional field in the justice arena to unexpectedly be placed in a temporary or permanent leadership position, or be promoted to a supervisory position, with little or no leadership and ethics education or additional preparation. A critical part of the leadership and ethics course is the analysis and evaluation of ethics and value-based leadership and the definition of leadership and its key components. Theories of leadership and leadership styles will be examined. The leadership framework will be discussed: what a leader must be, which includes values, ethics and attributes such as loyalty, duty, respect, selflessness, honor, integrity, personal courage, and mental, physical and emotional attributes; what a leader must know, which includes skills such as interpersonal, conceptual, technical and tactical; and what a leader must do, which includes a leader's influencing, operating and improving actions in a dynamic environment. The challenge of initially taking charge of an organization will also be emphasized. The class will include situational critical-thinking exercises and conclude with an in-class capstone exercise.

Course Descriptions

JUS470 - Crimes Against Children

This is a course that examines criminal activity targeted against children. The course will focus on the physical and sexual abuse, neglect, kidnapping, and sexual exploitation of children. Students will explore methods of identifying victims, investigating offenders and court presentation of criminal cases. Special attention is focused on the dynamics of the relationship between victims and offenders and how that is a factor in the investigation and prosecution of criminal acts.

JUS487 - Computer Forensics

This course is designed to expose students to legal and technical aspects of computer forensics. The methods of the collection, preservation, analysis and presentation of digital evidence will be presented to properly conduct a computer forensics investigation. The focus of this course will be on how law enforcement obtains electronic evidence, maintaining the evidentiary chain, as well as the legal aspects of the search and seizures of computers and related materials.

JUS488 - Cyber Crime Investigation

As computers become more common in businesses and households, it is inevitable that the information or evidence an investigator seeks will be stored in those computers or will involve use of the Internet. Data networks now in place allow us to transmit information to and from virtually any location on Earth in a timely and efficient manner. But what has this tremendous enhancement in communications technology brought us? Another opportunity for criminal activity to take place. Who are the criminals in cyberspace? Understanding cybercrime requires an understanding of the technology that is being used to commit the criminal acts. The investigation of cybercrimes requires highly specialized skills. This course is designed to expose students to legal and technical aspects of cybercrime investigation. The guidelines of the collection, preservation, analysis and presentation of digital evidence will be presented to properly conduct a cybercrime investigation. The focus of this course will be on how law enforcement investigate a cybercrime and obtain electronic evidence, maintaining the evidentiary chain, as well as the legal aspects of the search and seizures of computers, smart phones and related digital devices.

JUS490 - Forensic Accounting

An advanced review of strategies and tactics essential to the fraud examination process. Course presentation assumes basic accounting knowledge and guides the student into specialized applied settings indicative of forensic accounting. Coverage includes financial statement analysis, interpretation and scrutiny of financial records and documentation, trace techniques, reporting irregularities, fraud examination approaches, and legal rules and statutory construction pertinent to accounting practices. Students will prepare a series of field exercises in common fraud cases, such as bankruptcy, insurance, employee/employer reporting, covert examinations, trading practices and money-laundering schemes.

JUS495 - Research Methods in Criminal Justice Studies

This course serves as an introduction to the basic research methods in the field of criminology and criminal justice. Qualitative and quantitative methods are explained in this course. In addition, ethical issues are focused on in this course.

JUS496 - Criminological Theories

This course will focus on the study of crimes, criminals, causes of criminal behavior, and victimization issues. Students will explore how the classical, psychological, sociological, economic, biological, and political theories of crime explain criminal behavior, and the impact of these theories on the work of the criminal justice system.

JUS498 - Internship in Criminal Justice Studies

An on-site, experiential learning experience students work at a variety of justice agencies for academic credit is the central aim of the internship program. Intern locations have included government agencies, police departments, prisons, federal and state law enforcement, private security firms, judicial clerkships, legal offices, and legal research concerns. Interns must complete a self-evaluation, perform a series of exercises and assignments, author a log diary and a paper outlining the internship experience, work 45 hours per internship credit, and present an acceptable recommendation from the internship supervisor upon completion of the experience.

Course Descriptions

LAW-Law

LAW300 - The Paralegal Profession

This course introduces the student to the role of the legal professional with special emphasis on paralegals and legal assistants. Course stresses professionalism, law office administration and client conferencing skills, telephone techniques in a legal setting, law office ethics, confidentiality and legal office accounting skills. Emphasizes the application of skills required in the law office and develops skills in legal billing, specialized legal software, banking and filing procedures, tax matters, processing insurance and investments. Students prepare a legal portfolio.

LAW305 - Land Management and Administration

This course will impart the essential skills and knowledge necessary to work in the oil and gas industry. The development of essential title research skills and understanding title law will be a major thrust. Focus will also be on the acquisition and divestiture of individual producing or discovered non-producing assets or packages. Course will discuss some of the many techniques for evaluating the purchase or sale of oil producing property. Price determination, offer construction and agreement negotiation are all focused on. Case histories and lesson learned round out the coverage.

LAW310 - Legal Research and Writing

This course is designed to teach students to use a law library, perform legal research, analyze legal problems, and write a legal memorandum, draft pleadings and case briefs. Students are taught to locate and use primary, secondary and CALR legal research sources to solve legal problems, including federal and state cases, digests, statutes, regulations, treatises, encyclopedias, law reviews, citators and practice works. Students are expected to produce a written scholarly work at the course's end.

LAW320 - Litigation and Trial Evidence

This course will teach you the principles of civil litigation in federal and state courts. You will learn causes of action and defenses, and will be introduced to rules of procedure and discovery, along with ethical responsibilities. Pretrial practice, including discovery, pretrial motions and trial preparations, will be covered, together with the basics of a civil trial, post-trial motions and appeals. The principles learned will be applied to practical exercises.

LAW330 - Criminal Law for Paralegals

An introduction to substantive criminal law which includes a review of the social, philosophical and legal foundations of criminal codification encompasses the course. In addition, the course covers the historical development of criminal law in the U.S. Other subject matter includes parties to crimes including principals/accessories, criminal capacity, criminal elements, e.g. mens rea and actus reus, and the specific crimes against person, property and public order. The course captures criminal law from the defendant's perspective by reviewing the accused's mental states, potential defenses and uses of mitigation. More narrowly, the student will learn to prepare pleadings and other relevant documentation in the defense and prosecution of criminal cases.

LAW340 - Family Law

The purpose of the family law course is to give legal assistants a better understanding of domestic relations law and to show students how those laws governing family situations are applied. The content of the course covers such areas as formation of the marital relationship, dissolution, child custody and support, adoption, abortion, paternity, domestic violence, child neglect, and surrogacy. Participants will also draft pleadings and documents relevant to family practice.

LAW350 - Real Estate Law

This course is an introduction to Real Estate Law and covers the processes, procedures, and legal concepts involved in residential and commercial real estate. A solid foundation of real estate law concepts, with a special focus on the oil and gas industry, is provided in this course. The student will learn the essentials of real estate law, including various forms of ownership and tenancy, title search and closing activities, and real estate sale and transfer procedures. Special issues such as leasehold estates, common interest communities and real estate development will also be covered.

Course Descriptions

LAW360 - Law, Business and the Workplace

This course is a survey of the basic principles of corporate law including their creation and operation as well as a review of partnerships and proprietorships as business entities. Student will be required to prepare the documents necessary for incorporation, amendment, by-laws, and the recording of director's meetings and minutes, dissolutions and liquidations. This course will cover the formation, operation, and dissolution of various kinds of business organizations including sole proprietorships, corporations, partnerships, the law of agency and employment agreements. Employee compensation agreements will also be reviewed.

LAW370 - Administrative Law

This course presents basic concepts of administrative law and procedure in federal and state agencies, with emphasis on the paralegal's role in the administrative process. Paralegal students will learn both formal and informal advocacy techniques, including representing clients before administrative bodies. Substantive topics will include administrative delegation of power, rule making, agency discretionary powers, remedies and judicial review. Procedural topics include agency operation, adjudication, hearing preparation, and administrative and judicial appeals.

LAW380 - Estates and Trusts

This course will introduce students to the concepts and forms necessary for estate planning and its administration as well as the drafting of wills, trusts and other relevant documentation. This course will introduce students to an overview of postmortem estate administration, under either testate or intestate provisions. The process of administering a decedent's estate, from collection to valuation, to the appointment of a fiduciary, to the filing of final account and distribution of assets, will be examined.

LAW390 - Bankruptcy

The main focus of this course will be on bankruptcy law and procedure. It will cover commencement of a case, preparing of schedules, operating and liquidating procedures, adversary matters and litigation in bankruptcy court, debtors' and creditors' rights and obligations, technical terminology, and practical hints for paralegals. Forms utilized in bankruptcy court will be stressed as well as proceedings under Chapter 7, Chapter 13 and, to a lesser extent, Chapter 11. Also, proceedings under Chapters 9 and 12 will be reviewed. Additionally, the rights of creditors will be explored. This includes secured transactions, consensual and non-consensual liens, UCC transactions, and the unique position of real estate. An introduction to garnishments and other judicial attachments of property will be taught.

LAW400 - Constitutional Law for Paralegals

The Constitutional Law course is designed to give an overview of the interpretation of the constitutional articles and amendments. The student will explore the three branches of the federal government and the interpretation of the articles that created them and control their functioning. The course will also examine the individual's rights in society, the changes in society that impact individual rights, and the Supreme Court decisions interpreting individual rights. In addition, students will analyze and assess fact patterns, investigate claims and arguments, prepare pleadings and other legal documents as well as conduct sophisticated legal research in matters of constitutional law.

LAW405 - Oil and Gas Law

This course will focus on understanding the legal principles that control oil and gas development in the United States. The legal rules that govern the development of privately owned mineral rights will be focused upon, with an emphasis on joint ownership. The course will then turn to the various legal issues in the conveyance and leasing of oil and gas rights. Topical coverage will conclude with a discussion of oil and gas taxation and oil and gas contracts.

LAW410 - Law and Ethics

An inquiry into the interplay of law, morality and ethical reasoning and Western legal tradition is the chief thrust of this course. The course exposes the tradition and foundations of the American legal system with special emphasis on its jurisprudential foundations. Questions of right, justice, equity, law as moral command and order, natural law reasoning, and the dignity of the human person are central to the instruction. This course will also introduce students to the types of ethical dilemmas that they will face in the work force; generally to the ethical

Course Descriptions

rules developed by the American Bar Association, and specifically, to the rules adopted by this jurisdiction for the regulation of attorney and paralegal conduct and the model codes of paralegal associations; and to methods for researching the answers to ethical dilemmas.

LAW415 - Contract Law for Legal Support Staff

This course provides the student with a straightforward examination on the law of contracts. Complex area of law is clarified using numerous practical examples on how to draft and interpret different types of contracts. The student will learn to draft the initial agreements, incorporate changes, conduct an initial contract analysis in the event of a dispute to determine potential rights and liabilities, and help determine the appropriate remedies available. At the course's end, the student will be conversant with all of the elements of basic contract law and drafting.

LAW420 - Law and Conflict Resolution

This course provides students with an in-depth understanding of alternate forms of dispute resolution outside courtroom litigation. These alternate forms include mediation, negotiation and arbitration. It incorporates a community service experience in mediation allowing students a unique opportunity to apply theories, concepts and skills learned in the classroom to practical experiences in serving others in the community. The course provides students with a thorough and complete approach to understanding the psychological dimensions to conflict diagnosis. It also provides guidelines to evaluate and develop strategies and tactics to address interpersonal conflict. It also provides a comprehensive survey of all ADR processes.

LAW430 - Elder Law

This course concentrates on the legal problems associated with the elderly and issues of aging. It introduces students to the unique client needs of the elder client and their families. This course introduces substantive legal theories in modern elder law, including introduction to government program, such as Medicare, Medicaid and Social Security for old age retirement assistance; advanced planning for retirement; elder abuse and protective services legislation; and nursing home rights legislation. Topics include health care funding; health care decision making; long-term care; end-of-life decisions; elder abuse and neglect, both institutional and non-institutional, and guardianship.

LAW440 - Immigration Law

This course provides students with a theoretical and practical understanding of the process and procedures relating to immigration law. It also provides proper methodology for client interviews and client files, as well as an introduction to preparation of petitions and agencies that are part of Immigration law. Students will have practice in completing standard immigration forms, researching immigration law, accessing government and other websites for immigration related materials, and reviewing current issues in immigration law. Students will be able to assess each Visa category, determining the type of filing required by client circumstance. Students will analyze hypothetical situations, allowing students to scrutinize actual problems and issues that arise when processing a case. United States immigration statutes, rules and regulations, and precedent and administrative policies relevant to immigration law are fully covered.

LAW450 - Labor and Employment Law

Law concepts of labor and employment law and their respective applications are the central themes of the course. The course spends considerable time identifying applicable federal labor and employment laws, distinguishing between exempt and nonexempt employers, and differentiating between public and private sector employees. The course continues by analyzing labor organization, unfair labor practices, collective bargaining, picketing and strikes, the rights of union members, and public sector labor relations. Additionally, the duties and responsibilities of government and business executives and human resource managers are analyzed; and the administration and enforcement roles of various federal (and state) commissions and departments are discussed.

LAW460 - School Law

This course is designed to provide a foundational understanding of the legal framework within which public schools operate, and to examine selected legal issues that arise in the organization and administration of public schools. Emphasis and focus will be placed on the relevant law as it pertains to students in today's schools.

Course Descriptions

LEA-Leadership

LEA100 - Introduction to Leadership Studies

This course is required for the leadership studies minor. It is an introduction into the definition of leadership and the ways in which leadership can exert itself. In addition to exploring examples of leadership in a wide variety of settings, students will engage in interactive exercises aimed at developing and understanding their personal leadership styles.

LEA397 - Internship in Leadership Studies

Students will be placed with leaders off campus. They will integrate what they have been studying with the duties and responsibilities assigned to them by leaders in various fields as well as an academic supervisor.

LEA399 - Selected Topics in Leadership

This course is a focused examination of historical or emerging issues in leadership, dynamic problems, current research and issues on the study and practice of leadership from an interdisciplinary perspective. The topic, which varies each time the course is offered, may include the study of African American leadership, Latino leadership, European and Asian leadership, women in leadership, presidential leadership, world political leaders, corporate leadership or military leadership.

LEA400 - Capstone Seminar in Leadership Studies

This seminar involves the use of case studies assigned for group discussion, formal presentation, analysis, and resolution. Class sessions involve the application of interactive exercises, using simulations, role-playing and decision-making scenarios. Guest speakers, drawn from a variety of disciplines will be used as additional resources. In addition to exploring examples of leadership in a wide variety of settings, students will engage in interactive exercises aimed at developing and understanding their personal leadership styles, theoretical concepts, and developing the leadership in others.

LIT-Literature

LIT127 - Women as Hero

An exploration of heroic roles assigned to women in literature, the contrast between reality and the literature, and the differences between fictional women created by male and female authors. An analysis of the reasons for these differences forms part of the subject.

LST-Liberal Studies

LST490 - Seminar in Liberal Studies

This is the capstone course for the Liberal Studies student. It will focus on the integration of information learned from diverse, but inter-related courses within the Liberal Studies Curriculum. Focus will center on individually selected and inter/cross discipline related theories, ethics, skill sets, and research methods.

LST492 - Liberal Arts Internship

Internship in liberal arts.

MAT-Mathematics

MAT110 - Applications of Math

This mathematics course will cover how to apply mathematics to real world situations such as determining methods of fair voting and apportionment, finding the shortest path, scheduling meetings, determining the best return on investments, and collecting data to show patterns.

MAT130 - Elementary Topics in Mathematics II

This is the second course of a sequence of two mathematics content courses specifically designed for Pre-K to Grade 8 teacher education candidates by providing an overview of fundamental mathematical concepts. The content covered includes metric and non-metric geometry, coordinate geometry, introduction of statistics and probability, problem solving, and computer use.

Course Descriptions

MAT181 - College Algebra

Fundamental operations; factoring and algebraic fractions; exponents and radicals; functions and graphs; equations and inequalities; properties of graphs; systems of linear equations; synthetic division; rational zeros of polynomials; and logarithmic and exponential functions.

MAT191 - College Trigonometry

A thorough development of trigonometry. This course includes both circular and right-triangle geometry, evaluation of trigonometric functions, graphing trigonometric and inverse trigonometric functions, analyses of trigonometric graphs, verifying trigonometric identities, solutions of trigonometric equations, and applications of trigonometry.

MAT199 - Precalculus

This course is a study of numerical, analytical, and graphical properties of functions. The course content includes polynomial, rational, irrational, exponential, logarithmic, and trigonometric functions. This course is designed as a preparation for calculus..

MAT202 - Math Around the World

This course is intended for Liberal Arts majors (This course may NOT be used as a math course by secondary ed or BA in math students). Students will study the mathematical historical topics related to the region of the world. The course will be an online course and will include a required field trip to the region of the world being studied. An example: If the area of the world were Greece, topics may include the Greek ancient alpha numeric numeral system, studying the mathematics of Thales; Pythagoras; Euclid etc.

MAT207 - Data Preparation and Cleaning

This course provides students with an introduction to the need for and methods for data cleaning. The course presents methods for locating and handling invalid values, out-of-range values, and missing values along with methods for managing datasets. The course uses SAS software.

MAT213 - Data Visualization

This course explores techniques and tools for creating effective data visualizations. The course covers the creation and exploration of visualizations for categorical data, time series data, spatial and geospatial data. SAS software will be used for this course.

MAT215 - Statistics

For non-mathematics majors; not counted toward a mathematics major. Frequency distribution, percentiles, measures of central tendency and variability, normal distribution and curve, populations, samples, sampling distribution of means, sampling distributions of proportion, null and alternative hypotheses, type I and type II errors, tests of means, confidence intervals, decision procedures, correlation, chi-square, simple analysis of variance, and design of experiments.

MAT225 - Business Statistics

Statistical techniques relevant to business applications. Primary emphasis is placed upon identification of appropriate statistical methods to use, proper interpretation and appropriate presentation of results. Topics include descriptive statistics, probability concepts, the normal probability distribution, estimation techniques, tests of hypotheses, simple and multiple linear regression. Statistical software is used to implement many of the statistical methods.

MAT251 - Big Data Tools

This course covers an introduction to big data analysis tools. The course provides an overview of SAS, Hadoop and other big data tools. The course covers the structure and framework of data analytic tools and covers the use of these tools to perform various analyses.

Course Descriptions

MAT261 - Big Data Analytics

This course is intended to provide the student with an introduction to big data, big data analytics and several methods useful in big data analytics such as clustering, association rules and various forms of regression. SAS® statistical software will also be introduced and used to solve data problems.

MAT272 - Discrete Mathematics

Introduction to theories and methods of mathematics relative to computer science but taught from a mathematics perspective. Topics include logic, set theory, elementary number theory, methods of proofs and proof writing (direct, indirect and math induction), combinatorics, probability, relations and functions, and graph theory.

MAT282 - Calculus II

The integral; fundamental theorem of calculus; applications of the integral; inverse functions; logarithmic functions; hyperbolic functions; techniques of integration.

MAT290 - Technology for Mathematics

This course, designed for both mathematics and science majors, and for prospective and practicing educators, details the use of technological tools in the study of mathematics and explores the effective and appropriate use of technology in the teaching, learning, and application of mathematics. The course is composed of three components: using graphing calculators; using calculator-based laboratories; and using mathematical software. The course will be taught from a laboratory-based perspective.

MAT304 - History of Mathematics

This course is a historical summary of the development of mathematics. Emphasis is placed on relating mathematics to the development of world culture and its relationship with all aspects of our culture. The lives and discoveries of many mathematicians are discussed. Methods of incorporating the history of mathematics into high school mathematics courses are a major focus of the course.

MAT305 - Theory of Equations

This course deals with the development of the theory involved in solving algebraic equations. It includes complex numbers as an algebraic system, polynomials in one variable, cubic and biquadratic equations, limits of roots and rational roots, isolation and separation of roots, and the approximate evaluations of roots.

MAT341 - Linear Algebra I

This course covers systems of linear equations and matrices, determinants, vectors in n -space, vector spaces, linear transformations, eigenvalues, eigenvectors, and applications.

MAT345 - Cryptography I

This course is intended to provide an introduction to cryptography with the number theory portion tied in. The following topics will be covered: modular arithmetic, classical cryptography, public key cryptography and introduction to complexity.

MAT351 - Abstract Algebra I

Fundamental concepts of logic; natural numbers, well-ordering property, induction, elementary concepts of number theory; groups, cosets, Lagrange's theorem, normal subgroups, factor groups; homomorphism, isomorphism and related topics including Cayley's theorem, natural homomorphism, and the three fundamental homomorphism theorems.

MAT353 - Intermediate Mathematical Statistics

This course provides an introduction to mathematical statistics. It re-introduces content from an introductory statistics course and develops the content in theory further. It adds an in-depth look at several statistical methods from introductory courses and introduces Bayes estimation and testing.

MAT361 - Nonparametric Statistics

This course provides an introduction to nonparametric statistics. It includes the introduction of nonparametric inference testing including the Wilcoxon Test, the Mann-Whitney test, the Ansari-Bradley test, the Kruskal-Wallis

Course Descriptions

test, the Kendall test and the Theil test along with their associated estimators. Students will also learn how to run analyses in the SAS® software program.

MAT371 - Applied Categorical Data Analysis

This course provides an introduction to categorical data analysis. Topics include contingency table analysis, inference for contingency tables, models for binary response data including logistic regression and probit models, models for multinomial responses, loglinear models and mixture models for discrete data. SAS® software will be used for analysis.

MAT373 - Applied Time Series

This course provides an introduction to time series analysis. The course covers models for stationary and nonstationary time series including model selection, diagnostics and forecasting. This course uses SAS® software for analysis.

MAT376 - Applied Regression

This course is an introductory level course in regression analysis. This course begins with simple linear regression and associated one-way analysis of variance tables for regression analysis along with diagnostic measures for simple linear regression. The course continues with more complicated regression models including general regression models, multiple regression, generalized linear models and a brief introduction to nonlinear estimation. The course will cover the necessary linear algebra for completing regression. SAS® software will be used to complete analysis.

MAT381 - Calculus III

Continuation of integration techniques, indeterminate forms and improper integrals, parametric and polar curves, and conic sections, infinite series, and the theory of infinite series and power series.

MAT382 - Calculus IV

Vector analysis in two and three dimensions. Topics include theory of curves and surfaces; partial derivatives; multiple integrals; and Greens, Stokes and the Divergence theorems.

MAT391 - Statistical Packages

This course provides an in-depth look at statistical packages used to complete a variety of statistical analysis. The course will focus on current and highly used packages such as SAS®, Hadoop, and R. The course will provide a basic introduction to each package and will also cover more in-depth topics within each package as applicable.

MAT400 - Mathematical Modeling

This course provides an introduction to mathematical modeling. Students will be presented with real-world problems from a variety of fields, such as physics, biology, earth science, meteorology, engineering, economics, etc. Students will learn how to select appropriate mathematical models to model the real-world situation, use the model to solve a real-world problem, interpret the results of the solution(s), and communicate their work orally and in written format.

MAT401 - Data Analysis Capstone Project

This course is designed for the certificate in Data Science to provide hands-on experience in the area of data science. This experience will enable students to apply their knowledge of data science and provide valuable experience in the application of methods studied within the program that should enhance their job opportunities upon graduation. Students will receive experience with real world data. Analysis will be completed using SAS®.

MAT406 - Differential Equations

Ordinary differential equations and their solutions. The existence and uniqueness of solutions. Various types of differential equations and the techniques for obtaining their solution. Some basic applications, including numerical techniques, computer solution techniques are discussed.

Course Descriptions

MAT441 - Linear Algebra II

Extends the concepts learned in Linear Algebra I. The content is not fixed, but usually includes the following topics: linear transformations, change-of-base matrices, representation matrices; inner-product spaces, eigenvalues and eigenvectors, diagonalization.

MAT451 - Abstract Algebra II

This course is a continuation of MAT 351 Abstract Algebra I. It continues the covering of algebraic structures such as fields, rings and groups. It is a blend of theory and application.

MAT461 - Statistical Analysis I

Basic concepts of both discrete and continuous probability theory. The concepts of a random variable is stressed, including distributions and mathematical expectation. A number of important probability models are studied in detail. Analyses will be performed using SAS® software.

MAT462 - Statistical Analysis II

Statistical theory and application of statistical estimation techniques and hypothesis and hypothesis testing methods. Simple linear regression, multiple linear regression and basic experimental design. Analyses will be performed using SAS® software.

MAT468 - Field Experiences in Mathematics

This class gives the student an opportunity to delve into a topic of special interest to him/her. It also affords him/her an opportunity to experience research procedures in the field. The selection of the topic or topics to be examined will vary according to the research interests of faculty and students. The course is an online course that includes a required field trip related to the topic of the course.

MAT471 - Applied Multivariate Statistics

This course covers the basics for several multivariate statistical analyses. The course covers principal component analysis, canonical correlation analysis, factor analysis, discriminant analysis, and cluster analysis. SAS® software will be used for all analyses.

MAT474 - Complex Analysis

The course introduces the essential concepts in the Complex Analysis such as: Complex Numbers, Functions of complex variables, their Limits, Continuity, Derivatives, Integrals and Cauchy Integral Formula. 2. Shows students the importance of Complex Analysis Theory in pure mathematics, applied mathematics and Engineering Applications. 3. Develops the elements of Complex-Variable Functions in a rigorous and self contained manner.

MAT481 - Real Analysis I

This course covers logic and techniques of proof; relations, functions, cardinality and naive set theory; development of real numbers from natural numbers through topology of the line; and convergence and related ideas dealing with functions (sequences and series), including continuity.

MAT491 - Statistical Packages II

This course continues to consider statistical packages to complete statistical analysis and big data analysis. The course will focus on current and highly used packages. This course will provide an in-depth look at each package and give students hands-on experience with installing, working in and producing analysis using current software.

MAT496 - Senior Research Project

This course, which should be taken near the end of the student's bachelor's degree program, involves an in-depth investigation of a mathematical or computer science topic (theoretical computer science being mathematical in nature). The investigation will culminate in the presentation of a senior paper.

MDI-Multidisciplinary

MDI300 - Dialogue and Differences

Communicating across differences of age, gender, language, culture, and political orientation, and in different contextual situations is a useful skill for every individual. It is also integral to the success of any attempt to resolve

Course Descriptions

conflict, whether individual, group/institutional, or global. By offering a context for students to learn with individuals from different cultural and linguistic backgrounds, we will all gain insight into the role of culture in dialogue. An understanding of culture and its influence on our perspectives is essential for effective communication. Through interactive exercises, students will develop an understanding of the challenges of intergroup dialogue across differences and the skills required to communicate effectively. Students will engage in a workshop on dialogue skill-building and multiple dialogue sessions with classmates and other students, first learning the theory and skills that underlie successful participation and facilitation of dialogue and then applying them in the exploration of issues such as gender, religion, and international affairs.

MFL-Modern Foreign Language

MFL460 - Modern Languages and Cultural Internship

This course is intended to provide the Spanish/French/Arabic student with an opportunity to work in a professional setting to learn about areas that are not available or not practical in an academic environment. The internship will enable the student to apply Spanish/French/Arabic language skills in the real work place and will provide an invaluable experience which should make the student more marketable upon graduation. Prerequisite: Students should have completed 12 credits of the language and have junior standing.

MFL470 - Special Topics in Language

This course is designed for language majors, minors, certificate seekers, or other students who wish to explore language topics that are not regularly offered. The subject matter presented will be a combination of historical and contemporary topics in relation to the studied language and culture. This course is repeatable up to 12 credits.

MFL479 - Field Studies in Modern Languages and Cultures

This course primarily involves study-abroad educational experiences in modern languages and cultures that differ from internships. Examples include immersion instruction in the target language and in a country where the target language is widely spoken; undertaking academic coursework in any subject matter that is taught in the target language; attending a series of professional conferences that are substantially presented in the target language; and participating in organized educational and academic travel programs where the target language is largely spoken and the cultural and social activities relate to target-language environments. The field experience will enable the student to apply his/her respective language skills in real-world environments and will provide an invaluable experience, which will make the student more marketable upon graduation.

MFL481 - Modern Languages Internship

This course is intended to provide the student with an opportunity to work in a professional setting and to learn about areas that are not available or practical in an academic environment. The internship will enable the student to apply his/her respective language skills in the real-world environments and will provide an invaluable experience, which will make the student more marketable upon graduation.

MGT-Management

MGT300 - Principles of Management

This course provides background and insight into the human factors involved in the day-to-day and long-term operations of an organization. It is built on the management functions necessary for success in any type (profit or nonprofit) organization. The course focuses on major issues that affect today's managers, such as global environment, corporate social responsibilities and ethics, organizational culture, employee empowerment, and employee diversity. It also explores how external environments affect the operations of organizations.

MGT301 - Organizational Behavior

This course is designed to provide students with a multidisciplinary view of the study of behavior in organizations to better understand and manage people at work. It focuses on describing and explaining the core concepts and foundation principles that are fundamental to understanding behavior in organizations. Emphasis is placed on topics that affect individual behavior, team and group behavior and behavior of the organization itself. Behavioral questionnaires and self-assessment instruments are used to help students gain self-insights and further develop the competencies needed to be effective employees and successful managers/leaders.

Course Descriptions

MGT303 - Entrepreneurship I: Small Business Fundamentals

This is a management course designed to address the steps in the entrepreneurial process to establish a new business or to launch a new product line in an established organization. This course is a study of how to successfully analyze opportunities for a new venture. The contents provide the complete analytical process for establishing a new and successful operation. The new venture decision provides a compelling reason for success. This course leads up to the establishment of a complete Business Plan.

MGT305 - Entrepreneurship II: Small Business Management

This course focuses on the characteristics of an entrepreneur and framework to develop and lead a successful entrepreneurial business. The impact of emotional intelligence in the workplace and sources of entrepreneurial finance are discussed. Students will learn how to develop and manage the human capital in the workplace.

MGT311 - Organization Theory and Design

This course provides a comprehensive macro-view approach to the study of organizations and their functioning. Topics covered include environment and open systems, technology, size and life cycle, organizational control, culture and ethics, information processing, decision-making processes, power and politics, and organizational innovation and change. Emphasis is placed on how external and internal factors influence the structure and design of the organization.

MGT320 - Teamwork and Leadership

This course encourages leadership and teamwork through group interaction. The study of leadership through teamwork builds upon core concepts and active engagement. Students will practice and refine their interpersonal and leadership skills as they model professional communication delivering collaborative products.

MGT373 - Computer Based Management Information Systems

This course provides background and insight into the technical foundations of database management for business professionals. It concentrates on information technology systems that support managerial decision making. This course illustrates how the field of information technology systems supports customer relationship management and supply chain management. It demonstrates how information systems are developed and applied in solving various business dilemmas. The course stresses the importance of properly managing information technology, locally and globally, to obtain and maintain a competitive advantage in the business world.

MGT378 - Law of Privacy and Cybersecurity

This course focuses on developing students with a working knowledge of the legal and regulatory constraints and opportunities for privacy and security of IT systems, with particular emphasis on the regulation of network activities and data management. Students will be prepared to identify public policy constraints and opportunities; participate in the public policy debate over privacy and security issues; manage liability risks; and appreciate when and how to summon legal counsel.

MGT403 - Innovation Management

In this course, students learn how to identify strategic opportunities in which new innovations in technologies and business practices can be successfully implemented and how to do so. We focus on the practices and procedures by which both managers and entrepreneurs can manage innovation effectively. Through an in-depth grounding in the innovation and strategy literature, students learn the specific steps and processes needed to accomplish this goal. Through case study analysis of both successful and unsuccessful innovation management in a variety of industries, students learn the critical skills needed to profitably manage innovation. These are valuable skills which students can apply in their own current or future professional or career endeavors.

MGT431 - International Business Management

This course introduces to the Global exporting and importing process. The course contains information about trade internationally, by region and in global settings. The effects of cultural differences are highlighted showing how sizes, quantities, and types of sales in one country differ from those in another country. The foreign exchange process is described and students see the challenge from changing values in currencies.

Course Descriptions

MGT450 - Management Research

This course explores the fundamentals of business management. The focus is on practical application of commonly used techniques such as questionnaires and descriptive statistics. Students will utilize secondary research to formulate solutions to managerial problems. They will also design a questionnaire, report data, and demonstrate academic writing skills. The course balances team activities with independent research, utilizing the techniques discussed in the course.

MGT461 - Integrated Supply Chain Management

The coordination and integration of functions across the supply chain are often more important than the individual functions themselves. As global supply chains increase their reach and complexity, there is increasing demand for the skills to manage them. This course develops fundamental supply chain principles and explains the role of global supply chain managers in managing the flow of goods and dealing with suppliers. Topics include supply chain metrics, production planning and inventory control, global supply chain design, logistics and outsourcing.

MGT492 - Management Internship

The student is placed with a business firm, bank, government agency or nonprofit organization performing management-related tasks. The internship experience offers a practical training ground for students that supplements academic training by permitting them to apply the theories, concepts and techniques learned through their other coursework to address actual problems in a real business environment.

MIS-Management Info Systems

MIS201 - Management Information Systems

This course provides background and insight into the information systems that business professionals and other organizations rely on. It concentrates on computer-based information systems that use various information technologies. This course illustrates how the field of information systems encompasses many complex technologies, abstract behavioral concepts and specialized applications in countless business areas, such as marketing, human resource management, finance, accounting and operations.

MIS321 - Accounting Information Systems

This course will provide students with the background to oversee accounting system functions, implement and review systems of internal controls, and understand how to ensure the organizations have valid, accurate, and timely financial information. Students will explore topics in Accounting Information Systems and use technologies to make decisions in specialized areas of accounting professionals, such as managerial accounting, financial accounting, auditing, and tax accounting. Topics will include types of systems, internal control issues, audit issues, and systems development issues.

MIS322 - Human Resource Information Systems

This course is designed to provide an introduction to the use of technology in the administration of human resources, and how new technologies can contribute significantly to the efficiencies in the management of a company's human capital. It is designed to help students understand the integration of technology into the human resource department. It will address the strategic needs of organizations and how they are met through the use of human resource information.

MIS375 - Information Technology Ethics

This course provides background and insight into the ethical challenges posed by rapidly changing Information Technology. Students will examine and analyze the issues and controversies that comprise the field of cyberethics and cybertechnology. This course illustrates the broad coverage of cyberethics since it covers not only the professional, business aspects of Information Technology Ethics but also the individual, personal aspects of Information Technology Ethics. Although designed for business majors, it addresses and analyzes issues that concern all students since everyone is affected by Information Technology.

MIS385 - Health Information Systems

The course will provide students with an overview of Information Systems used within the Healthcare industry and the challenges it faces. Students will explore current trends in Healthcare Information Systems along with

Course Descriptions

government and security regulations that surround it. The goal of the course is to provide students with challenges facing the healthcare industry when selecting and implementing a Healthcare Information System.

MIS401 - Business Driven Management Information Systems

This course focuses on the management and technical components that are core to business applications and management control of information systems. Topics will include management information and decision support systems which assist in planning, organizing, and controlling business activities. It also emphasizes the physical and logical components of business information systems along with decision support / expert systems.

MIS421 - Strategic Issues in MIS

This course will discuss the strategic roles and responsibilities of IT Executives and Managers. Students will explore how firms can gain and sustain a competitive advantage using information systems. Additionally, the course will provide an understanding of how IT drives organizational value. Key concepts around approaches to managing information systems functions in an organization and ensuring alignment with business strategies will be discussed while addressing real world current issues facing an IT organization.

MIS492 - MIS Internship

The student is placed with a business firm, bank, government agency or nonprofit organization performing management information systems related tasks. The internship experience offers a practical training ground for students that supplements academic training by permitting them to apply the theories, concepts and techniques learned through their other coursework to address actual problems in a real business environment.

MKT-Marketing

MKT300 - Principles of Marketing

This course serves as an introduction to the marketing discipline. Foundational topics include identification of target markets, understanding of population demographics and psycho-graphics, the four P's (product, price, place, promotion) of marketing, social responsibility, marketing segmentation, environmental factors affecting marketing efforts, consumer behavior, marketing research, advertising, promotion and personal selling. Careers in marketing are also covered.

MKT311 - e-Marketing

This course presents a strategic framework for developing marketing strategies on the Internet. It extends the marketing mix framework to e-commerce using current theories and applications in online product, online pricing, web-based marketing communication and distribution strategies. Other topics include marketing research on the Internet, electronic retailing, Internet-based customer relationship management and legal-ethical dimensions of e-marketing.

MKT320 - Principles of Selling

This course serves as an introduction to the world of the professional sales representative. The focus of the course is on the development and execution of a professional sales presentation. Topics covered include professional self-presentation; the approach; features, advantages and benefits of the product; the marketing plan; the business proposition; handling buyer objections and closing the sales presentation.

MKT321 - Sales Management

This course serves to present the theories and concepts relevant for the management of a professional remote sales force. Topics covered include sales program planning; account prospecting; sales force organization; recruiting and selecting sales personnel; sales training, leadership, motivation, compensation and evaluation of the sales force.

MKT331 - Retailing

This course serves as an overview of the retail marketing environment. Topics include strategic retail marketing, situational analysis, retail institutions by strategy mix, non-store based retailing, trading area analysis, retail organization and the human resources function, development of merchandise plans and pricing, assortment planning, visual and image merchandising and retail promotional strategy.

Course Descriptions

MKT341 - Non-profit Marketing

A marketing course designed for both business and non-business majors that differentiates between for-profit and not-for-profit organizations, investigates the competitive environment facing nonprofits (e.g., hospitals, churches, charities, colleges, performing arts groups), and applies research techniques and marketing tools (product policy, distribution and delivery systems, monetary pricing, and communication strategies) to the nonprofit entity.

MKT351 - Advertising Management

This course serves to present the theories and concepts involved in the understanding of the advertising mix: advertising, public relations, sales promotion and professional selling. Topics include integrated marketing communication, branding, promotional opportunity analysis, theoretical frameworks, types of appeals, executional frameworks, media selection, trade and consumer promotions, sponsorship programs and the evaluation of the integrated marketing communication program.

MKT361 - Entrepreneurial Marketing

The course provides an understanding of the basic concepts and processes used in developing an integrated marketing communications (IMC) campaign targeted to the small business startup or owner. Topics covered include developing a promotional opportunity analysis, understanding and using the advertising mix, establishing media selection techniques, selecting promotional strategies, and evaluating the IMC efforts.

MKT401 - Marketing Management

This course focuses on the description and analysis of the nature, strategies, and techniques used in marketing. It examines the impact of technology on marketing, and the strategic role of marketing in the overall goal of organizational success in highly competitive and volatile markets. The decision making process of managers will be explored as they lead the design and implementation of a marketing strategy that encompasses product planning, pricing, supply chain management and promotion strategies.

MKT421 - Consumer Behavior

This course presents a strategic framework for understanding and applying marketing strategies. It integrates the disciplines of psychology, anthropology, economics and sociology with the marketing discipline to explain, understand, and predict consumer decisions in the marketplace. This is achieved by exploring both the theoretical and practical implications of (1) individual behavior variables such as motivation, learning, perception, personality, and attitudes; (2) group influences such as family, culture, social class and reference group behavior; and (3) consumer decision processes such as cognitive dissonance, brand loyalty new product adoption and risk reduction. The field of consumer behavior is very broad. This specific course will focus on the processes involved when individuals or groups select, purchase, use, or dispose of products, services, ideas, or experiences to satisfy needs and desires.

MKT431 - Marketing Research

This course focuses on explaining and using the behavioral and statistical tools needed for designing, implementing, and reporting marketing research projects. Accordingly, this course will provide emphasis in the following areas: 1. Provide an understanding of the importance of marketing research 2. Describe the conceptual framework for conducting marketing research 3. Explain the components of a well-defined marketing research problem 4. Compare and contrast the various types of research design 5. The nature and scope of primary versus secondary data 6. Accessing online information databases 7. Deciding on survey data and the collection method 8. Using measurement scales 9. Designing Questionnaires 10. Identifying the optimum sampling method 11. Collecting data 12. Determining relationships among data 13. Preparing and presenting research results

MKT461 - International Marketing

On the completion of this course, students will be able to analyze, integrate and explain a variety of environmental forces that differential domestic from international marketing designs. For those students considering a career in marketing, this course will demonstrate that many of the prevailing assumptions regarding marketing need to be re-examined when applied to markets outside of the USA.

Course Descriptions

MKT492 - Marketing Internship

The student is placed with a business firm, bank, government agency or nonprofit organization performing marketing-related tasks. The internship experiences offers a practical training ground for students that supplements academic training by permitting them to apply theories, concepts and techniques learned through their other coursework to address actual problems in a real business environment.

MTR-Mechatronics

MTR300 - Manufacturing Processes

This course covers various methods of processing metals, plastics, ceramics, and composite materials with emphasis to the major processes used in manufacturing today: casting and molding, forming, separating, conditioning, assembling, and finishing. A final section provides students with an introduction to product design and process selection.

MTR310 - Principles of Automatic Control

This course covers key concepts of industrial control. The purpose of this course is to provide the student with an understanding knowledge of industrial control principles including: instruments, circuits, components and control techniques. The primary focus is on operation principles and the measurement devices. The student will have already learned basic electronic principles in Circuits I, II, and Digital Fundamentals.

MTR320 - Statics

This course will emphasize the study of forces acting on rigid bodies at rest. Concepts of force, moment, couple, force components, force resultants, concentrated and distributed loads, basics of static equilibrium of machines and structures, friction, centroids and moments of inertia will be covered. Emphasis will be placed on the concept of developing free body diagrams for simple mechanical structures and their resultant force equilibrium solutions.

MTR325 - Fundamentals of Programmable Logic Controllers

The course provides students with an introduction to programmable logic controllers through the design, troubleshooting, improvement, and optimization of mechatronic control systems. The course covers the component parts of a programmable logic controller, their function, and their interrelationship. PLC input/output systems and requirements are examined. Ladder logic programming using I/O instructions, logic instructions, timers, counters, and sequential control are covered in-depth. Sequence of PLC operation, hardware installation, networking PLC systems and peripherals, troubleshooting, safety requirements, and industrial applications of PLCs are also introduced.

MTR330 - Dynamics

This course will cover the dynamics of particles and rigid (planar) bodies. Topics will include kinematic equations, Newton's Second Law, work and energy solutions, and impact and momentum solutions. Emphasis will be on particle analysis, with coverage of rigid bodies as appropriate, as assessed by course instructor. Students will hone problem-solving skills through dynamic system analysis, and learn professional preparation skills. Three hours of lecture

MTR335 - Advanced PLCs and Integration

The course provides students with additional and more advanced skills in Programmable Logic Controllers (PLCs). Students will learn how to program and apply zone control techniques, data transfer, math functions, and data communications. Also covered are sequencers, analog I/O, the use of HMIs (Human Machine Interface), programming special function modules, process control, and I/O bus networks. In addition to ladder logic programming, sequential function chart and function block programming will be used to program a PLC.

MTR340 - Fluid Power

Topics covered will include: fluid properties; manometry laws; fluid statics; fluid dynamics; buoyancy and stability of submerged objects; continuity equations; Bernoulli's principle and modifications for pumps and turbines; viscosity; Reynolds's number; Darcy's equation; Moody's diagram; series pipeline system, and pressure and flow measuring techniques. All lecture topics will be complemented by appropriate lab experiments, and/or hydraulic, and pneumatic (fluid) system design circuits.

Course Descriptions

MTR370 - Properties and Strength of Materials

This course will provide survey of materials used in industry and their physical and chemical principles as they relate to structure, properties, corrosion, and engineering applications. An introductory level in stress analysis will include: shear and bending moment diagrams, Hook's Law as it relates to normal and shear stress and strain, stresses in bolted connections, shear stress and angle of twist in shafts, normal and shear stress in beams, and the concept of factor of safety. Additional topics covered will include bending stresses, shear stresses, combined stresses, Mohr circle, beam deflection, stress concentration factors and fluctuating loads (qualitative discussion only). All lecture topics will be complemented by appropriate lab experiments.

MTR400 - Machine Design Elements and Kinematics

This course covers the methods and theory of practical machine design with basic kinematics. The course will integrate the knowledge of statics, dynamics, strength of materials and engineering materials in the design process. The topics will include materials selection, load, stress, strain, deflection, fatigue and failure theories, design of shafts, keys, couplings, bearings, springs, screws, fasteners, and linkages. All design topics will be supplemented by appropriate case problems. The application of computer-aided design software to analyze design problems will be demonstrated. An introduction to finite element analysis software and application will be presented in this course.

MTR410 - Process Control

This course introduces students to the mathematical theory governing process control, and develops an understanding of the dynamic behavior of process control systems, including system stability. Simulation and practice are used to reinforce theory and apply it to practical industrial applications of varying complexity. Methods are presented for designing and tuning process controllers.

MTR420 - Computer-Integrated Manufacturing

This course will cover conventional and computer-integrated manufacturing processes. Students will develop an understanding of the manufacturing systems used to make products, the application and potential benefits of automation, and Computer-Integrated Manufacturing (CIM) concepts. This course provides the student with information on the way computer based systems support the operation of a manufacturing business. The course is designed to give students an integrated hands-on experience with tools and systems used in industry. Special attention is given to the roles of computer-aided design (CAD), computer-aided manufacturing (CAM), computer-aided process planning (CAPP), Manufacturing Resource Planning (MRP II), programmable logic controllers (PLCs), industrial robots, and supporting technologies including automated data capture as they apply to the modern manufacturing facility. Concepts will be reinforced using simulation, analog, and hardware.

MTR445 - Senior Project Proposal

A capstone course in the mechatronics engineering technology area where the students are required to propose a mechatronics engineering technology related project (problem statement and solution) they wish to pursue for completion later in their program of study. In this course, the students will research various design and/or manufacturing issues connected with mechatronics engineering technology. This course is intended to help students formulate a problem statement in the mechatronics engineering technology area for solution in a later class. An interdisciplinary approach with other engineering technology programs is highly recommended with the problem statement formulation.

MTR450 - Senior Project

This course is a continuation of MTR 445 where a proposal was submitted to address a mechatronics engineering project. Students will work in teams on "open-ended" design or manufacturing project proposed earlier. Students are given the opportunity in this course to realize original and creative solution to engineering problems. Students are encouraged to adopt an interdisciplinary approach to problem solving and may want to perform the project under direction of one or more faculty. Course requirement will include oral presentations on progress throughout the semester with a required final comprehensive technical report in the end.

MTR495 - Mechatronics Engineering Technology - Internship

Student interns are placed with an industrial, corporate or governmental organization that most nearly approximates their goals for mechatronics engineering technology employment. The intent of the internship is

Course Descriptions

to provide students with practical work experience solving actual problems in a dynamic environment, yielding enhanced job opportunities upon graduation. Students must follow the step-by-step procedure as outlined at the Cal U Intern site.

MUS-Music

MUS100 - Introduction to Music

The purpose of this course is to expose the student to the various historical, analytical and aesthetic elements of music, thereby providing an opportunity to broaden and enrich personal enjoyment. This exposure to music is made through the use of visual aids, audio recordings, radio, television, films and concerts.

MUS104 - Voice Class I

This course is designed for the student who wants to improve his/her unique singing (and speaking) voice as a musically expressive instrument. Understanding and practice of diaphragmatic breathing, breath management, vocal placement and deportment are emphasized.

MUS109 - Private Instruction

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS119 - Private Instruction: Piano I

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS129 - Private Instruction: Percussion I

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS149 - Private Instruction: Woodwinds I

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS159 - Private Instruction: Voice I

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS170 - Private Instruction: Guitar I

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS179 - Private Instruction: String I

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS186 - Clavinova Ensemble

The Clavinova Ensemble will provide a music experience for students so they can actively engage in the artistic, cultural and social benefits of music presentations. This is a performance based course requiring the development of intellectual and physical demonstrations. Active participation by all members is required since the quality of the course and the experiences gained are dependent on the progress of all individuals. The University Clavinova

Course Descriptions

Ensemble performs at concerts both on and off campus. Membership in this ensemble is open to any interested keyboard player. No audition is necessary, but a successful interview with and permission of the director is required. Repeatable up to 8 credits.

MUS187 - Guitar Ensemble

The Guitar Ensemble will provide a music experience for students so they can actively engage in the artistic, cultural and social benefits of music presentations. This is a performance based course requiring the development of intellectual and physical demonstrations. Active participation by all members is required since the quality of the course and the experiences gained are dependent on the progress of all individuals. The University Guitar Ensemble performs at concerts both on and off campus. Membership in this ensemble is open to any interested guitarist. No audition is necessary, but a successful with and permission by the director is required. This course is repeatable to a maximum of 8 credits.

MUS188 - String Ensemble

The String Ensemble will provide a music experience for students so they can actively engage in the artistic, cultural and social benefits of music presentations. This is a performance based course requiring the development of intellectual and physical demonstrations. Active participation by all members is required since the quality of the course and the experiences gained are dependent on the progress of all individuals. The University Clavinova Ensemble performs at concerts both on and off campus. Membership in this ensemble is open to any interested keyboard player. No audition is necessary, but a successful interview with and permission of the director is required. This course is repeatable to a maximum of 8 credits.

MUS191 - University Choir

The California University Choir provides an opportunity for students to sing a wide variety of music from both contemporary and traditional repertoire. The choir performs frequently on campus and throughout southwestern Pennsylvania. Choir membership is elective; an interview with the director is required. Repeatable up to 8 credits.

MUS192 - California Singers

A small (20-24 members) vocal ensemble, with membership determined by audition. The group performs entertainment music of all eras and many cultures; the style of performance is adapted to fit the music being performed, the audience and the season. Smaller groups within the ensemble, such as the A Capella Stella (all women a capella) and Vulcanize (all male acapella), may rehearse separately to prepare extra concert repertoire. Choreography, dialogue or mime is part of some performances. A student may participate with or without using credit. Repeatable up to a maximum of 8 credits.

MUS193 - University Gospel Choir

The California University Gospel Choir provides an opportunity for students to sing a wide variety of gospel music from both contemporary and traditional repertoire. The choir performs frequently on campus and at various venues throughout southwestern Pennsylvania. Choir membership is elective; an interview with the director is required. This course is repeatable to a maximum of 8 credits.

MUS196 - Jazz Ensemble

The Jazz Ensemble performs a wide variety of literature, from swing through fusion, funk, rock and ballad. Entrance is by an interview with the Jazz Ensemble director. Attendance is required at rehearsals and all public performances. Membership granted only by audition. Course is repeatable for up to 8 crs.

MUS197 - Pep Band

The Pep Band performs at select basketball games, other spring sporting events, and various campus activities where the need for a smaller ensemble exists. Membership in this ensemble is open to any interested instrumentalist or equipment technician. The audition is a required interview with the director.

MUS198 - Marching Band

The University Marching Band performs at football games and parades, and is the featured band at numerous marching band festivals. Membership in this ensemble is open to any interested instrumentalist or equipment technician. There is no audition, but an interview with the director is required. Membership is also open to any

Course Descriptions

student interested in auditioning for feature twirler or for a position on the auxiliary unit as a silk, dancer or rifle. Repeatable up to a maximum of 8 crs.

MUS199 - University Concert Band

The University Concert Band performs a wide variety of traditional and contemporary literature written for the idiom. The University Concert Band performs at convocations and concerts both on and off campus. Membership in this ensemble is open to any interested instrumentalist. No audition is necessary, but an interview with the director is required. Repeatable up to a maximum of 8 crs.

MUS209 - Private Instruction: Brass II

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS215 - Comprehensive Musicianship I

Provides a knowledge of the fundamentals of music and an ability to execute basic skills, including the study of notation, rhythms and meters, major and minor scales and key signatures, intervals and chords. Basic ear training and an introduction to piano keyboard is also included. Strongly recommended for elementary education students and any others interested in strengthening their knowledge of music fundamentals.

MUS219 - Private Instruction: Piano II

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS229 - Private Instruction: Percussion II

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS249 - Private Instruction: Woodwinds II

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS259 - Private Instruction: Voice II

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS270 - Private Instruction: Guitar II

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS275 - Music and Recording Technology I

Careers in the music technology industry are often multifaceted in nature. This requires one to be prepared to utilize a wide range of skills in the workplace, rather than relying on a single skill set. Music and Recording Technology I is a course that is designed to provide students with a wide range of creative skills, so that they may be confident as they forge their careers in this industry. Students are also introduced to digital music concepts that will be explored in greater depth in future courses. Specific topics that are to be covered include: photo editing, movie editing/production, MIDI recording/editing, audio recording/editing and music notation.

Course Descriptions

MUS279 - Private Instruction: String II

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS300 - Jazz: History, Form and Analysis

This course presents the historical background of jazz from 1900 to present; the important artists and ensembles and their contribution to the art form; and the analysis of jazz styles and forms via guided listening to recordings and live performances.

MUS304 - American Musical: History, Form and Analysis

This course presents the various historical, cultural and social elements of the American musical. This will be accomplished through the use of visual aids, audio recordings, television, video tapes, films and, whenever possible, attendance at live performances. Experts in the field will be utilized as guest lecturers.

MUS305 - African-American Gospel and Caribbean Music: History Form and Analysis

This course presents the historical background of gospel music, various styles of Caribbean popular and gospel music, and important artists and ensembles and their contributions realized through analysis of performance styles.

MUS306 - The Opera: History, Form and Analysis

This course will examine the origins, history and elements of opera and related dramatic works for voices with instruments. The analysis of various operas will reveal the relationship of plots and music to historical and national events taking place at the time of their composition. The entire class will attend a live opera performance if at all possible.

MUS307 - Special Music Project

This course revolves around a specific staged musical production. It encompasses all facets of this project from concept through delivery, including individual and ensemble performances, technical design and implementation, business and marketing.

MUS309 - Private Instruction: Brass III

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS310 - Music in Media

This class will study the role of music in various media as a reflection and determinant of social behavior as well as an artistic expression. From its earliest roots to today's top-selling film and TV scores, jingles, video games and other marketing media, the interaction of music with drama and narrative has served to elicit and motivate behavior and reaction among audiences. Sociological theories interact with popular theater, film and other media to act upon its audiences at a visceral level. This course aims to explore the evolution of and contemporary uses of the sociological implications of music as used in the media.

MUS313 - Rock and Roll: History, Form and Analysis

The course presents the various musical, historical, cultural, and social elements of Rock and Roll. The student will acquire from this course an aural and intellectual grasp of this facet of music. This will be accomplished through the use of lecture/discussion and individual projects as well as the use of audio and video methods to study the important artists and ensembles and their contributors to the art form.

MUS314 - The Music Industry: History, Form and Analysis

This course presents the historical background of the Music Industry in America. It will cover an overview of the music industry including song writing, publishing, live performance, the record industry, music merchandising and publishing, contracts and licenses, and career opportunities.

Course Descriptions

MUS315 - Comprehensive Musicianship II

This course is designed for the student who wishes to acquire comprehensive musicianship skills. The student will learn the sol-fa system of note reading and interval identification, using both stationary and moveable tonic. Through sight-singing and ear-training exercises, students will refine their aural skills. Students will learn to notate simple melodies dictated, as well as to sing, whistle, or hum melodies and chords represented by notation.

MUS316 - Comprehensive Musicianship III

This course is designed to provide students with knowledge of the fundamentals of music and an ability to execute basic skills, including the study of notation, rhythms and meters, major and minor scales and key signatures, intervals and chords. Ear training and piano keyboard skills are also included. Comprehensive Musicianship III is designed for music majors as well as advanced music minors.

MUS319 - Private Instruction: Piano III

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS329 - Private Instruction: Percussion III

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS349 - Private Instruction: Woodwinds III

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS359 - Private Instruction: Voice III

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS370 - Private Instruction: Guitar III

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS372 - Creative Arts for Elementary Education and Early Childhood

This course provides a survey of concepts, theories, and experiences for integrating Arts education into the elementary classroom curriculum. Students will have practical experiences in Art, Music, and Theatre along with Arts and Education theories. This course will enable future teachers to develop arts experiences and lesson plans for children.

MUS375 - Music and Recording Technology II

Music and Recording Technology II provides students with the foundational knowledge needed to begin a career in the recording arts. The primary focus of this course is to expose students to topics related to analog recording and engineering, including: acoustic and psycho-acoustic principles of sound, audio cables and connectors, connecting analog sound systems, operating principles of microphones, analog mixing console design and operation, analog recorders, signal routing and analog signal processing.

MUS379 - Private Instruction: String III

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

Course Descriptions

MUS390 - Music Production I

Music Production I provides students with the foundational knowledge needed to begin a career in the music technology industry. This course will incorporate topics such as audio and MIDI theory, recording technology basics, and also introduce students to various “industry standard” software titles. Prerequisite: MUS 380.

MUS409 - Private Instruction: Brass IV

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS416 - Comprehensive Musicianship IV

Comprehensive Musicianship IV is the final theory course of the rotation and builds on the foundations of Comprehensive Musicianship I, II and III. It is the study of advanced theory of music including chromatic harmony. Stylistic differences between 18th- 19th- and 20th-century practice will be studied. Sight-singing and ear-training work will be continued. Ongoing practice of basic keyboard skills will continue to reinforce knowledge of these elements of music literacy. Original composition will be encouraged.

MUS419 - Private Instruction: Piano IV

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS425 - Commercial Music Arranging

Commercial Musical Arranging will call upon the application of previously acquired skills and apply them to the task of creating imaginative and practical commercial arrangements in various musical styles.

MUS429 - Private Instruction: Percussion IV

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS449 - Private Instruction: Woodwinds IV

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS459 - Private Instruction: Voice IV

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS469 - Independent Study Music

Ind Study Music

MUS470 - Private Instruction: Guitar IV

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS475 - Music and Recording Technology III

Music Production III exposes students to the concepts and skills used in the field digital audio production. Students will accomplish this by exploring industry standard recording software titles as well as by completing various independent and group recording projects. At the conclusion of this course all students will take the Pro Tools User Certification Exam, which, if passed, will award them with Pro Tools User Certification.

Course Descriptions

MUS476 - Music and Recording Technology IV

Music and Recording Technology IV introduces students to the topics of digital audio editing and mixing by exposing them to various post-production techniques commonly used in modern music production. Students will experiment with these techniques on recording projects they themselves completed in previous Music and Recording Technology courses throughout the semester. In addition to being exposed to these topics, students are also taught the official Avid Pro Tools 110 curriculum which further emphasizes the use of advanced production techniques specific to the Pro Tools software environment. Midway through the course, all students will take the Pro Tools User Certification Exam, which, if passed, will award them with Pro Tools User Certification.

MUS477 - Music and Recording Technology V

Music and Recording Technology V is the capstone course in the music department's music technology course offerings. Throughout the semester, students will complete a comprehensive recording portfolio that consists of detailed written reports which outline all technical and artistic decisions, processes that were utilized to create five recording projects (four guided, one self-guided). While the completion of the portfolio is generally self-guided, each student's work will be reviewed and critiqued by the professor of record three times throughout the semester (week 5, week 10, week 15). Once completed, the portfolio can be used as a tool for internship applications, future employment applications, and the like. All class lectures in MUS 477 will consist of discussions centered around the following topics: advanced editing and production skills used in Pro Tools software, figureheads in the fields of audio engineering and music production, proper engineering etiquette, communicating well with clients, understanding the role technology serves in helping to achieve artistic goals.

MUS479 - Private Instruction: String IV

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS488 - Music Tech Internship

Music Department Internship offers the student the opportunity for practical, professional recording work and field experiences in various on and off-campus settings. Internship are to be jointly administered by an on-site supervisor and a Departmental Internship Supervisor.

MUS499 - Senior Project/Recital

The Senior Project / Recital serves as the final demonstration of the student's specialization within the Commercial Music Technology Program. Under the supervision of a faculty advisor, the student seeks to make a substantive contribution to the discipline. Considerable latitude in the form of the contribution is permitted. Empirical and historical research as well as creative presentations are all appropriate. Other faculty members of the Music Department are assigned to independently pass judgment on the student's scholastic effort. An oral defense, demonstration or display of the completed project / recital is required.

NMT-Nanonmanufacturing

NMT311 - Materials, Safety and Equipment Overview for Nanofabrication

This course provides an overview of basic nano-fabrication processing equipment and material chemistry and handling procedures. The focus is on clean room protocol, safety, environmental and health issues in equipment operation and materials handling. Topics to be covered will include clean room operation, safety and health issues; vacuum pump systems operation, turbo-molecular, cryo, diffusion, and dry mechanical pump systems; furnace operation, safety, environmental and health issues (covering horizontal and vertical tube furnaces, and rapid thermal annealing tools); chemical vapor deposition system operation, safety, environmental and health issues (covering gas delivery, corrosive and flammable gas storage, plumbing, regulators, and mass flow controllers); and vacuum deposition/etching system operation, safety, environmental and health issues (covering microwave and EF power supplies, tuners, heating and cooling units, vacuum gauges, valves, and process controllers). Specific materials handling issues will include DI water, solvents, cleaners, ion implantation sources, diffusion sources, photoresists, developers, metals, dielectrics, and toxic, flammable, corrosive and high purity gases as well as packaging materials.

Course Descriptions

NMT312 - Basic Nanofabrication Process

This course provides an overview of basic processing steps in nanofabrication (contact lithography, basic etching and deposition techniques). The majority of the course details a step-by-step description of the equipment and processes needed to fabricate devices and structures. Processing flow will be examined for structures such as microelectronic devices, including diode and the MOS capacitor. Students receive an in-depth introduction to basic lithography from wafer preparation to final inspection. Contamination issues in nanofabrication are discussed in detail. Students will learn the similarities and differences in both equipment and process flows for each configuration by undertaking hands-on processing.

NMT313 - Thin Films in Nanofabrication

This course covers advanced thin-film deposition and etching practices in nanofabrication. Advanced deposition techniques covered in the first part of the course include atmosphere, low-pressure and plasma-enhanced chemical vapor deposition, sputtering, thermal and electron beam evaporation. Materials studied include dielectrics (nitride, oxide), polysilicon (doped and undoped), and metals. The second part of the course focuses on advanced etching processes and techniques emphasizing reactive ion etching (single wafer, batch), high-density plasma systems (ECR, MERIE, ICP), ion beam etching, and wet chemical etching. Students will receive hands-on experience in depositing and etching dielectric, semiconductor and metallic materials using state-of-the-art tools and practicing many of the steps critical to nanofabrication of semiconductor devices, including microelectronics, MEMs devices, display structures and structures used in the biotechnology fields.

NMT314 - Advanced Lithography and Dielectrics for Nanofabrication

This course covers all aspects of advanced lithography from design and mask fabrication to pattern transfer and inspection. The course is divided into three major sections. The first section describes the advanced lithographic process from substrate preparation to exposure. Most of the emphasis is on understanding the nature and behavior of photoresist materials. The second section examines systems and techniques that define patterns. This section will introduce specialized optical masks and reticles, aligners, steppers and scanners. In addition, critical dimension (CD) control and profile control of photoresists will be investigated. The last section will discuss advanced optical lithographic techniques, such as phase shifting masks and illumination schemes as well as e-beam, e-ray, EUV and ion beam lithography. A section about engineering dielectrics is also discussed.

NMT315 - Materials Modification in Nanofabrication

This course will cover in detail the processing steps used in modifying material properties in nanofabrication. Evaluate thermal budget requirements using state-of-the-art tools. An intensive study of metals used in nanotechnology aids the student in understanding the various methods of metalization, such as CVD, evaporation and sputtering. Metal applications for interconnect technologies will be examined. Aluminum, refractory metals and copper deposition techniques and characterization will be discussed in detail along with topics such as diffusion barriers, contact resistance, electromigration, corrosion, stress effects and adhesion. Other modification technologies such as ion implantation, diffusion, and surface preparation and treatment are integrated as well. An intensive study of dielectric properties and materials, including dielectric constant engineering, mechanical, optical and electrical characteristics, poly, BSG, PSG, SOG and BPSG, gives the student further insight into advanced device fabrication. Material properties and basic device structures will be discussed for the optoelectronic market.

NMT316 - Characterization, Packaging, and Testing of Nanofabricated Structures

This course examines a variety of techniques and measurements essential for controlling device fabrication and final packaging. We will revisit concepts such as residual gas analysis introduced in NMT 211; optical emission spectroscopy (OES) and end point detection will be discussed as introduced in NMT 213. Characterization techniques, such as surface profilometry, advanced optical microscopy, optical thin film measurements, ellipsometry and resistivity/conductivity measurements, will be implemented on nanofabricated samples. Basic electrical measurements on device structures for yield analysis and process control will also be stressed. These will include breakdown measurements, junction testing, C-V and I-V tests, and simple transistor characterization. In addition, we will examine mechanical as well as electrical characteristics of nanostructures for biological/ biomedical applications. The students will perform DNA analysis by learning and performing the polymerase chain reaction for DNA replication. They will also study and manufacture microfluidic channels for biological analysis. An extensive overview of biology will be given with emphasis on biocompatible materials. The student will also learn about the manufacturing issues involved in subjects such as interconnects, isolation and final device assembly.

Course Descriptions

The importance of planarization techniques, such as deposition/etchback and chemical/mechanical polishing, will be emphasized. Lastly, packaging procedures, such as die separation, inspection bonding, sealing and final test for both conventional IC's and novel MEM and biomedical devices, will be examined.

NRN-Nursing CCAC

NRN999 - Community College of Allegheny County Nursing at Cal U

For Community College of Allegheny County Nursing Students.

NSE-National Student Exchange

NSE200 - National Student Exchange

National Student Exchange (NSE) is a domestic based consortium (U.S. and Canadian institutions) through which students study full-time toward their Cal U degree at a member school of their choice. Students must apply for placement and receive approval for courses to be taken while on exchange. Students may exchange for up to one full academic year. NSE 200 denotes a student's first term of participation. A student is registered for 12 credits if paying tuition/fees to Cal U (Plan B) or 0 credits if paying tuition to the host school (Plan A).

NSE300 - National Student Exchange

National Student Exchange (NSE) is a domestic based consortium (U.S. and Canadian institutions) through which students study full-time toward their Cal U degree at a member school of their choice. Students must apply for placement and receive approval for courses to be taken while on exchange. Students may exchange for up to one full academic year. NSE 300 denotes a student's second term of participation. A student is registered for 12 credits if paying tuition/fees to Cal U (Plan B) or 0 credits if paying tuition to the host school (Plan A).

NSE400 - National Student Exchange

National Student Exchange (NSE) is a domestic based (U.S. and Canadian institutions) consortium through which students study full-time toward their Cal U degree at a member school of their choice. Students must apply for placement and receive approval for courses to be taken while on exchange. Students may exchange for up to one full academic year. NSE 400 denotes a student's third term of participation. A student is registered for 12 credits if paying tuition/fees to Cal U (Plan B) or 0 credits if paying tuition to the host school (Plan A).

NUR-Nursing

NUR228 - Nutrition for Nurses

This course is for nursing students anticipating licensure as a registered nurse. The course focuses on the basics of healthy nutrition through the lifespan with selected cultural variation nutritional therapy, diet and physical activity, nutrition in selected diseases and medical conditions, and food safety.

NUR330 - Philosophy of Professional Nursing

This course focuses on the re-socialization of the RN student from a technical to a full professional nursing role through an overview/synthesis of the conceptual foundations of professional nursing practice. Facilitation of this change will be through incorporation of principles and concepts of self-awareness and self-directed learning throughout discussions of professional self-concept development, theoretical bases of professional nursing, and delivery of professional nursing as related to the various roles of the professional nurse.

NUR350 - Health Assessment

This course focuses on the opportunity for the student to develop and practice skills in the use of data-gathering methods and techniques for the health assessment of individuals throughout the developmental life span. Emphasis is on history taking and physical assessment of adults using a systems approach, focusing on variations across cultures and variations in findings at different stages of adulthood.

NUR361 - Nursing Research

This course is designed to increase the professional nurse's knowledge and use of principles, methods, and procedures related to the research process. Emphasis is on reading, interpreting, and evaluating research findings while considering ethical and practical aspects of conducting research as the basis for evidence-based nursing practice.

Course Descriptions

NUR370 - Methods of Nursing Research

This course focuses on basic concepts, principles, methods and procedures related to the research process. Opportunity will be provided for the development of critical thinking and decision making skills needed by the professional nurse to analyze and evaluate research findings for application to practice.

NUR375 - Leadership and Change in Nursing

This course focuses on analysis and synthesis of concepts in nursing and related fields regarding planned change and group development through study and experience in group process and leadership roles. Selected clinical experiences provide for application of theory in critical analysis of situations and decision-making within the practice of nursing to meet emerging health needs of consumers. *This course includes a clinical practicum experience.

NUR410 - Research Utilization and Evidence-Based Practice in Nursing

This course focuses on the ability to differentiate between conducting research, research utilization, and evidence-based practice. Through participation in designated research activities, students will learn to synthesize evidence-based knowledge into applicable protocols of care and to utilize research on an organizational level.

NUR420 - Nursing Informatics

This course introduces the learner to the history and current state of health informatics, basic informatics concepts, health information management systems and the use of technology to improve healthcare within the framework of interprofessional communication. The course will provide the learner with the knowledge and skills needed to competently practice and provide patient care through the use of current and emerging healthcare technology. Content includes legal and ethical considerations associated with nursing informatics, as well as the exploration of patient care technologies to support clinical decisions, provide safe, quality patient care, document nurse sensitive indicators and the role of nursing informatics in communication strategies.

NUR430 - Evidence-based Practice in Nursing

This course is designed to enable professional nurses with the knowledge and skills to examine clinical/professional nursing problems with an evidence-based practice approach for the improvement in health and practice outcomes. Emphasis is on evidence-based practice steps and skills required to appraise different types of knowledge used in the process to determine strategies aimed to improve patient and/or professional nursing outcomes. Students will select a clinical nursing topic and critically appraise evidence-based practice knowledge. The results of their appraisal will be used by students to propose an evidence-based practice pilot plan for an improvement in clinical outcomes of their chosen topic.

NUR450 - Trends and Issues in Nursing

This course focuses on the analysis of professional nursing and bioethical issues within a systems framework. Implications for professional nursing practice in the health care delivery system are emphasized.

NUR465 - Nursing Assessment and Health Promotion for Individuals and Families

This course includes a clinical practicum experience and is designed to enable baccalaureate nursing students to deliver patient and family centered care as a member of an inter-professional healthcare team. Emphasis will be on family and individual health-wellness-illness, history taking and assessment using a systems approach, with consideration of multicultural and multi-identity perspectives. A variety of nursing and family theories will provide a framework for guiding individual and family assessment and intervention, and the significance that family nursing is conceptually and empirically distinct from nursing of individuals. Students will use Evidence Based Practice to guide their development of an inter-professional plan of care for the individual and family unit.

NUR470 - Family Health Nursing

This course focuses on the theory and practice of family nursing, a domain within professional nursing which is rapidly becoming an integral part of generalist practice. Emphasis will be on the recognition that family nursing is conceptually and empirically distinct from nursing of individuals. A variety of nursing and family theories will provide the basis for serving families as units as well as family subsystems and individual family members. Family assessment, family nursing diagnoses, family nursing roles and goals from health promotion through

Course Descriptions

rehabilitation, theoretical approaches which guide family assessment and intervention, and general family nursing interventions will be addressed. *This course includes a clinical practicum experience.

NUR475 - Community Health Nursing

This course includes a clinical practicum experience which focuses on the synthesis of wellness and population-based health concepts to promote, maintain, and restore health to communities/populations. Students will explore the various roles of the community health nurse. Theories from nursing and the public health sciences will be used to identify the needs of populations, including vulnerable populations, at risk for illness, disability or premature death. The course addresses the epidemiological processes and demography used to identify populations at-risk for the development of preventable illnesses. Emphasis will be placed on health determinants, health behavior theories, health disparity, social policy, social justice, legislative/political issues, human genetics, impact of globalization, environmental health, as well as, chronic disease prevention to impact the health of a population. Students will have the opportunity to participate in a community assessment, to identify health and safety risks within the community/population. Students will be given the opportunity to propose specific strategies to educate people/populations about health and safety issues and to increase access to healthcare.

NUR485 - Professional Development in Nursing

Examines professional growth from entry into the BSN program to graduation. This capstone course culminates in completion of a professional resume and self-assessment, which documents achievement of program objectives and defines individual career goals.

NURPOR - Nursing Portfolio

Transfer Nursing Credits.

PGM-Professional Golf Mgt

PGM100 - Introduction to PGM

This course provides students with an overview of the PGA of America and the Cal U/PGM educational program. Students will be introduced to the PGA's qualifying level and the Cal U/PGM curriculum, which will enable them to become more informed about the educational requirements to become future PGA members and what is expected in Cal U/PGM Level I. In addition, students will be introduced to the working intricacies of the PGA of America.

PGM125 - Professional Golf Management Internship I

This course is one of the professional golf management student internship experiences. Students will secure internship sites based on their unique educational needs and experiences. Internship students will work directly with PGA golf professionals in one or more work settings.

PGM150 - Teaching of Golf I

This course provides the golf student with the theory and techniques of teaching the golf swing. Students will utilize technology to evaluate the golf swing and develop and deliver golf lesson plans. The course utilizes the classrooms in Hamer Hall as well as California University's indoor practice facility in Gallagher Hall and outdoor golf practices at Cedarbrook Golf Course.

PGM200 - Intermediate Topics in PGM

This course will provide students with a detailed examination of the PGA of America and the Cal U/PGM educational program. Students will be introduced to PGM Level II, which will enable them to become more informed about the educational requirements to be completed in preparation for the Cal U/PGM Level II checkpoint.

PGM210 - Golf Shop Management

This course will provide the student with the basics of the operations and management of the golf shop. Topics include methods of merchandising, scheduling of play, implementing course regulations, development and management of the golf operations team, time management, and personnel management.

Course Descriptions

PGM250 - Golf Operations Management

This course provides the student with the content needed for the PGA's PGM Program Level II checkpoint. Golf Business Operations and Customer Relations are examined in their entirety within this course and focus on key concepts relating to: interaction strategies and interpersonal skills within a business context, moments of truth, policy and procedure development, yield management evaluation, supervising and delegation of staff, and techniques for motivating both customers and employees.

PGM260 - Golf Performance Coaching and Technology

This course teaches student how to use golf swing technology to collect and analyze data for the purpose of improving a golfers' ability. Enhancing student proficiency in using launch monitors, force pressure plates, 2D video, and 3D analysis software are key components of the course. Students will also learn how to use the acquired data to develop golf lesson programs and a physical exercise routine designed to improve overall player performance. Various communication platforms will be used to help students effectively deliver golf instruction in-person and online.

PGM300 - Advanced Topics in PGM

This course provides the student with the content needed for the PGM Level III checkpoint. Inventory, merchandising, food and beverage, and PGA membership are some of the topics covered.

PGM310 - Turfgrass Management

The course will provide the student with an overview and introduction to not only the science of turfgrass, but also the role turf management plays in the golf operation. Topics include grass selection, mowing, fertilization, irrigation, supplementary cultural practices and the management of botanical pests.

PGM325 - Professional Golf Management Internship III

This course is one of the professional golf management student internship experiences. Students will secure internship sites based on their unique educational needs and experiences. Internship students will work directly with PGA golf professionals in one or more work settings.

PGM350 - Food and Beverage Management

This course provides the student with an overview of the principles and techniques involved in establishing and maintaining a successful, profitable food and beverage operation at a golf facility. Some of the topics the course will examine include: (1) menu development, (2) menu descriptive copy, (3) principles and techniques of restaurant design, (4) staffing and training, (5) cost control measures, (6) beverage control and legal aspects of beverage control, (7) kitchen equipment and safety, (8) sanitation, (9) improving and enhancing customer service, and (10) the legal aspects of food and beverage operations.

PGM405 - Expanded Golf Operations

The course enables the PGM student to evaluate, design, implement and enhance the operations of a golf facility. The student will be introduced to the various elements of developing or enhancing existing golf facilities.

PGM410 - Teaching of Golf II

This course is designed to improve the golf instructional skills of golf professionals, especially those desiring to be quality coaches. Included in the course are such topics as teaching, coaching, training techniques, motivational strategies and the needs of special populations. Methods of recording student progress, management techniques for a successful instructional program, and the use of audio-visual and other electronic teaching tools are examined.

PGM415 - Trends and Issues in the Golf Industry

An analysis of professional golf industry trends as well as "grow the game" initiatives from historical, contemporary, and futuristic viewpoints with implications for global expansion and overall participation.

Course Descriptions

PHI-Philosophy

PHI100 - Perspectives in Philosophy

This course is an introduction to such major philosophical issues as the nature of knowledge, reality, religion and morals.

PHI115 - Logic and Language

This course is an introduction to basic principles and techniques for distinguishing correct from incorrect reasoning.

PHI200 - World Religions

This course studies the seven world religions, including their origins and doctrines.

PHI220 - Ethics

An examination of selected ethical systems and their philosophical foundations, this course places special emphasis on understanding such basic moral concepts as good, right and duty.

PHI247 - Science, Technology and Society

This course examines the philosophical issues that stem from the impact that evolving science and technology have on people's beliefs, values and behavior.

PHI270 - Philosophy of Marxism

This examination of the basic texts of Marx and Engels and the subsequent development of Marxist philosophy attempts a critical evaluation in light of contemporary political philosophy.

PHI305 - Medieval Philosophy

Beginning with neo-Platonism, this course proceeds to study such thinkers as Augustine, Eriugena, Anselm, Thomas Aquinas and William of Ockham.

PHI308 - Bioethics

This course examines ethical controversies arising from the study of biology and the development and application of biotechnology, and considers applications of theoretical ethics to those controversies.

PHI310 - 19th-Century Philosophy

A survey of the development of German idealism after Kant and the voluntaristic reactions to it, this course also considers British Empiricism and French Positivism.

PHI311 - Formal Logic I

An introduction to the syntax and semantics of truth-functional and first-order languages, this course also covers proof theories for such languages.

PHI325 - Philosophy of Science

A study of the methods, concepts and presuppositions of scientific inquiry, this course attempts to understand the historical development of science in the context of various theories of knowledge and reality.

PHI326 - Social and Political Philosophy

An examination of selected social or political systems and their philosophical foundations, this course places special emphasis on such basic concepts as natural rights, equality, justice, individual freedom and political authority.

PHI335 - Aesthetic Theory

This course examines the nature and basis of criticism in the fine arts and literature, the nature and function of art, aesthetic standards, the concept of beauty, artistic creativity, and the meaning of truth in literature and the arts.

Course Descriptions

PHI336 - Philosophy of Film

An introduction to the philosophy of film, an aspect of the philosophy of art. Of particular interest is the relationship between film and philosophy.

PHI355 - Philosophy of Religion

This course considers the nature of religion, speculations and arguments about the nature and existence of God, the possibility of religious knowledge, claims to religious experience and revelation, the problem of evil, the belief in immortality, and the meaning of religious language.

PHI370 - The Philosophy of Law

A survey of the debate about the concept of law in the history of philosophy, this course examines the recent revival of the debate in greater detail. Specific topics include the nature of legal reasoning, the legal enforcement of morality, the problem of responsibility and the concept of justice.

PHI405 - Epistemology: The Nature of Knowledge, Evidence, and Truth

An examination of selected theories of knowledge, this course includes contemporary discussions.

PHI415 - Philosophy of Mind

An examination of important stages in the philosophical development of the notion of mind, this course discusses such contemporary problems as the relation of mind and body and the nature of consciousness, and analyzes such notions as will, emotion, action and memory.

PHI431 - Analytic Philosophy

An examination of selected theories of knowledge, this course includes contemporary discussions.

PHI459 - Tutorial in Philosophy

A tutorial in philosophy offers students (either individually or in small groups) the opportunity to do research on a specific philosophical topic of their choosing, and to regularly present their ongoing work to a professor for criticism and direction. The topic must be approved by the professor directing the tutorial.

PHI470 - Special Problems in Philosophy

This course is a discussion of some special problem or issue in philosophy.

PHI490 - Seminar in Philosophy

This course is a discussion of either one prominent philosopher or a movement in philosophy.

PHS-Physical Science

PHS120 - Basic Physical Science with Laboratory

Basic Physical Science (L) is a laboratory-oriented course in physical science for non-majors. Laboratory activities/experiments are assigned, providing a hands-on introduction to experimental methods of scientific investigation. Each activity provides opportunities for the student to discover the practical knowledge necessary for a well-rounded understanding of physical science.

PHS137 - Introduction to Environmental Chemistry

This course provides knowledge of basic chemical principles and applies that knowledge to a consideration of current environmental issues such as ozone depletion, global warming, air and water pollution, and the hazards of radioactivity. It will provide the student with an opportunity to begin to appreciate the chemical complexity of environmental issues.

PHS145 - Astronomy

A presentation of methods of investigation and results of astronomical discoveries. Survey of facts and important astronomical theories. Solar system, what is a star, multiple star systems, variable stars and stellar evolution will be discussed. Instruments of the astronomer, such as telescopes and spectroscopes, will be used.

Course Descriptions

PHY-Physics

PHY101 - College Physics I

Introductory physics. Vectors, mechanics, energy, momentum, conservation principles and oscillatory motion.

PHY121 - General Physics I

An introductory non calculus course dealing with mechanics and heat.

PHY122 - General Physics II

An introductory non-calculus course addressing the areas of sound, light, and electricity and magnetism.

PHY202 - College Physics II

A continuation of College Physics I. Heat and thermodynamics, hydrostatics, waves and acoustics, electricity, and an introduction to magnetism and ac circuits.

PHY203 - College Physics III

A continuation of College Physics II. Magnetism, AC circuits, Maxwell's equation and electromagnetic waves, light, atomic and nuclear physics, and special relativity. Some review of material from College Physics I and II.

PHY301 - Intermediate Electricity and Magnetism

Electric and magnetic fields and energy, the effects of matter on them, circuits, Maxwell's equations, electromagnetic waves. Vector calculus and differential equations used.

PHY321 - Intermediate Mechanics

Vector calculus, Newtonian kinematics and dynamics of many particle systems, with emphasis on integral relations, motion in a central potential, scattering theory, systems with constraints, variational principles in mechanics, small oscillations, wave equations and special relativity.

PHY331 - Modern Physics

Relativistic kinematics and dynamics, particle and wave aspects of radiation and particles, the structure of the hydrogen atom, and many-electron atoms. Introduction to quantum mechanics.

PHY341 - Mathematical Methods in Physics I

Vector calculus, complex variable analysis and conformal mapping, Fourier series and integrals, ordinary differential equations, partial differential equations, general series representations of functions and special functions.

PHY375 - Radiation and Optics

A review of Maxwell equations and wave analysis. Fraunhofer diffraction, radiation from atoms, polychromatic waves magneto-optic and electro optic effects, and introduction of laser and maser theory.

PHY376 - Statistical and Thermal Physics

Statistical methods, statistical thermodynamics, macroscopic thermodynamics and its relation to statistical mechanics, application of statistical methods to gases and solids, phase equilibrium, and quantum statistics.

PHY405 - Quantum Mechanics

Formulation and application of the fundamental principles of quantum theory which evolved in the twentieth century. Planck's quantum postulates, DeBroglie hypothesis and wave particle duality. Momentum space and the Fourier transform. Formulation of the Schrodinger equation and its application to the treatment of particles in potential fields.

PHY451 - Advanced Laboratory I

Experiments selected from topics discussed in Modern Physics. The lecture time is used to discuss error analysis, curve fitting and points of interest to the laboratory reports.

Course Descriptions

PHY455 - Solid State Physics

An introduction to the physics of solid materials, including crystalline lattice structures, band theory, conductors, semiconductors and superconductors. Recent developments in nanoscience as related to solid state physics will also be emphasized.

PHY462 - Fundamentals of Nuclear and Particle Physics

An upper-division course that focuses on the fundamentals of nuclear and particle physics including nuclear models, scattering, potentials, decays, particle accelerators and detectors, elementary particles and their interactions, mathematical symmetries and associated conservation laws, and a summary of the Standard Model. Some familiarity with quantum mechanics and multivariate calculus are assumed.

PHY475 - Astrophysics

Topics concerning stellar evolution including observations, physical states of the stellar interior, evolutionary phases and initial and final stellar structure, and cosmology.

PHY495 - Physics Seminar

An introduction to literature, history, teaching and research methods in the physical sciences.

POS-Political Science

POS100 - Introduction to Political Science

This course is designed to introduce students to key ideas, institutions, processes and actors in the political world. It is intended to be a general, not detailed, examination, and attempts to encourage understanding, reflection and critical thinking.

POS102 - American Government for Elementary Education Majors

American Government is a course for elementary education majors, and provides an introduction to the major institutions and processes in the American political system.

POS105 - American Politics

This is an introductory course in American government focusing on the major institutions and processes in the American political system. Topics discussed in the course include separation of powers, checks and balances, civil liberties, political parties, the Congress, the president, the Supreme Court, federalism, and policy-making processes.

POS210 - Politics of Western Europe

A comparative analysis of the institutions, processes and policies of the nations of Great Britain, France and Germany, and how these nations relate to the United States system.

POS300 - Public Policy

The course covers theoretical and applied components of public policy and analysis, including an examination of decision making concepts and models and their application to various policy areas, policy development, implementation, and adjustment, the political context, and report writing.

POS301 - Research Methods in Political Science

A scope and methods course with an emphasis on research methods, research design, writing techniques, and statistics used in political science.

POS303 - The Mass Media and American Politics

The interaction of politics and the mass media within American society is covered. Topics include media effects on political socialization, techniques of opinion manipulation, propaganda, press responsibility, public opinion polling and government control of the media. Special attention is devoted to the use of television as an instrument of communication.

Course Descriptions

POS306 - Congress

In this intensive examination of the legislative problems and procedures of Congress, students are introduced to such topics as the representational functions of Congress, the role of parties and leaders in Congress, the importance of the committee system, and the forces affecting congressional decision making.

POS307 - Revolution

A comparative study of the phenomenon of revolution, encompassing the causes, events and principal actors in those periods that culminate in the outbreak of violent political change.

POS308 - Municipal Government

The course is designed to provide students with a basic understanding of the organizational forms of municipal governments, the process of decision making and implementation, and proposed solutions to problems of urban society.

POS310 - The Presidency

Intensive study of the American presidency, focusing on personality, organization of the office, use and misuse of power, and policy making.

POS311 - Cyberpolitics

An examination of the impact of the Internet on American democratic institutions and processes, focusing on campaigns and elections, civil liberties, law enforcement, national security, and public policies, including cyber democracy, cyber terrorism, law enforcement issues of wire tapping and encryption, education, taxes, entitlements, business, and medicine.

POS312 - Politics of the World Economy

This course will be concerned with understanding the politics of the world economy. The emphasis will be on the contemporary structure of the international political economy, how it emerged, and what actions and policy responses – by international institutions, governments, multinational corporations and labor unions – continue to shape its order. Students will also gain knowledge of how their lives are impacted by the world economy and what future opportunity exists there.

POS314 - Constitutional Law: Governmental Powers

A study of the major provisions of the American Constitution and the growth of American constitutional law based on analysis and discussion of leading judicial decisions.

POS315 - Constitutional Law: Civil Liberties and Civil Rights

A study of the development and meaning of the rights and liberties guaranteed to persons under the Constitution of the United States. Special emphasis is placed on the antecedents of and the adoption of the Bill of Rights and a description of the court structure through which the meaning of civil liberties is determined in specific situations.

POS316 - Judicial Policy and Politics

Intensive study of the judicial process in the United States and the relationship between the judicial system and the larger American social system.

POS317 - Nonquantitative Techniques for Policy Planning

This is a course on non-quantitative techniques used in decision making: case studies, field research (e.g., theoretical sampling and semi-structured interviews), nominal group technique, idea writing, future imaging, timelines, Delphi questionnaires and focus groups.

POS318 - Political Parties and Pressure Groups

This course examines the roles political parties and pressure groups play in electoral politics and policy making.

POS319 - Campaign Management

A course on political campaigns and elections that combines theory and practice. The emphasis is placed on campaign strategy.

Course Descriptions

POS320 - United States Foreign Policy

Policy objectives, patterns of decision making and U.S. foreign policy actions. The roles of interest groups, public opinion, Congress and other external influences in U.S. foreign policy are also examined.

POS322 - Politics of the Middle East

This course will consider the nature and types of politics found throughout the Middle East. Consideration will begin with the diversity of peoples in this area, both in terms of religion and ethnicity, and how these were shaped by the Ottoman and European imperial systems of government. This will be followed by an examination of how contemporary Arab, Israeli, Turkish and Iranian governments have dealt with this legacy even as they respond to the challenges of the modern world.

POS325 - Politics of Asia

A comparative analysis of the institutions, processes and policies of China, Japan, and India and how these nations relate to the system in the United States.

POS326 - Politics of Africa

A comparative analysis of the institutions, processes and politics of selected African nations and their place in the international arena.

POS327 - Contemporary Political Thought

A general survey of the major political ideas and representative thinkers of the 19th and 20th centuries, drawing connections between these ideas and contemporary developments in philosophy, religion, psychology, sociology, and the natural sciences.

POS329 - Internship in Political Science

Application of political science methodologies to various professional environments under faculty supervision.

POS330 - American Political Ideas

An advanced course in political theory: the major political ideas and controversies that are associated with the development of American political thought.

POS340 - The Politics of Empires

This course will explore the political ideas, traditions and institutions associated with the idea of empires and imperial organization in international order. It will also focus on how empires not only organize foreign policy and foreign affairs, but equally the social and economic lives and cultures of their citizens and subjects. The course will begin with an overview of political science thinking on the values and ethics associated with the idea of empire, and how much of this political thought views empire as the key to peace, progress and prosperity. The course then considers the evolution of the imperial idea throughout political history to its current manifestations in our own age. The classical expression of empire is will first be considered in the examination of the Egyptian, Greek and Roman empires. The course then subsequently will consider the Asian practice of empire in both its Islamic forms (Ottoman, Safavid and Mughal) and Chinese forms. Following this, the course will turn to a treatment of the great trading and colonization empires (British, French, Dutch) and their influence in determining the modern economic and Western international political order. The age of ideological empires will be the fourth section of the course and it will explore not only the Nazi and Communist empires, but those patterns of world and imperial international order influenced by the French Revolution and the liberal internationalism of the United States of America. The course will conclude with a consideration of imperial order and international organization in the current era of globalization and increasing economic integration. In studying the aforementioned, the student will not only meet the general objectives, but also the following political science objectives.

POS344 - Intergovernmental Relations

The course is an examination of the legal, political, fiscal, and administrative dimensions of intergovernmental relations in the United States.

Course Descriptions

POS346 - Introduction to International Relations

This course considers the nature of world politics and how it has evolved. Emphasis will be on the nature of power in international relations, and why this often leads to conflict, from war to economic competition. Following this, the student will consider what measures and institutions have been created to deal with such issues, from diplomacy to international organizations like the United Nations to the emergence of international human rights law and citizen advocacy groups. There will also be consideration of careers available in international relations, and the students will be exposed to this through playing the role of a diplomat in an international relations simulation or game.

POS347 - Development of Political Thought: Classical and Medieval

The basic ideas, values, and method of the profound political thinkers and philosophers from the Axial Age, including Zoroastrianism, Judaism, Daoism, Jainism, Buddhism, Confucianism, Platonism, Legalism, and Aristotelianism.

POS348 - Political Thought: Medieval and Modern

This course will explore and develop an understanding of the nature and content of political thought from the medieval period to the modern world. The student will also develop an understanding of how political thought shapes government and political institutions and through them, the larger world. Among the thinkers considered will be Dante, Machiavelli, More, Luther, Calvin, Jefferson and Burke. The course will conclude with an examination of how the modern political world was, in large part, a creation of these thinkers and their institutions from modern representative government to trading empires to emergent international organizations.

POS355 - Public Administration

Topics covered in the course include both theoretical and applied components, with an emphasis on public bureaucracies, administrative leadership, intergovernmental relations, organized interests, and making rules and implementing government decisions.

POS360 - Politics, Palaces and Art in Islam

This course will explore the political ideas and the political systems of the Islamic world. It will focus upon not only their politics and governing structures, but the public art and architectural spaces, motifs and practices that are associated with rulers, or the expression of power in Islam. Subject matter will include political power, its expression in public architecture and its celebration in public art. The course will begin with the government and desert palaces of the Umayyads and will include the great palaces of Cordoba and Granada in Moorish Spain. Subsequent topics will then be the Abbasid court of Baghdad and the Central Asian khanates of Samarkand, Bokhara and Herat, followed by the tent cultures and palaces of the Mongols and Timurids. Then the course will consider the royal palace cities and political empire of the Fatimids in Egypt. Following this, the course will examine the empires and the built wonders of Tuqluq India, Safavid Persia, Ottoman Turkey and Mughal India. The concluding part of the course will consider how these political – and their expression in architecture and art – continue to influence the public mind and aspirations of the contemporary Islamic world. In studying this phenomenon, the student will not only meet the above objectives, but also the following political science objectives.

POS365 - Public Sector Organizational Theory and Behavior

The course centers on organizational theory, behavior, and performance in public and nonprofit organizations, including the organizational environment, decision making procedures and choices, inter-agency and intra-agency teamwork, and organizational politics.

POS370 - Public Sector Personnel Management

The course centers on public personnel management and administrative theories and practices, public sector employment law, diversity recruitment, and labor relations.

POS375 - Public and Nonprofit Strategic Planning

The course focuses on strategic planning as it relates to public and nonprofit organizations, including theories and methodologies, organizational dynamics, and frameworks.

Course Descriptions

POS379 - Special Topics in Political Science

Topical study of a political problem, policy issue, or discipline controversy determined by departmental faculty.

POS415 - Public Opinion and Political Behavior

A course on the fundamentals of public opinion research, including measurement methods. The study of political behavior as it relates to political participation and public policy.

PSE-Professional Studies in Ed

PSE200 - Introduction to Professional Studies in Education

This introductory course will provide students with an opportunity to explore the various career options available outside and within the education field. Students will identify their future professional goals and determine how to apply the knowledge, skills, and dispositions they will learn in education courses to a variety of fields.

PSY-Psychology

PSY100 - General Psychology

This course is an introduction to the scientific study of behavior and mental processes. It explores topics such as the biological basis of behavior, research methods, learning, emotions, cognitive processes, perception, personality, abnormal behavior and the treatment of mental disorders. Research as well as practical application is stressed.

PSY150 - Lifespan Developmental Psychology

Students completing this course will have an awareness of the biological, cognitive and social factors that impact physical, mental, social, and emotional development throughout the life-span. The course will present the research methodology common to this field of psychology as well as the major theories and their application to stages of life.

PSY205 - Childhood: Developmental Psychology

The purpose of this course is to provide students with meaningful scientific information in understanding infants and children and in providing practical principles for working with children. Theories and methods used to understand physical, emotional, cognitive and social development from conception to age nine will be discussed.

PSY207 - Adulthood: Developmental Psychology

This course discusses factors of a biological and environmental nature that impact a person's physical, mental, social, and emotional development throughout the life-span with an emphasis on early, middle and late adulthood, death and dying.

PSY208 - Educational Psychology

This course emphasizes the application of psychological principles to the classroom. Topics discussed include human development, learning, individual differences, assessment, education objectives, motivation and behavior management.

PSY209 - Industrial Psychology

This course is a comprehensive introduction to the field of industrial psychology. It demonstrates the application of psychological principles of behavior to work conditions. An examination of business and industrial activities and the role a psychologist plays in such activities. A strong emphasis on the practical and everyday problems that confront people in the world of work.

PSY211 - Social Psychology

The interaction between the individual and social groups within a cultural context: the individual in a social role, social groups, and social institutions. The course will cover such topics as aggression, interpersonal attraction, group behavior, persuasion, and helping behavior.

Course Descriptions

PSY216 - Child Psychology: Birth to Age 4

The purpose of this course is to provide students with meaningful scientific information in understanding infants and children and in providing practical principles for working with children. Special attention is given to the study of the relationship of the physical, emotional, cognitive, and social growth from conception to age 4.

PSY217 - Child Psychology 5 to 9

The purpose of this course is to acquaint students with the basic principles and major issues of children age 5 to 9. Theories and methods used to understand physical, emotional, cognitive and social development will be discussed.

PSY220 - Descriptive Statistics in Psychology

This course presents the fundamentals of hypothesis testing. It covers computation and interpretation of descriptive statistics (measures of central tendency, variability, correlation and regression) as well as an introduction to typical statistical procedures utilized in the social sciences, particularly psychology.

PSY222 - Psychology of Stress Management

Sources of stress, effects of stress, manifestations of stress and methods of coping with stress will be examined, with the focus being on practical application.

PSY302 - Evolutionary Psychology

This course will examine the mechanisms of the human mind through the lens of evolutionary psychology. We begin with a brief historical review of key theories in psychology and evolutionary biology. We then proceed to substantive topics, including problems of survival, long-term and short-term mating, sexuality, parenting, kinship, cooperation, aggression and warfare, conflict between the sexes, status, prestige, and dominance hierarchies. The course concludes by proposing a unified field that integrates the different branches of psychology. All course topics will be approached from both theory-driven and applied perspectives.

PSY303 - Cross-Cultural Psychology

Cross-cultural research in psychology has demonstrated that many psychological processes once assumed to be universal (i.e., shared by members of all cultures) are actually quite culture-bound. Although a few topics on psychology have a relatively long history of cross-cultural investigation, psychologists are becoming more aware that all of the topics on psychology must be examined from a broad cultural perspective. In this course we will focus on topics in personality, social, developmental and health psychology, examining them in light of various cultural backgrounds and orientations.

PSY305 - Psychology of Personality

This course explores the essential factors that result in creating individual differences in human behavior and mental processes. Current theories and classical theories are studied to increase understanding of the development and structure of personality. The characteristics of the normal and the maladjusted personality are identified, with special concern for developmental patterns.

PSY306 - Cognitive Psychology

This course examines human cognition, sometimes called higher mental processes. It explores how humans acquire, store, transform, and use knowledge, with topics including perception, memory, language, problem solving, decision making, life-span development of cognition and intelligence. The contributions of neuroscience to the understanding of cognition are stressed.

PSY310 - Mental Health/Psychology of Adjustment

Problems of personality and mechanisms of adjustment, including a study of the origin and resolution of conflicts, and the role of emotion in the patterns of behavior.

PSY311 - Psychology of Gender Roles

This course explores the development of gender roles throughout the life span, factors that sustain these roles, and how gender roles influence the daily lives of men and women. Aspects of life experiences where gender plays

Course Descriptions

an important role—including sexuality, education, occupation/career, physical and mental health, and the media—are explored. Throughout the course, both multicultural and cross-cultural perspectives are used.

PSY320 - Black Psychology

This course presents the psychological principles shaping the personality of Blacks. The course includes a critique of “traditional” theories, statistics, racial myths, discriminatory thinking and behavior. Analysis of attitudes and behaviors which develop in prejudicial socio-economic, educational and political systems and ways to counteract them are reviewed. This course emphasizes proactive Black leadership and the life-style of individual Black people and their community.

PSY331 - Inferential Statistics in Psychology

This course presents the fundamentals of parametric and nonparametric inferential statistical procedures, including t-tests; analysis of variance, correlation and regression; and chi-square. It covers the testing of the assumptions of these procedures, as well as their computation and interpretation with regard to hypothesis testing.

PSY335 - Psychology of Learning

This course is designed to promote understanding of learning theory as applied to the classroom and other learning environments. Building upon the introductory learning theory presented in General Psychology; this course provides both a historical perspective and greater depth to the application of learning theory to the future professional's repertoire.

PSY336 - Forensic Psychology

This course is designed to give the undergraduate with a minimal background in psychology a basic overview of the field of forensic psychology. The course provides a broad examination of forensic psychology and concentrates on the applied side of the field, focusing on research-based forensic practice. Professional application of psychological knowledge, concepts and principles to both the civil and criminal justice systems are emphasized. The course exposes students to the many careers related to the field and utilizes the multicultural perspective focusing on racial issues, mental and physical disabilities, sexual orientation, and gender discrimination in relation to the work of forensic psychologists.

PSY340 - Psychological Measurement Lab

Students will acquire knowledge and skills in the fundamental process of measuring psychological qualities in humans and non-humans. They will learn how to evaluate measures and select the best measurement strategy for the situation at hand (in the practice of counseling, teaching, supervising, research and program evaluation).

PSY345 - History and Systems of Psychology

This course explores the evolution of psychology starting with its philosophical roots. All major perspectives of psychology are explored, including structuralism, functionalism, behaviorism, gestalt, psychoanalysis, humanism and the cognitive view. Understanding the contextual forces that shaped the discoveries and thinking of the times in relation to the development of psychology as a science is emphasized.

PSY350 - Principles of Behavior Modification

Applications of the principles of contemporary approaches to behavior modification are explored. Behavior-change techniques that are based on operant conditioning are emphasized. Some attention is also given to behavior therapy, which involves procedures based on classical conditioning. Examples of the uses of these techniques in counseling, clinical and educational settings are reviewed. Students complete one or more applied projects.

PSY365 - Research Methods in Psychology

This is a survey course emphasizing the design of research strategies for evaluating hypotheses about behavior and the quantitative analysis of research results. Students will design, implement, and write up a research study using APA style and the statistical and research techniques of scientific psychology.

Course Descriptions

PSY375 - Psychopathology of Childhood

Intensive study of the cognitive, emotional and behavioral disorders in children and adolescents. Emphasis is on etiology, early recognition and approaches to treatment or intervention .

PSY400 - Psychopathological Disorders of Adulthood

A survey of behavior pathology including psychoses, mood and adjustment disorders, and personality disorders, including drug addiction and psychophysiological disorders together with a general consideration of etiology, treatment and prognosis.

PSY415 - Childhood Trauma: Theory, Research, and Practice

The purpose of this course is to examine the impact of trauma and traumatic stress on children, adolescents, and families. Specifically, this course will explore theoretical foundations, current research and literature, and developmental considerations of the impact of traumatic stress on developing children. Further, evidence-based treatments for childhood traumatic stress will be reviewed and described as well as scientific information for understanding how to support children who have experienced trauma.

PSY420 - Social Psychology Lab

The course combines a review of the foundations of psychological research (e.g., hypothesis generation, experimentation), as well as a focus on advanced procedural methods and techniques for social psychological research. In addition, we will focus on data management, analysis, and presentation. Altogether, this course will provide an in-depth, hands-on introduction to the world of conducting research in social psychology, from start to finish.

PSY421 - Theories of Psychotherapy

This course introduces the student to the theory and practical application of the major models utilized in the treatment of psychological disorders. Behavioral, Cognitive, Psychoanalytic, and Systems approaches (among others) are explored with emphasis on their theoretical assumptions, techniques of intervention and associated personality theory. Students will learn to take into account individual differences (race, gender, and age among others) when considering the theories, techniques, and other activities in clinical psychology endeavors.

PSY422 - Clinical Skills in Psychology

The focus of this course is on the specific techniques psychologists and other mental health practitioners use to create positive change in people. Students will learn the skills of active listening, empathy, cognitive reframing, crisis management, rapport building, and treatment planning, among others. Students will learn to enhance their effectiveness as positive change agents through self-reflection as well as acquisition of knowledge about the targets of intervention and their effectiveness. Videotaping is an integral part of the learning process in this class and students will be required to supply a videotape for the class work as well as a final assessment.

PSY425 - Senior Project

This course is an opportunity for the student to integrate and synthesize all aspects of their prior collegiate academic experience as it relates to their chosen major of psychology. The student will review research methods and current research literature in an area that is of special interest to them, develop a proposal for further research on an approved project in an area of interest, conduct the research proposed, write a thesis and present the findings in an appropriate forum.

PSY430 - Physiological Psychology

The biological foundations of behavior are explored in this course. Topics examined include the anatomy and physiology of the nervous system, sensory and motor systems, memory, higher cognitive functions, and psychological disorders.

PSY460 - Senior Seminar: Special Topics

Students of psychology will enhance their postgraduate opportunities by learning a variety of professional knowledge areas, skills, and abilities that pertain to a specific current topic in the field of psychology. Topics such as ethics, multicultural sensitivity, foundational research, applications, future trends in research and application and professional behavior will be covered as they pertain to the listed special topic offered in a given term.

Course Descriptions

PSY469 - Psychology Internship

Students will be placed with professional psychological agencies off campus. They will integrate, under supervision, what they have academically been studying with the duties and responsibilities assigned to them by practicing psychologists in the field.

PTA-Physical Therapist Assist

PTA100 - Introduction to Physical Therapist Assistant

An overview of the discipline of physical therapy and the role and function of the physical therapist assistant within the physical therapist-physical therapist assistant team. Additional topics include examinations of the history of physical therapy, physical therapy professional organizations, legal and ethical issues, and commonly encountered pathologies.

PTA101 - Basic Physical Therapy Procedures

This course provides an introduction to basic physical therapy patient care procedures in a laboratory format. Topics covered include body mechanics, positioning and draping, vital signs, basic exercise, transfer activities, wheelchair features and activities, ambulation aids and activities, infection control, wound care, emergencies, and a review of the Americans with Disabilities Act.

PTA110 - Introduction to Pathology

This course examines the disease process on the cellular, histological and systemic levels. Particular emphasis is placed on those pathologies commonly encountered by the physical therapist assistant in pediatric, geriatric, orthopedic and neurological impairments.

PTA150 - Clinical Internship I

This introductory clinical internship provides the physical therapist assistant student with extensive observation of activities such as patient care, administration, quality assurance and supervision of other supportive personnel. In addition, students begin to treat patients under the direction of the physical therapist using principles common to all procedures.

PTA200 - Professional Issues in Physical Therapy

This course is an examination of the legal, ethical and professional aspects of a career in physical therapy. Important issues such as liability, malpractice, proactive acts and reimbursement are discussed. Special attention is focused on the importance of research and preparation for the PTA National Physical Therapy examination.

PTA210 - Interventions in Neurological Impairments

This course is an examination of the etiology, signs and symptoms, and effects of pathologies to the central and peripheral nervous systems. Emphasis is placed on how neurological diagnoses affect the physical function of patients. Specific treatment procedures and techniques within the physical therapist assistant scope of practice are demonstrated and practiced in the laboratory setting.

PTA225 - Interventions in Orthopedic Impairments

This course guides the physical therapist assistant student under the direction of a physical therapist from fundamentals and theory through practice in orthopedic rehabilitation. Emphasis is placed on rehabilitation treatment options for all major joints to reduce pain and swelling, increase motion and strength, enhance balance and proprioception, and restore function. The course will also examine the role of the physical therapist assistant in prosthetic and orthotic management.

PTA230 - Physical Therapy Interventions Across the Life Span

This course will explore anatomy, pathology, and pathophysiology of disease processes with increased prevalence in the pediatric and geriatric populations. Development of the pediatric population and characteristics of normal and pathological changes associated with aging will be discussed. Lab experiences will include mock case studies, functional and motor function training, postural assessment, application of assistive / adaptive devices, interdisciplinary clinical observation hours, and activities to foster volunteerism, advocacy, and leadership.

Course Descriptions

PTA240 - Physical Therapist Assistant Special Topics

This course will illustrate the role of the physical therapist assistant in patient/client management in specialty populations, as well as the role of the physical therapist assistant in participation in health care environment, practice management, and wellness/prevention. Special conditions include women's health diseases, bariatrics, wound care, cancer, amputations, prosthetics, and orthotics. Additional topics include reimbursement, research methods, and educational theories.

PTA260 - Physical Therapist Assistant Pharmacology and Imaging

This course will explore the mechanism of action, adverse effects, and physical therapy implications of drugs used to treat common cardiovascular, pulmonary, musculoskeletal, metabolic, and neurological conditions commonly encountered by the physical therapist assistant. In addition, this course will explore the essential information physical therapist assistants need to be able to accurately recognize patients' medical imaging studies in order to better understand the nature of their pathology or injury. Although an overview of imaging tests will be explored, emphasis will be placed on radiography, CT Scan, and MRI images related to various musculoskeletal conditions.

RAD-Radiography Technology

RAD101 - Radiography Theory and Lab II

This course continues to develop the student knowledge of the student to radiation production. Presented are the nature and characteristics of radiation, x-ray production, the fundamentals of photon interactions with matter, and a review of image quality characteristics. Radiographic procedures and principles necessary to perform diagnostic studies of the structures of the lower limb, pelvic girdle, and bony thorax. Content will establish a knowledge base in technical factors that govern the image production process.

RAD110 - Radiography Clinical I

This course introduces the clinical education practical experience through structured, sequential, competency-based clinical assignments in a clinical healthcare setting. Included will be the processing of radiographic images, practice in ethical situations during patient contact, patient care, and patient positioning for diagnostic radiographic studies. The student will also apply the principles of radiographic exposure. There will be sessions of image critique and radiation protection which will be emphasized and observed. Image critique covers the evaluation of radiographs for their diagnostic quality which includes positioning, technique, anatomy, etc.

RAD120 - Radiography Clinical II

This course is a continuation of RAD 110 Clinical I. It is designed to further enhance clinical education practical experience in a clinical healthcare setting, processing of radiographs, practice in ethical and situations during patient contact, patient care, and patient positioning for diagnostic radiographic studies. The student will also apply the principles of radiographic exposure. There will be sessions of image critique and radiation protection which will be emphasized and observed. Image critique covers the evaluation of radiographs for their diagnostic quality which includes positioning, technique, anatomy, etc.

RAD130 - Radiography Clinical III

This course is a continuation of RAD 120 Clinical II. It is designed to further enhance clinical education practical experience in a clinical healthcare setting, processing of radiographs, practice in ethical and situations during patient contact, patient care, and patient positioning for diagnostic radiographic studies. The student will also apply the principles of radiographic exposure. There will be sessions of image critique and radiation protection which will be emphasized and observed. Image critique covers the evaluation of radiographs for their diagnostic quality which includes positioning, technique, anatomy, etc.

RAD140 - Radiography Clinical IV

This course is a continuation of RAD 130 Clinical III. It is designed to further enhance clinical education practical experience in a clinical healthcare setting, processing of radiographs, practice in ethical and situations during patient contact, patient care, and patient positioning for diagnostic radiographic studies. The student will also apply the principles of radiographic exposure. There will be sessions of image critique and radiation protection which will be emphasized and observed. Image critique covers the evaluation of radiographs for their diagnostic quality which includes positioning, technique, anatomy, etc.

Course Descriptions

RAD200 - Radiography Theory and Lab III

This course introduces the student to different types of imaging equipment, accessories, and systems. Presented are the significance of scatter control and considerations involved in selection of exposure techniques and their radiation induced biological effects. Radiographic procedures and principles necessary to perform diagnostic studies of the structures of the spine, fluoroscopy, surgical, and interventional studies.

RAD201 - Radiography Theory and Lab IV

This course introduces the student to radiographic procedures and principles necessary to perform diagnostic studies of the structures of the cranium, facial bone, and paranasal sinus studies. Also presented is an overview of ARRT content: patient care, ethics and law in the radiologic science, pharmacology, venipuncture, imaging equipment, radiation production and characteristics, principles of exposure and image production, digital image acquisition and display, image analysis, radiation biology and radiation protection, radiographic pathology, radiographic procedures.

RAD210 - Radiography Clinical V

This course is a continuation of RAD 140 Clinical IV. It is designed to further enhance clinical education practical experience in a clinical healthcare setting, processing of radiographs, practice in ethical situations during patient contact, patient care, and patient positioning for diagnostic radiographic studies. The student will also apply the principles of radiographic exposure. There will be sessions of image critique and radiation protection which will be emphasized and observed. Image critique covers the evaluation of radiographs for their diagnostic quality which includes positioning, technique, anatomy, etc.

RAD220 - Radiography Clinical VI

This course is a continuation of RAD 210 Clinical V. It is designed to further enhance clinical education practical experience in a clinical healthcare setting, processing of radiographs, practice in ethical and situations during patient contact, patient care, and patient positioning for diagnostic radiographic studies. The student will also apply the principles of radiographic exposure. There will be sessions of image critique and radiation protection which will be emphasized and observed. Image critique covers the evaluation of radiographs for their diagnostic quality which includes positioning, technique, anatomy, etc.

RAD230 - Radiography Clinical VII

This course is a continuation of RAD 220 Clinical VI. It is designed to further enhance clinical education practical experience in a clinical healthcare setting, processing of radiographs, practice in ethical and situations during patient contact, patient care, and patient positioning for diagnostic radiographic studies. The student will also apply the principles of radiographic exposure. There will be sessions of image critique and radiation protection which will be emphasized and observed. Image critique covers the evaluation of radiographs for their diagnostic quality which includes positioning, technique, anatomy, etc.

RAD240 - Radiography Clinical VIII

This course is a continuation of RAD 230 Clinical VII. It is designed to further enhance clinical education practical experience in a clinical healthcare setting, processing of radiographs, practice in ethical and situations during patient contact, patient care, and patient positioning for diagnostic radiographic studies. The student will also apply the principles of radiographic exposure. There will be sessions of image critique and radiation protection which will be emphasized and observed. Image critique covers the evaluation of radiographs for their diagnostic quality which includes positioning, technique, anatomy, etc.

REC-Recreation

REC165 - Introduction to Recreation and Leisure

The course will familiarize students with the interrelationship between leisure and Western culture. Specifically, students will be introduced to the many effects leisure has on society including, but not limited to, the economic impact of leisure, leisure as a modifier of culture, and leisure as it relates to life stages and health.

REC195 - Leisure and Wellness Recreation

An introduction to the philosophy and techniques of leisure education as a process towards achieving high levels of wellness through recreation. The class will address leisure in its historical and modern contexts as well as the

Course Descriptions

relationships between leisure, work, health, and wellness in both individual and societal contexts. The course introduces students to methods for increasing a proactive lifestyle to greater wellness through leisure education.

REC220 - Youth Competitive Recreational Activities

This course focuses on the planning and management of competitive recreational activities for youth. The purpose of this course is help prepare students for management positions in youth serving recreation agencies by building competence in primary areas related to youth recreational activities that are competitive in nature.

REC225 - Recreation and Youth Development

This course provides a historical and contemporary analysis of youth culture in the United States. The role of recreation in shaping youth culture is examined. Through the investigation of various youth serving organizations, this course provides an understanding of free-time settings that can offer youth the supports, opportunities, programs and settings needed to successfully transition into adulthood.

REC230 - Camp Counseling and Administration

This course focuses on camp management and administration, emphasizing the role of organized camping and camp experiences as an important component of youth development. The purpose of this course is to help prepare students for careers in professional camp management and programming through competence building in several essential core areas of camp administration.

REC235 - Special Event Management in Recreation Settings

This course provides a philosophical and theoretical understanding of the impact that events and festivals have had on society. The role of festivals and events in boosting the economy, infrastructure and job market of host communities is also examined. This course equips students to pursue careers in the field of festivals and events through the investigation of various aspects of planning, promoting, financing, and managing special events within community, commercial, and outdoor recreation settings.

REC240 - Sustainable Communities and Ecosystems

A social science approach to dealing with relationship between humans and the organic and inorganic environment. Emphasis is placed on the physical, biological and cultural basis of society's adaptation to the environment.

REC246 - Scenic Areas of the U.S.

This course explores the physical settings, managerial framework and historical background of some of the more popular scenic areas of the United States including national parks (NPS), national forests (USFS), national refuges (FWS), national resource lands (BLM), wilderness, national trails, national rivers and other scenic resources. The course uses the management agency and ecosystem as major threads and examines inherent differences in management philosophy, uses, and missions/goals of the various land management agencies. Although there are no prerequisites for the course, some knowledge of the basic tools of the earth sciences, for example, maps, patterns, classification, analysis and synthesis, etc., is essential. The course is aimed at students of parks and recreation, tourism, geography, geology, biology, education and earth sciences.

REC250 - Non-Profit and Community Recreation

An analysis of the role of recreation programming and facilities in the community, With emphasis on the importance of inclusion of leisure services in community development.

REC270 - Introduction to Interpretation

This course prepares the student to develop and to supervise interpretive services and public outdoor education programs focusing the natural resources/environmental interpretation and historical/cultural interpretation. The course concentrates on interpretive knowledge, skills and abilities including displays and exhibits, interpretive walks, slide presentations, and interpretive trails.

REC275 - Sustainable Recreation and Green Parks

This course surveys the history, current status, case studies and best management practices for sustainable recreation and green parks. It examines the relationship of outdoor recreation and natural resources, especially

Course Descriptions

the environmental impact of recreational pursuits on the resource base. Parks and outdoor recreation lands are the essential green infrastructure of our communities and nation. Parks and public recreation lands and facilities are carbon-reducing landscapes that help clean our air and water, recharge aquifers, and reduce stormwater runoff. Through energy efficiency, climate friendly operations, low impact techniques and other environmental management measures, sustainable recreation and green park resources that will sustain, protect, restore and expand these ecosystem services and environmental assets.

REC280 - Adventure and Outdoor Recreation Outfitting

This course will be a theoretical and experiential examination and analysis of adventure and outdoor recreation outfitting and all of the related elements. The course is designed to give students a broad theoretical, as well as practical, background in teaching and learning experientially. Concepts presented, experienced and discussed in this course include the basic premises of experiential learning through adventure and outdoor recreation activities according to a wide variety of educators and philosophers.

REC285 - Water-Based Recreation Management

An analysis of managerial and administrative practices and processes in water-based recreation agencies and departments, including: departmental organization, policymaking, liability and negligence, personnel management and staffing, fiscal management, budgeting, finance, office management, programming and public relations.

REC361 - Parks and Recreation for Diverse Populations

Leisure and recreation services for special population groups will be examined and studied with a focus on access/inclusion, barriers to participation, disabling conditions and special population groups, program development and service delivery, and legislation.

REC362 - Recreation Site Design and Management

This course will familiarize the student with the components of the park and recreation site design process. Instruction will center on the specific tools and procedures necessary to enable the student to be an effective planner of recreation and park facilities. The student will gain an understanding of the complete planning process from conceptualization through implementation, construction and maintenance.

REC365 - Recreation Resource Management

This course explores the relationship between outdoor recreation in behavior and the natural environment and how the relationship benefits people and society. The exploration of natural resources and facilities management (i.e., wildlife health and trail maintenance) in outdoor recreation are emphasized as well as key issues facing the field today.

REC374 - Commercial Recreation Management

An overview of the commercial recreation industry, specifically focusing on the procedures involved in the developing, marketing and managing of the enterprise. The student is introduced to the methods used in starting a leisure business. The management skills necessary for effective and profitable management of an enterprise are also discussed.

REC378 - Recreation Management and Leadership

An analysis of managerial and administrative practices and processes in recreation, park and agency departments, including departmental organization, policy making, liability and negligence, personnel management and staffing, fiscal management, budgeting, finance, records and reports, office management, and public relations.

REC412 - Recreation Program Planning and Evaluation

The course emphasizes the analysis of a community, assessment of its residential leisure needs, and implementation of recreational programs into the community. The course stresses planning, objectives, goal setting, structural organization, advertising and evaluation.

Course Descriptions

REC415 - Challenges and Trends in Parks and Recreation

An integrative course for detailed study of current issues in parks and recreation with emphasis on unique and imaginative solutions to the challenges facing the recreation/parks profession.

REC478 - Professional Development in Recreation

The course provides students with the opportunity to gain practical experience in an agency in the leisure services delivery system while being supervised by an agency professional and a faculty member. Students will be able to apply skills and knowledge as a volunteer at an agency that falls under their particular area of interest. Students are expected to utilize leadership and management skills to enhance participant involvement and agency operations.

RET-Robotics Engineering Tech

RET110 - Agile Robotics I

This course provides a basic introduction to the field of robotics technology with particular emphasis on first-generation agile robotics as characterized by remotely piloted mobile robots. Because of the multidisciplinary nature of robotics, the student is exposed to many facets of robotics including concepts from computer, electrical and mechanical disciplines with a focus on engineering processes. The laboratory component features activities to solidify lecture concepts and team-oriented, hands-on projects to solve basic robotic problems.

RET120 - CADD Concepts

An introduction to the principles of drafting and design, this course covers terminology and fundamentals, including size and shape descriptions, projection methods, geometric construction, sections, auxiliary views and reproduction processes. This course provides students with a basic understanding of modern technical drafting and modeling fundamentals for engineering design. Students will be introduced to freehand sketching, multi-view orthographic projection, shape modeling and its applications in computer-aided drafting and design (CADD). Experiences will include geometry development and projection techniques, visualization methods and feature representation, as well as geometric modeling techniques for CADD, drafting practices, manufacturing processes and materials documentation.

RET160 - Agile Robotics II

This course continues from Agile Robotics I by delving into the details of second-generation agile robotics technology as characterized by mobile robots with autonomous behaviors. Course highlights include use of software tools, further details of robotic systems, application of robot control programming, motion planning and additional applied technician skills. The laboratory component provides discovery activities to solidify lecture concepts and team-oriented, hands-on projects to solve autonomous robotics problems.

RET210 - Robotic Teaming

Modeled from the third generation of agile robotics evolution, this course explores the concept of adding inter-robot communications to autonomous robotic platforms to support swarming behaviors. Swarming capability is a common requirement of both industrial and personal robotic systems to achieve collaborative tasks using a team approach. Sufficient coverage and application of a computer programming language and of an embedded robotic platform is included.

RET260 - Robotic Systems Project

This project-based course integrates learning objectives of the robotics engineering technology program along with project management principles. Under the approval of the instructor, students will identify and realize a semester-long project based on mobile robotic technologies. Major phases of the project include literature research, project specification, project design, implementation, documentation and presentation in alignment with established engineering technology methods.

SCM-Supply Chain Management

SCM301 - Fundamentals of Supply Chain Management

This course prepares students in the basics of supply chain and supply chain's roles within organizations. The course includes defining supply chain management and the various domains within supply chain, including logistics, manufacturing and operations management, order management, procurement and supplier relations,

Course Descriptions

inventory management, warehousing operations, and transportation operations). It includes an explanation of how the supply chain supports organizations' strategic and financial goals.

SCM311 - Procurement, Materials Management, and Supplier Relations

This course will delve into purchasing policies, procedures, order specifications and agreements, and the role of purchasing in production planning and inventory management. The course will also explore the strategic role of procurement in supply chains, how to identify, evaluate, and select potential suppliers. Production-inventory planning and control, warehousing, and physical distribution will be discussed, as well as the impact of information technology on strategic procurement.

SCM321 - Production and Operations Management

This course is a broad-based introduction to the fields of operations and production management. Operations management can be described as the design and control of the recurring activities of the firm. Operations management encompasses a broad range of business activities involved in producing a good or service. Key aspects of operations management include product design, production and manufacturing processes, quality control, and inventory management. This course will aim to develop practical problem solving techniques crucial in the modern workplace.

SCM341 - Logistics and Transportation Management

This course delves into the crucial supply chain functions in the areas of logistics and transportation. Logistics and transportation management encompasses the various activities required to store, package, handle, and transport freight across a logistic network. Students will compare and contrast the various modes of shipping, including rail, truck, water, and air. Additional key topics include shipping documentation, warehousing, and pricing freight. At the conclusion of the course, students will be able to synthesize a multitude of factors to design an efficient logistics network.

SEC-Secondary Education

SEC210 - Introduction to Secondary Education

An entry-level course for prospective teachers designed to begin their professional development. Different instructional activities will allow the student to become proficient in the theories of modern secondary education instructional development, basic history and philosophy of secondary education and of pedagogy in general.

SEC220 - Standards-Based Education

The Pennsylvania Standards Aligned System (SAS) is a collaborative product of research and good practice that identifies six distinct elements which, if utilized together, will provide schools and districts a common framework for continuous school and district enhancement and improvement. There are many intangible components; however, research supports the notion that great schools and school systems tend to have six common elements that ensure Student Achievement: Clear Standards, Fair Assessments, Curriculum Framework, Instruction, Materials and Resources, and Interventions.

SEC310 - Instructional Strategies in Secondary Education

This course will allow the secondary education major to explore and develop many instructional strategies and methodologies that are accepted as valid. Instructional activities will allow the student to become proficient in the theories of modern secondary education instructional development, basic history and philosophy of secondary education and of pedagogy in general. Students will participate in observation at selected field sites, grades 7 – 12. Students will continue development of their professional portfolio.

SEC350 - Content Area Literacy

The purpose of this course is to help the prospective teachers of the secondary education academic subject areas develop an understanding and appreciation of the necessary reading skills needed by their students. Methods of establishing awareness of general reading needs as well as the special skills unique to their subject area will be stressed.

Course Descriptions

SEC360 - Technology Integration in Secondary Education

The purpose of this course is to help the teacher candidates learn how to effectively analyze, select, and integrate current educational technologies into the design, implementation and assessment of learning experiences to engage a diverse student population. The course includes collaboration with teachers in a field experience setting to develop applications for technology for learning.

SEC391 - Teaching of Art

This course is designed to provide insight into the teaching of general art, art history, ceramics, crafts, drawing, painting, and printmaking in grades K through 12. Students become aware of and use the resources and methods of instruction for teaching art at the elementary and secondary levels.

SEC392 - Teaching of English and Communications

This course is designed to provide insight into the teaching of general English, writing, literature, public speaking, communication, media and theater in grades 7 through 12. Students become aware of and use the resources and methods of instruction for teaching English and Communications at the secondary level.

SEC393 - Teaching of Foreign Languages

This course is designed to provide insight into the teaching of foreign language acquisition and cultural courses in grades K through 12. Students become aware of and use the resources and methods of instruction for teaching languages and cultures at the secondary level.

SEC394 - Teaching of Mathematics

This course is designed to provide insight into the teaching of general mathematics, algebra, geometry, probability, and statistics in grades 7 through 12. Students become aware of and use the resources and methods of instruction for teaching mathematics at the secondary level.

SEC395 - Teaching of Science

This course is designed to provide insight into the teaching of Biology, Chemistry, Earth and Space Science, and Physics in grades 7 through 12. Students become aware of and use the resources and methods of instruction for teaching science at the secondary level.

SEC396 - Teaching of Social Studies

This course is designed to provide insight into the teaching of general social studies, history, political science, geography, economics, anthropology, psychology, and world cultures in grades 7 through 12. Students become aware of and use the resources and methods of instruction for teaching social studies at the secondary level.

SEC400 - Classroom Management

This course will allow the Secondary Education teacher education candidate to explore different instructional methodologies and classroom management plans, from the physical set-up of the classroom, classroom rules to procedures for dealing with problem students in your classroom. It includes issues related to adolescent development and school safety.

SEC420 - Assessments and Interventions

Part of this course is designed to provide insight into the design, implementation, and analysis of assessment instruments used in 7-12 education. The second part of this course is to allow the secondary education candidate to become aware of, and to gain experience in, the contemporary interventions that teachers use to prevent, minimize, or eliminate negative behaviors in the classroom.

SEC460 - Professional Practices in Secondary Education

The development and refinement of contemporary pedagogical skills constitute the primary learning purpose for student teachers. Specific teacher-learning skills that are developed are lesson planning, delivery methods, organizational procedures, class control, and educational measurement and evaluation. An integral component of the student teaching experience is a bi-weekly class. The class serves as a means of coordinating activities and exchanging ideas and experiences of the student teachers.

Course Descriptions

SOC-Sociology

SOC100 - Principles of Sociology

This survey course permits students to explore the rich variety of topics studied by sociologists. Central to all the topics are the structures and processes of human interaction. Emphasis is placed on the relationship of natural and social factors in human behavior. Attention also is given to topics such as the meaning and function of culture; the origin, function and characteristics of social institutions; and the genesis and nature of social pathology. Sociologists investigate groups, organizations, and societies, and how people interact within these contexts. It is an expanding field whose potential is increasingly tapped by those who craft policies and create and evaluate programs. Sociology is an active science: The concepts, theories, and research methods of sociology can be used in practical, concrete ways to create a better world, or simply a better corner of the world.

SOC205 - Contemporary Social Problems

This course encourages students to think critically and scientifically about a broad array of social problems that affect people throughout the world. These social problems, to name only a few, include those that concern inequality, conflict, and environmental issues. As we study these problems (e.g., assessing how extensive they are, what causes them, possible solutions and their implementation) we must go further than mere description and opinion-based analysis and reach a point where we understand them scientifically and can communicate this understanding to others. Our sociological understanding of social problems will be enhanced by our ability to apply the discipline's theoretical perspectives to them. Social issues of popular concern in America today, such as poverty, ecology, violence and homosexual rights, are discussed and analyzed from a sociological perspective. Attention is not only given to the content of the issues, but also to the place of statistics in data reporting and analysis; the objective data used in support of interest group claims; and the use of various theoretical schemes in providing alternative explanations for each issue being a social problem.

SOC210 - Social Inequality

We examine the distribution of key social resources--wealth, power, and status—to groups and individuals, as well as theoretical explanations of how unequal patterns of distribution are produced, maintained, and challenged. In addition to global inequalities, we give special consideration to how race, ethnicity, and gender intersect with social class to produce different life experiences for people in various groups in the United States.

SOC211 - Sociology Collective Behavior

This course is a descriptive and analytical inquiry into the relatively unstructured social responses to social change. War resistance movements, militia movements, stock market panics, popular fads and crazes are among the topics considered. Attention is given to the processes, emergent structures and theoretical explanations associated with various types of collective behavior.

SOC225 - Sociology of Aging

Theoretical and research methodological issues in the sociological study of human aging are considered. Special emphasis is placed upon the interaction of pertinent biological and sociological variables as they relate to a variety of topics, including work, retirement, leisure, institutionalization and death.

SOC240 - Social Institutions

Designed as a descriptive study of the basic institutions of society (particularly family, religion, economic, government and education), the course uses a cross-cultural and comparative perspective. American institutions form the core of the comparative analysis.

SOC290 - Gender and Work

This course examines the gendered nature of paid and unpaid work from a socio-historical and comparative perspective. Students will explore the forms and varieties of gendered work in the developed and developing countries with an emphasis on how concepts of masculinity and femininity influence the organizational structure, occupational categories and job tasks associated with formal and informal work arrangements.

Course Descriptions

SOC300 - Sociology of Deviance

This course discusses the various forms of deviant behavior, public responses to such behavior and the causes of such behavior. Particular attention is given to the interactive processes that result in behavior being labeled as deviant. How the criminal justice system copes with deviant behavior also is considered.

SOC309 - Sociology of Sport

This course approaches the study of sport from a sociological perspective. Students will learn to utilize the various theoretical sociological perspectives to examine the nature of professional and recreational sports as they relate to social reality.

SOC311 - Sociology of Crime

This course is designed to give the student a brief overview of crime and criminality and to enable the student to understand the relationship between administrative structure of the criminal justice system and crime causation. Included in this course is a description and analysis of various types of criminal behavior, the epidemiology of crime in the United States, the social basis of law and major etiological forces responsible for law breaking.

SOC312 - Sociology of Organizations

Sociologists have long documented that social life involves interaction with both informal and formal institutions. As such, human interaction with organizations forms the basis for this course study. Examples of these organizations include: churches, workplaces, universities, governments and communities in addition to primary group interaction. Throughout the semester, students will develop an understanding of organizational structure, influence, and empowerment. Activities and assignments during the semester will provide structured opportunities for the student to explore the sociological literature on organizations in contemporary society and to apply that knowledge critically. Specifically, the course material will engage the student with the concepts and tools necessary to analyze the physical and social structures of organizations, technology in organizations, organizational environments and cultural influence on organizations. Cultural focus will explain concepts of power, control, and conflict within organizations while enabling the student to become proficient in organizational competency as it relates to the group process. A variety of theoretical frameworks will be investigated in order to investigate multiple perspectives on any given issue.

SOC315 - Social Minorities

Students will analyze the dynamics of social minority status specific to ethnicity, racial classification, gender, disability, and sexual orientation, and how minority status is socially constructed. Students will also examine societal responses to minority status and attempts to change this status. Finally, students will select one minority group in another country and compare it to one in the United States. Historically, every group of immigrants to the U.S. that did not come from England has experienced some degree of exclusion, discrimination, or racism that temporarily (or permanently) transformed them into "minorities." This course examines the racial and ethnic experiences of those groups (and various other minority groups that are based in sex and gender, social class, sexual orientation, and disability) to see how their experiences have shaped and changed U.S. society. We will start by examining how we construct these categories of difference, then go on to how difference is experienced, what difference means, and finally how we might bridge these differences. Interspersed throughout these academic readings, we will read an urban ethnography that examines race relations in Philadelphia in order to practice applying our sociological concepts to a real-world setting. Students who take this course should gain a much better understanding of why various minority groups act as they do, allowing them to live and work effectively in different multicultural environments.

SOC316 - Urban Sociology

This course is an introduction to urban sociology with a focus on urban social problems. Topics covered include classic urban sociological theories, post-industrial urban economies, urban social networks, suburbanization, segregation, poverty, crime, subcultures, schooling, and public policy. Classes will be mostly discussion with occasional short lectures. The course will focus on U.S. cities with selected comparisons to Western Europe.

SOC318 - Sociology of Addiction, Excess, and Exploitation

This course will examine societal addictions, exploitation, and excesses in relation to their specific defining variables, patterns and practices, and historical and contemporary influences, inhibitions, and acceptances.

Course Descriptions

Particular attention to how socio-cultural forces influence use and participation, by using a wide array of sociological tools and theories. Students will engage in the critical analysis of social practice as it is governed and defined by norms and values. Topics will be situated within a larger sociological framework that is equally shaped by culture, environment, and individual characteristics and expectations.

SOC319 - Sociology of Technology

This course explores the ways in which society and its social structures shape the design and use of technology, and how technology in turn influences cultural and social experience. Students will examine the way in which technology is affected at a fundamental level by the social contexts in which it develops. The course will explore the sociological underpinnings of norms, values, class, status, power, gender, labor and time, as they relate to such topics and social institutions as employment, education, medicine, equality, virtual interactions, and community-organizational governing.

SOC320 - International Women's Movements

In this discussion-centered examination of women's movements throughout the world, students will analyze contemporary movements utilizing a case study approach. The course begins with an analysis of the contemporary movement in the United States and then follows selected movements in Europe, the Middle East, Africa, Asia and Latin America.

SOC324 - Child Abuse and Neglect: A Societal Perspective

This course will examine the socially constructed variables that contribute to both the socialization and abuse of children (adults, community, social, political, and cultural contexts). The meanings and perceptions of childhood, inequality, abuse and neglect will be discussed in relation to their historical and contemporary underpinnings. Specific content will address the socially constructed definitions and categories of child maltreatment and abuse, family preservation, substitute and foster care, and permanency planning.

SOC378 - Charismatic Leaders

This course examines the nature of the social relationship between charismatic leaders and their followers. Charismatic leaders are selected from a wide variety of religious, social, economic and political contexts for study. Charismatic authority, unlike traditional authority, is a revolutionary and unstable form of authority, especially if the leader cannot produce the changes promised or when confronted by the contradictory logic and demands of the other types of authority. Each leader is evaluated in terms of his/her charismatic qualities and success or failure in bringing about stated goals. Each leader is also evaluated in terms of his/her contribution to the concepts and theories of charismatic leadership.

SOC379 - Special Problems in Sociology

This course permits students to explore the rich variety of topics studied by sociologists. This course is offered when a topic germane to society arises and is discussed and agreed upon by the sociology faculty.

SOC380 - Society and the Sociopath

This course will examine the societal variables that serve as catalysts and consequences for the development of the sociopath. The sociopath will be analyzed in accordance with specific and malleable historical, cultural, and contemporary contexts, as well as in response to future social changes, challenges, and innovations. The spectrum and continuum of "bad" behavior will be scrutinized in relation to socially constructed definitions, perceptions, and contexts that range from immorality to malevolence to corruption.

SOC395 - Sociology of Elite Deviance

This course examines the concept of elite deviance from various sociological perspectives and isolates the structural aspects of political and economic systems as they relate to deviant behavior. Multiple examples of elite deviance will be identified including: political corruption, environmental pollution, organized crime, trafficking, insider trading, and other criminal acts which are by nature relegated to those in positions of power.

SOC400 - Structural and Institutional Violence: School, Workplace, and Eldercare

This course will examine violence as it impacts the social and structural institutions of school, workplace, and eldercare. The nature and extent, causes and consequences, and proposed remedies will be explored in relation

Course Descriptions

to their social contexts and historical and contemporary, socially-defined, underpinnings. Specific content will include critical analysis of bullying, fighting, harassment, personal and social risk factors, institutional perceptions and values, inequality, and social status.

SOC410 - Social Theory and Society

This course considers the historical development of sociological theory as well as how theories are constructed and used to explain social phenomena. Special attention is given to understanding and analysis of classical and contemporary theorists including: Comte, Durkheim, Marx, Weber, Simmel, and the Chicago School Theorists. The student will illustrate proficiency in the critical analysis of theories by comparing and contrasting them to various social conditions and problems.

SOC411 - Symbolic Interaction

This course offers an in-depth study of one of the three major theoretical perspectives in sociology. We will examine the breadth and depth of this perspective, its major theorists and concepts. Students will keep personal journals with observations and analyses of everyday life, review and assess relevant academic literature, and evaluate the new directions this perspective is taking. We will apply the symbolic interactionist perspective to popular films and will also consider symbolic interactionism's relationship with social psychology. Students will compose a research design for an applied sociological study that integrates the symbolic interactionist approach and has the potential to lead to positive social change.

SOC415 - Social Science Research Methods

This course is designed to develop the technical and analytical skills necessary for conducting social science research. Upon completion of this course, students will develop the fundamental skills necessary to develop a research project using both qualitative and quantitative methods. Students will apply skills in framing research questions and appropriate methodology and will also differentiate between various types of statistical analyses intended to assess and evaluate research data. As such, students will justify the reliability and validity of their research and support that in comprehensive research projects.

SOC417 - Field Research Methods

This is an advanced research methods course that emphasizes the process of gathering ethnographic data and writing an ethnographic report. Ethnography is an approach to research that enables researchers to look at the social world through the eyes of their informants and requires students to use inductive thinking and reasoning skills. The primary methods used are field interviewing and participant observation: the basic field methodologies of qualitative researchers in anthropology and sociology. Students study a micro-culture of their own choosing throughout the semester then prepare a written report and deliver an oral report on the major findings.

SOC420 - Applied Sociology

This course focuses on the applied aspects of sociology and is intended for sociology majors in the applied sociology concentration. Students will learn to apply the concepts, theories and methods of sociology to better the human condition. Problem solving techniques, research applications, and conflict resolution strategies will be used to examine issues in businesses, government, education, social service and social movement organizations, and nongovernmental organizations.

SOC429 - Sociology Internship

This Special Experience Component course provides students with opportunities to demonstrate the application of knowledge and skills developed through both the discipline of sociology and the General Education program. This course is characterized by reflective thinking and the ability to synthesize information and ideas, to integrate knowledge, and to express ideas acquired throughout the college experience. This course emphasizes the overall general education experience by emphasizing ethics, values and norms, and multicultural awareness as broadly defined. Designed to supplement the classroom studies of sociology majors with practical field experience, internships provide students not only with additional knowledge and skills, but with the opportunity to apply what was learned previously to onsite situations. Internships are intended to develop the major's professional competencies in observational, analytical and research skills.

Course Descriptions

SOC495 - Seminar in Sociology

As a capstone course for sociology and other majors, this course centers on a current theme in society. Students will analyze the theme, demonstrating the use of concepts, methods, and theories from sociology and other social science disciplines. Involves review of the discipline of sociology and focuses on key issues, including review of the tools of the discipline and the role of sociology in the student's future roles as individual, employee, and citizen.

SOW-Social Work-Undergrad

SOW150 - Introduction to Social Work

This course explores the social, political, economic and historical dimensions of poverty and welfare services in the United States. It complements other beginning courses in the social sciences by integrating this knowledge in a fashion which aids in the comprehension of welfare services while establishing a basis for movement toward higher level courses.

SOW201 - Interviewing for the Human Services

This class introduces students to the theory, value and skill components necessary for effective interviewing with diverse client systems. Communication techniques and personal attributes that enhance problem solving are explored. Demonstration and practice of core skills are thoroughly integrated in the classroom and skills lab.

SOW208 - Diversity in a Changing World

This course provides an analysis of the historical, economic, and political relations of American religious, ethnic, and racial minorities in terms of social change and social structure. Special attention is given to Puerto Rican, Chicano, and Indian subcultures, as well as minority experience in the rural environment. Sources of prejudice and discrimination and social processes, including conflict, segregation, assimilation, accommodation, and cooperation, are examined.

SOW215 - Human Behavior and the Social Environment: The Life Course

Human Behavior and the Social Environment: The Life Course is the first of a two-semester course content area that is designed to provide the perspectives, frameworks and theories necessary to understand human behavior in the social environment from a social work perspective. This course emphasizes ecological, systems, and life course perspectives to work effectively with individuals and families across the lifespan. Approaches to understanding human and family growth and behavior are presented, with an emphasis on diversity and difference and the impacts of oppression and discrimination across the life course. Person-environment transactions and person-environment fit are stressed as the basis for understanding individuals and families from a social work perspective.

SOW300 - Dialogue and Differences

Communicating across differences of age, gender, language, culture, and political orientation, and in different contextual situations is a useful skill for every individual. It is also integral to the success of any attempt to resolve conflict, whether individual, group/institutional, or global. By offering a context for students to learn with individuals from different cultural and linguistic backgrounds, we will all gain insight into the role of culture in dialogue. An understanding of culture and its influence on our perspectives is essential for effective communication. Through interactive exercises, students will develop an understanding of the challenges of inter-group dialogue across differences and the skills required to communicate effectively. Students will engage in a workshop on dialogue skill-building and multiple dialogue sessions with classmates and other students, first learning the theory and skills that underlie successful participation and facilitation of dialogue and then applying them in the exploration of issues such as gender, religion, and international affairs.

SOW302 - Social Work Practice with Individuals

This course assumes that generalist social workers perform varied tasks with basic skills, attitudes and knowledge, and that this development will increase self-awareness with subsequent emergence of a professional self. Students learn problem assessment, caseload management, and a variety of counseling theories and intervention strategies, with special emphasis on the unique characteristics of the rural client.

Course Descriptions

SOW303 - Human Sexuality and Society

Humans evolve as sexual beings from a continual interplay among biological, cultural and psychosocial factors. This course provides content on enhancing personal well being, establishing psychologically healthy relationships, making responsible sexual choices, protecting reproductive health, preventing sexual dysfunction and trauma. Included in the course is accurate information and open discussion regarding the ways in which sexuality both contributes to and affects overall health and well-being. The course covers diverse groups and the human lifespan including sexuality and sexual expression among the elderly.

SOW304 - Social Work Practice with Families

This course is the second in a four-course practice methods sequence. It builds on the skills developed in Social Work Practice with Individuals, utilizing the ecological-systems approach to assessment and problem solving. The course covers the history of social work with families, the stages of family development, assessment of goals and objectives for families, and the principles and values for intervention and problem solving with families.

SOW315 - Human Growth and Behavior: Birth to Young Adult

This course provides foundation knowledge, contribution of studies, research, and theory in understanding human development. SOW 315 begins the life cycle from prenatal influence through young adulthood. Emphasis is on both normal development/behavior and on differences. The course illustrates how diverse groups are affected in their development through the life cycle, with examples from rural experience.

SOW316 - Human Behavior and the Social Environment II: Groups, Organizations and Communities

Human Behavior and the Social Environment II: Groups, Organizations and Communities is the second of a two-semester content area that is designed to provide perspectives, frameworks and theories necessary to understand human behavior in the social environment from a social work perspective. Approaches presented emphasize diversity and difference and the systemic impacts of oppression and discrimination at the group, organizational and community levels. The nature of systems, environmental transactions, and goodness-of-fit are stressed as the basis for understanding groups, organizations and communities from a social work perspective. A strengths-based, empowerment perspective is also used throughout the course to better understand reciprocal relationships at the group, organization and community levels.

SOW330 - Child Welfare

In this class, students learn about societal efforts to insure the welfare of children, the rights of children and parents, child welfare policies, programs, and service delivery problems. Students examine historical and current practices, working with natural parents, supportive services, substitutes, and residential care.

SOW340 - Poverty and Related Social Problems

This course examines poverty as a dependent and independent variable in its relationship to other social problems and human behavior. Social policy and programs that attempt to respond to the variety of conditions that are both causes and effects of poverty and related behavior will be studied.

SOW345 - Social Work Practice with Groups

This course is the third in a four-course practice methods sequence. It builds on the skills developed in Social Work Practice with Individuals, utilizing the ecological-systems approach to assessment and problem solving. The course covers the history of social group work, the stages of group development, assessment of goals and objectives for groups, and the principles and values for intervention and problem solving with groups.

SOW349 - Social Work Practice with Organizations and Communities

Macro practice methods refer to those skills that enable the generalist social worker to act at an organizational and community level to effect change in larger social systems. These skills encompass planning, organizing and administrative tasks. Proficiency at the macro level is particularly important for the rural practitioner who may be relatively isolated from other service providers. Through a semester-long class project, students gain hands-on experience in committee work, program development, action, research, budgeting and many other specific skills.

Course Descriptions

SOW350 - Social Work with the Aging

This course examines the development and current status of policies and services related to the elderly, the service delivery systems, and implications for social work practice concepts for working with the elderly.

SOW370 - Policy Practice in Social Work

In this class, students learn about the social change process, strategies, reactions to change, the impact of change on social policy and social welfare institutions.

SOW405 - Social Work Research Methods

This course prepares the student to understand social work research methods and the use of research methods. The student will be able to understand the philosophy of research, the reasons for doing social work research and the components of the research process including strengths, limitations, ethics and interpretation of research findings. The course will progress from the general discussion of research principles and methods to the more specific elements of professional social work research. This is a 400 level course with work and expectations of student to be at an advanced level.

SOW410 - Social Work in Mental Health

This course builds on psychosocial study, assessment, and treatment introduced in Social Work Practice with Individuals. It acquaints students with DSM-IV-R terminology and its uses for generalist social-work practice. It also explores the scope and depth of individual psychopathology, community concerns, prevention, and intervention approaches.

SOW425 - Field Education

This course provides a supervised placement in a practice setting under the supervision of a MSW social worker. The application of theoretical knowledge and skills, along with demonstrated competencies in working with various client systems, is emphasized. The course requires a minimum of 480 clock hours.

SOW435 - Field Education Seminar

This capstone seminar is paired with a supervised placement in a practice setting (SOW 425) under the supervision of a MSW social worker. This seminar is focused on professional reflection and synthesis of prior coursework with praxis in a field setting. The application of theoretical knowledge and skills, along with demonstrated competencies in working with various client systems, is emphasized. Ethical professional practice is emphasized.

SOW495 - Seminar in Social Work

This seminar focuses on selected topics of particular significance or current importance and interest to the social work profession. Students can receive credit for more than one seminar provided that each seminar focuses on a different topic.

SPN-Spanish

SPN101 - Elementary Spanish I

This course is designed for the student without previous knowledge of Spanish who wishes to achieve a command of language fundamentals. Acquisition of speech skills in the classroom is reinforced in the language laboratory. Progressively greater emphasis is placed on reading and writing.

SPN102 - Elementary Spanish II

This is a continuation of Spanish 101.

SPN203 - Intermediate Spanish I

This course reviews the essentials of Spanish grammar through intensive oral and written practice to facilitate the use of Spanish grammar and to develop the use of words and expressions accepted throughout the Spanish-speaking world.

Course Descriptions

SPN204 - Intermediate Spanish II

Students develop control of the principal structural patterns of the language through dialogue, and reading as well as through oral and written exercises based on selected readings.

SPN305 - Spanish for Business

This course focuses on the applied aspects of the Spanish language in a business and international trade context. Significant emphasis will be on practical communicative activities that involve business scenarios, learning about business integrity and values that are recognized in the Hispanic community, analysis and discussions of Spanish commercial readings, analysis and discussions of business-cultural reading that impact the Hispanic market. While some background is provided in terms of the business and international trade such information is intended to assist in the language capabilities of business personnel as opposed to undertaking substantive studies in this regard.

SPN306 - Spanish for Medical Personnel

This course focuses on the applied aspects of the Spanish language in a health care context. Significant emphasis will be on practical vocabulary such as obtaining patient information, evaluating patients, conducting physical examinations, explaining diagnoses, implementing and explaining treatment, explaining the use of prescriptions, interacting with the elderly, and issues involving pregnancy and birth. Students will also learn about the Hispanic community in regard to demographics and the impact on the medical field. Further, students will learn about working with community members and leaders toward mutual goals and objectives in health promotion and prevention. While some background is provided in terms of the health care system, such information is intended to assist in the language capabilities of health care professionals as opposed to undertaking substantive studies in this regard.

SPN307 - Spanish for Social Services

This course focuses on the applied aspects of the Spanish language in a social work context. Significant emphasis will be on practical vocabulary such as obtaining client information, evaluating and speaking with clients, financial aid screenings, applying for work permits, discussing child abuse and abusive parents, discussing injury and disability benefits, discussing Medicare and welfare, and offering advice to clients. Students will also learn about the Hispanic community in terms of state population and its impact in the social services field and how to work with community members and leaders toward mutual goals and objectives in the well-being and promotion of clients. While some background is provided in terms of the social work field, such information is intended to assist in the language capabilities of social work professionals as opposed to undertaking substantive studies in this regard.

SPN308 - Spanish for Social Services

This course focuses on the applied aspects of the Spanish language in the teacher education context. Significant emphasis will be on practical vocabulary such as communicating with parents and students, classroom management, managing behavioral issues, teaching various subject areas, enforcing school rules, and cooperation between school and parents. Students will also learn about the Hispanic community in terms of state population and its impact in the education field and how to work with community members and leaders towards mutual goals and objectives in promoting social and academic learning. While some background is provided in terms of the education system, such information is intended to assist in the language capabilities of education professionals as opposed to undertaking substantive studies in this regard.

SPN311 - Spanish Conversation, Composition and Phonetics I

In this course, students will acquire a genuine command of the language and the ability to communicate by listening, speaking, reading and writing. There is intense practice in conversation, composition and phonetics based on modern prose, as well as on natural spontaneous speech models, including colloquialisms. Class is taught in Spanish.

SPN312 - Spanish Conversation, Composition and Phonetics II

This course is a continuation of Spanish 311 on a higher level of proficiency accepted by educated speakers of the Spanish world. Students will acquire a genuine command of the language and the ability to communicate by

Course Descriptions

listening, speaking, reading and writing. There is intense practice in conversation, composition and phonetics based on modern prose, as well as on natural spontaneous speech models, including colloquialisms.

SPN342 - Golden Age and Baroque

Spain's Golden Epoch, its beauty and cultural significance, is the topic of SPN 342, which surveys the artistic and other intellectual developments that gave fame to this great century. The origins of the modern novel, and the vocal and instrumental works by Golden Age composers, as well as the beautiful pastoral and mystic poetry of this most productive period are themes of discussion. Spanish painters, whose works embody the new forms and ideas of the Renaissance, are presented. This course also surveys the unfolding of secular theater and the new concept of drama; and how several outstanding authors of the time, influenced Western culture. Examples of the Baroque style, evident in many of these works, will exemplify features of this form.

SPN346 - 20th Century Spain 1939 to the Present

This course is dedicated to the study of the exciting revitalization of today's Spanish society following the repression of the postwar years. It will trace the various faces of that revolution of Spanish culture when the Spaniards decided to forget the war and the desperate state of Spain and focus on new forms of artistic expression. The course will also examine the relationships among different forms of art during that period (e.g. the surrealist style in Spanish cinema, as well as in painting and in music). It will present the two major tendencies among the intellectuals of the time: those who had an inclination toward social protest and those who manifested an attitude of avoidance of the Spanish reality and produced works of universal significance.

SPN348 - Romanticism in Latin America

This course examines the new art and cultural trends of post independence Latin America. It looks at the role of painting, music and literature in the process of construction of a national identity: the "Americanista" ideology. It will study the origins and tendencies of the romantic movement, which breaks all classical rules and gives free rein to excited feelings. The course will follow the artistic-cultural work and activities of the prominent figures whose talent and efforts contributed to the creation of the new Spanish-American nations.

SPN349 - Mexico and the Chicano Movement in the 20Th Century

This course surveys a general, critical introduction to the political, social, and cultural changes in the Mexican society from the Pre-Columbian times to the present through art and literature. The course explores the concern that Mexican intellectuals have with social and political issues, and the impact that socio-political events have had on Mexico's contemporary cultural achievements. The course will also present the opportunity to examine the social awareness of today's Mexicans and the effect that this consciousness will have on the country's relationship with the United States through Chicano art and literature.

SPN350 - Contemporary Argentina

This course will attempt to give the student a multiphasic view of the culture of Argentina, the Latin American country with the most widespread artistic activity. It will begin with the nationalistic trend in the arts, which evolved from the so-called "gauchesco" tradition. It will then examine the vanguardist current in the literature, music, and the visual arts. The goal of SPN 350 is also to give the student a greater awareness of the ever-increasing attention the world is giving to Hispanic America, the recent boom in Spanish intellectual productivity, and an appreciation of the future impact this will have on the world.

SPN421 - Survey of Spanish Literature I

This course is an introduction to the masterpieces of Spanish literature, ranging from Poema de Mio Cid to current authors. Represented will be all of the important Spanish literary genres: narrative poetry (epic and ballad), lyric verse, short story, and selections from novels and dramas. Class and readings are in Spanish.

SPN422 - Survey of Spanish Literature II

A study of representative selections from the Colonial period to the present, this course emphasizes the salient characteristics and the distinctive contributions of each literary form in the period or movement under study.

Course Descriptions

SPN450 - Foreign Language Colloquium in Spanish

This course is intended to promote interaction, to stimulate critical thinking, and to provide argumentative situations that will develop the student's capacity and ability in oral and written expression. Class and readings are in Spanish.

SPT-Sport Management

SPT100 - Introduction to Sport Management

An introduction to basic skills and competencies required to successfully manage in the sport management industry, the course utilizes general management theory and principles that make direct application to the sport management field.

SPT101 - Intro Sport Mgmt Prac Appl

Integrates coursework from Introduction to Sport Management (SPT 100) with planned and supervised professional experiences. Experiences will take within and outside regularly scheduled class meeting times.

SPT105 - Fundamentals of Student Athlete Recruiting

This course has been designed as a Web-based offering for the high school principal, counselor, coach, or those seeking a future career in related fields, and for parents of student athletes who desire to compete at the collegiate level. This course outlines the various methods students use in an attempt to get an athletic scholarship, federal and state financial aid, as well as NCAA, NAIA, and junior college requirements for competition. The class also includes specific strategies that student athletes must learn in order to achieve success in their college experience, such as the knowledge of nutrition, goal setting, as well as pitfalls of the incoming freshman adjusting to college life as an athlete.

SPT199 - Practicum in Sport Management

A supervised observational/work experience in a sport administration and management cognate (administration, aquatics, promotion, marketing, directing, fitness). The professor must approve the practicum experience in advance. This course consists of a minimum of 70 hours of work experience.

SPT300 - Psychology of Sport

This course is designed to cover diverse concepts associated with formal recreational or sport activity. These include, but are not limited to, motor skill learning, coaching characteristics and techniques, nervous system correlates of athletic activity, research on relaxation, imagery and cognitive techniques, and peak athletic performance.

SPT305 - Ethics in Sport

This course will provide background in ethical theory to sport. Ethical problems, dilemmas and conflicts in sport will be discussed, as well as coaching practices, funding practices, management problems and social (cultural) roles. At the completion of this course, the student should be able to practice applying these ethical theories to typical problems in the world of sport.

SPT310 - Sport Marketing

A study of basic marketing science as it applies to all realms of the sport industry, this fundamental course is intended to give students the depth and breadth of marketing principles and practices as they apply to the sport industry.

SPT311 - Sales Techniques in the Sport Industry

The sport industry requires students who are trained in all aspects of sport business, including the critical area of sport sales. This course will provide practical professional sales techniques and philosophies utilized in several areas of sport including personal selling, ticket sales and sponsorships. Subsequently, the dynamics associated with building and fostering relationships necessary for consumer loyalty and a vibrant sport organization will be thoroughly examined.

Course Descriptions

SPT312 - Sales Techniques in Sport – Practical Application

Integrates coursework from Sales Techniques in Sport (SPT 311) with planned and supervised professional experiences. Experiences will take within and outside regularly scheduled class meeting times.

SPT315 - Facility and Event Management

This course is designed to provide students with the basic knowledge of the facility planning process, as well as how to manage specific sport facilities and the events staged in these facilities.

SPT316 - Facility and Event Management – Practical Application

Integrates coursework from Facility and Event Management (SPT 315) with planned and supervised professional experiences. Experiences will take within and outside regularly scheduled class meeting times.

SPT320 - Administration of Intercollegiate Athletic Programs

This course reviews the many administrative tasks an athletic administrator encounters in the administration of an intercollegiate athletic program and department. The course is designed for students majoring in sport management studies, business administration, or students who might be interested in a career in athletic administration at the collegiate level.

SPT325 - Sport and Society

An examination of sport as a social institution in America. Students will address controversies and issues regarding the development of sport at all levels of formality and organization. Sport as a social institution will be analyzed from the primary theoretical orientations of the discipline, namely the functionalist, interactionist and conflict approaches.

SPT330 - Globalization and International Sport

This course examines the organization, governance, business activities, and cross-cultural context of modern sport on an international level.

SPT340 - History of Sport

This course examines the organization, governance, business activities, and cross-cultural context of modern sport on an international level.

SPT360 - Sports Communication

An examination of the interrelationship between sports and media in today's society. This course draws on theories of rhetoric and social criticism by examining the media's role in telling the story of sports and, in telling that story, shaping and reinforcing cultural values. The course will utilize various broadcasts and print, and electronic media to examine how they are vital to the success of the sport organization.

SPT400 - Legal Aspects of Sport

An introduction to basic skills and competencies required to successfully manager in the sport management industry. The course utilizes general management theory and principles, which make direct application to the sport management field.

SPT410 - Governance in Sport

This course is a study of the growth and development of sport throughout the world, as well as how the governing bodies involved affect the structure, organization and delivery of sport.

SPT415 - Sport Finance

This course is a study of how sport organizations develop financial strategies and utilize financial indicators in developing organizational strategic plans.

SPT420 - Economics of Sport

This course focuses on analysis of how economic models are used to measure the impact of sport on various economies.

Course Descriptions

SPT425 - Organization and Administration of Sport

This course is a study of the application of organizational theory to the understanding and management of sport organizations.

SPT430 - Sport Management Senior Seminar

This course provides the student with a basic understanding of the developments, trends and social processes that explain the widely popular sporting experience of society today.

SPT499 - Internship in Sport Management

This course is the sport management student's capstone experience. Students will be assigned to an internship site based on their unique educational needs and experience. Internship students will work directly with sport management professionals in one or more work settings.

TED-Technology Education

TED100 - Introduction to Technology Education

This course initiates the professional development of each technology education student. Activities will afford each student the opportunity to become well grounded in the philosophy, theory and practice of technology education curriculum and pedagogy. Following extensive modeling activities within a campus-based classroom/laboratory environment, all students will participate in similar activities at selected K-12 schools for 15 hours of field experience.

TED105 - Communicating Technical Designs

This course is intended to promote the competencies, skills and sensibilities needed for the successful development and realization of contemporary products. A design/problem-solving model will include elements of design and appearance, ergonomics, idea modeling, anthropometrics, form, function and visualization. These elements will be coupled with basic engineering drawing skills, including freehand drawing, orthographic projection and basic descriptive geometry, axonometric drawings and developments. Emphasis will be placed on documentation of design work using manual drafting, CAD and freehand sketching.

TED111 - Information Systems

This course provides a broad overview of information systems, specifically print, acoustic, light, audiovisual and electronic media as they relate to the realm of communications. The student will experience individualized and group laboratory activities in the combined areas of generating, assembling, processing, disseminating and assimilating of a communicative message.

TED126 - Engineering Materials and Product Design

This laboratory-based course is an introduction to material properties and product design. Design engineering requires knowledge of the selection, properties, uses and impacts of materials choices, and processing methods. A process of research, design, creation, use and assessment of products will be used. The lab activities of the course will focus on the safe and efficient processing of polymer materials.

TED210 - Design and Appropriate Technology

This course focuses on developing a basic understanding of design and appropriate technology. Students engage in design and problem-solving activities to develop, produce, test and analyze technological systems while assessing the multiple interactions between such systems and their impacts on societies, values, economics, environments and basic human needs.

TED211 - Design and Sustainable Technology

This course focuses on developing a basic understanding of design and appropriate technology. Students engage in design and problem-solving activities to develop, produce, test and analyze technological systems while assessing the multiple interactions between such systems and their impacts on peoples' societies, values, economics, environments, and basic human needs.

Course Descriptions

TED226 - Applications and Processing of Engineering Materials

This course is designed to serve as an introduction to engineering principles as they relate to selection, preparation, conditioning, forming, shaping, finishing and using materials. Engineering principles will be reinforced with activities that allow students to explore the many facets of materials science, selection, processing and testing. Additionally, this course serves as the foundation for other laboratory courses that require the processing of materials.

TED300 - Assessment and Instruction in Technology Education

To address the standards, it is critical that technology education students be able to instruct and assess student learning in a standards-based environment. This course will enable students to explore and develop instructional methodologies and assess student learning in both a traditional and authentic sense. Students will also be introduced to a variety of classroom management and discipline issues that classroom teachers face each day. All students will participate in instructional activities at a selected middle school for 15 hours of field experience.

TED302 - Energy and Control Systems

Students will be presented with an overview of energy systems as they relate to technology and how signals are controlled for various technological processes. States, forms and sources of energy will be examined as well as the control, transmission, conversion and storage of energy forms. Students will be involved with a variety of laboratory activities to design, build, test and evaluate energy and control systems.

TED304 - Design in Bio-related Technology

This course provides a broad overview of bio-related technologies as it relates to technology education. Students will study these systems from historical, current and potential future applications of bio-related technologies in a broad spectrum of industries/agencies. Students will participate in various laboratory and research activities as they identify and analyze bio-related products, services and processes. They will work individually and in groups to design, test, analyze and evaluate bio-related processes and products.

TED316 - Structural Design

Students will develop a basic understanding of the design and behavior of structures. Through laboratory activities, students will learn how structures are designed; why certain materials are used; how structures withstand loads; and the impacts of structures on societal, biological and technological systems.

TED335 - Transportation Systems

This course focuses on developing a basic understanding of the behavior of land, water, air and space transportation systems. Students engage in problem-solving activities to design, produce, test and analyze transportation systems while studying the technical subsystems of propulsion, structure, suspension, guidance, control and support.

TED416 - Sustainable Architecture and Systems

This course covers a variety of natural and sustainable construction materials and systems – some revivals of ancient materials and practices, some new and innovative – as the natural-building movement gains both momentum and prominence in the construction and architectural arena. Integrated topics such as water conservation systems and energy conservation and alternative generation sources are also included.

TED426 - Manufacturing Enterprises

The class begins with an introduction to manufacturing technology, technical systems, and the historical evolution of manufacturing. Students will examine the organization and management of manufacturing endeavors. The class culminates in the design and production of a product in a manufacturing enterprise situation which closely parallels the functions of a manufacturing corporation.

TED435 - STEM Senior Project Proposal

This senior course provides the student with an opportunity to integrate several concepts of different STEM areas and it allows him/her to pursue specialized interests. The student will submit a written proposal for a project. After approval of the project, the student will be assigned a faculty advisor and select complement faculty members

Course Descriptions

for area support. Minimum requirements for the proposal are submission of a functional specification and time schedule for completion.

TED436 - Engineering Design and Development

This course provides individual and/or small groups of students within a laboratory class the opportunity to conduct a focused investigation of a particular technological system or subsystem. The nature of this investigation requires direct contact by the student with corporate, university and governmental libraries, laboratories and associations. The scope of the research and development problem could relate to local, national or international topics. The time frame of the research could be historical, contemporary or futuristic. Each student and/or group is required to design, build, operate and analyze some type of technological model, prototype or simulation that demonstrates with precision the essence of the research problem. Portfolio documentation of the progress of the research and development problem is required.

TED450 - Teaching Technology in the Secondary School

Students will use their technical skills and knowledge in the area of communication, transportation, manufacturing, construction, bio-related technologies and develop curriculum plans, design laboratories, and instructional activities appropriate for teaching technology in the secondary school. In addition, enhancing technical skills, teaching techniques, program assessment, and evaluating student learning will be emphasized along with safety, liability, school law and the integration of math, science, technology, and social science in learning activities.

TED451 - Teaching Technology in the Elementary School

This course is designed for students who are technology education majors. It is designed to offer each student the opportunity to design and build teaching/learning activities that integrate concepts related to mathematics, science, communication and social science with technology.

TED461 - Technology Education Student Teaching

Student teaching is the culminating experience for technology education majors. The student teacher is assigned to and works under two different master teachers at two different field locations during the semester. The development and refinement of contemporary pedagogical skills constitute the primary learning purpose for the student teacher. Specific skills that are developed are lesson planning, laboratory management, safety practices, record keeping, classroom management and educational measurement and evaluation. An integral component of the student teaching experience is a regularly scheduled practicum. This serves as a means of coordinating activities and interchanging ideas and experiences of student teachers.

TED462 - Student Teaching Practicum

Student teaching is the culminating experience for technology education majors. The student teacher is assigned to and works under the supervision of two different experienced teachers at two different field locations during the semester. The development and refinement of contemporary pedagogical skills constitute the primary learning purpose for student teachers. Specific teacher-learning skills that are developed are lesson planning, delivery methods, organizational procedures, class control, laboratory management, safety practices, record keeping, and educational measurement and evaluation. An integral component of the student teaching experience is a bi-weekly practicum. The practicum serves as a means of coordinating activities and exchanging ideas and experiences of the student teachers.

TED-Technology Education

TED100 - Introduction to Technology Education

This course initiates the professional development of each technology education student. Activities will afford each student the opportunity to become well grounded in the philosophy, theory and practice of technology education curriculum and pedagogy. Following extensive modeling activities within a campus-based classroom/laboratory environment, all students will participate in similar activities at selected K-12 schools for 15 hours of field experience.

TED105 - Communicating Technical Designs

This course is intended to promote the competencies, skills and sensibilities needed for the successful development and realization of contemporary products. A design/problem-solving model will include elements

Course Descriptions

of design and appearance, ergonomics, idea modeling, anthropometrics, form, function and visualization. These elements will be coupled with basic engineering drawing skills, including freehand drawing, orthographic projection and basic descriptive geometry, axonometric drawings and developments. Emphasis will be placed on documentation of design work using manual drafting, CAD and freehand sketching.

TED111 - Information Systems

This course provides a broad overview of information systems, specifically print, acoustic, light, audiovisual and electronic media as they relate to the realm of communications. The student will experience individualized and group laboratory activities in the combined areas of generating, assembling, processing, disseminating and assimilating of a communicative message.

TED126 - Engineering Materials and Product Design

This laboratory-based course is an introduction to material properties and product design. Design engineering requires knowledge of the selection, properties, uses and impacts of materials choices, and processing methods. A process of research, design, creation, use and assessment of products will be used. The lab activities of the course will focus on the safe and efficient processing of polymer materials.

TED210 - Design and Appropriate Technology

This course focuses on developing a basic understanding of design and appropriate technology. Students engage in design and problem-solving activities to develop, produce, test and analyze technological systems while assessing the multiple interactions between such systems and their impacts on societies, values, economics, environments and basic human needs.

TED211 - Design and Sustainable Technology

This course focuses on developing a basic understanding of design and appropriate technology. Students engage in design and problem-solving activities to develop, produce, test and analyze technological systems while assessing the multiple interactions between such systems and their impacts on peoples' societies, values, economies, environments, and basic human needs.

TED226 - Applications and Processing of Engineering Materials

This course is designed to serve as an introduction to engineering principles as they relate to selection, preparation, conditioning, forming, shaping, finishing and using materials. Engineering principles will be reinforced with activities that allow students to explore the many facets of materials science, selection, processing and testing. Additionally, this course serves as the foundation for other laboratory courses that require the processing of materials.

TED300 - Assessment and Instruction in Technology Education

To address the standards, it is critical that technology education students be able to instruct and assess student learning in a standards-based environment. This course will enable students to explore and develop instructional methodologies and assess student learning in both a traditional and authentic sense. Students will also be introduced to a variety of classroom management and discipline issues that classroom teachers face each day. All students will participate in instructional activities at a selected middle school for 15 hours of field experience.

TED302 - Energy and Control Systems

Students will be presented with an overview of energy systems as they relate to technology and how signals are controlled for various technological processes. States, forms and sources of energy will be examined as well as the control, transmission, conversion and storage of energy forms. Students will be involved with a variety of laboratory activities to design, build, test and evaluate energy and control systems.

TED304 - Design in Bio-related Technology

This course provides a broad overview of bio-related technologies as it relates to technology education. Students will study these systems from historical, current and potential future applications of bio-related technologies in a broad spectrum of industries/agencies. Students will participate in various laboratory and research activities as they identify and analyze bio-related products, services and processes. They will work individually and in groups to design, test, analyze and evaluate bio-related processes and products.

Course Descriptions

TED316 - Structural Design

Students will develop a basic understanding of the design and behavior of structures. Through laboratory activities, students will learn how structures are designed; why certain materials are used; how structures withstand loads; and the impacts of structures on societal, biological and technological systems.

TED335 - Transportation Systems

This course focuses on developing a basic understanding of the behavior of land, water, air and space transportation systems. Students engage in problem-solving activities to design, produce, test and analyze transportation systems while studying the technical subsystems of propulsion, structure, suspension, guidance, control and support.

TED416 - Sustainable Architecture and Systems

This course covers a variety of natural and sustainable construction materials and systems – some revivals of ancient materials and practices, some new and innovative – as the natural-building movement gains both momentum and prominence in the construction and architectural arena. Integrated topics such as water conservation systems and energy conservation and alternative generation sources are also included.

TED426 - Manufacturing Enterprises

The class begins with an introduction to manufacturing technology, technical systems, and the historical evolution of manufacturing. Students will examine the organization and management of manufacturing endeavors. The class culminates in the design and production of a product in a manufacturing enterprise situation which closely parallels the functions of a manufacturing corporation.

TED435 - STEM Senior Project Proposal

This senior course provides the student with an opportunity to integrate several concepts of different STEM areas and it allows him/her to pursue specialized interests. The student will submit a written proposal for a project. After approval of the project, the student will be assigned a faculty advisor and select complement faculty members for area support. Minimum requirements for the proposal are submission of a functional specification and time schedule for completion.

TED436 - Engineering Design and Development

This course provides individual and/or small groups of students within a laboratory class the opportunity to conduct a focused investigation of a particular technological system or subsystem. The nature of this investigation requires direct contact by the student with corporate, university and governmental libraries, laboratories and associations. The scope of the research and development problem could relate to local, national or international topics. The time frame of the research could be historical, contemporary or futuristic. Each student and/or group is required to design, build, operate and analyze some type of technological model, prototype or simulation that demonstrates with precision the essence of the research problem. Portfolio documentation of the progress of the research and development problem is required.

TED450 - Teaching Technology in the Secondary School

Students will use their technical skills and knowledge in the area of communication, transportation, manufacturing, construction, bio-related technologies and develop curriculum plans, design laboratories, and instructional activities appropriate for teaching technology in the secondary school. In addition, enhancing technical skills, teaching techniques, program assessment, and evaluating student learning will be emphasized along with safety, liability, school law and the integration of math, science, technology, and social science in learning activities.

TED451 - Teaching Technology in the Elementary School

This course is designed for students who are technology education majors. It is designed to offer each student the opportunity to design and build teaching/learning activities that integrate concepts related to mathematics, science, communication and social science with technology.

TED461 - Technology Education Student Teaching

Student teaching is the culminating experience for technology education majors. The student teacher is assigned to and works under two different master teachers at two different field locations during the semester. The

Course Descriptions

development and refinement of contemporary pedagogical skills constitute the primary learning purpose for the student teacher. Specific skills that are developed are lesson planning, laboratory management, safety practices, record keeping, classroom management and educational measurement and evaluation. An integral component of the student teaching experience is a regularly scheduled practicum. This serves as a means of coordinating activities and interchanging ideas and experiences of student teachers.

TED462 - Student Teaching Practicum

Student teaching is the culminating experience for technology education majors. The student teacher is assigned to and works under the supervision of two different experienced teachers at two different field locations during the semester. The development and refinement of contemporary pedagogical skills constitute the primary learning purpose for student teachers. Specific teacher-learning skills that are developed are lesson planning, delivery methods, organizational procedures, class control, laboratory management, safety practices, record keeping, and educational measurement and evaluation. An integral component of the student teaching experience is a bi-weekly practicum. The practicum serves as a means of coordinating activities and exchanging ideas and experiences of the student teachers.

THE-Theatre

THE100 - Introduction to Theatre

A study of the art and craft of theater from play script to play production. The course surveys theater history, literature, architecture, acting, directing and design for the student who wants to know what goes on in theater and what it means. Students can expect to participate in classroom performances.

THE101 - Voice and Speech

A practical and useful course for the performer or anyone who wants a flexible, strong, controlled voice. The focus of the course is the natural way in which the body produces vocal sounds and primarily studied for clear and articulate speech, which is free of regional qualities, affectation, imitation and annoying physical habits. An introduction to phonetics (IPA) and to voice production and control, with exercises to develop adequate quality, loudness, pitch, rate, and articulation will be utilized to achieve desired results. An Introduction to the Estill Voice Craft will be introduced to demonstrate the production of various vocal qualities.

THE120 - Entertainment Audio I

Entertainment Audio I introduces students to the foundational knowledge necessary for successful careers in theater sound design and/or audio engineering. Specific topics of focus in this course include: acoustic/psychoacoustic principles of sound, analog/digital audio cables and connectors, proper configuration of analog/digital audio equipment and sound systems, microphone design/implementations, mixing console design and operation, proper understanding of gain-staging and signal path, and signal processor function/implementations.

THE126 - Makeup

This course teaches techniques for modeling the face and body with makeup, hair and three dimensional prostheses. A full range of theatrical techniques from street and fashion to character and fantasy makeups will be explored. Qualified students will create three dimensional prosthesis from face and body casts.

THE131 - Fundamentals of Acting

An introduction to the basic tools of the actor's craft and personal discipline for the student through the use of acting exercises, sensitivity exercises, theater games and improvisation.

THE140 - Script Analysis

Students will read and analyze several plays and musical theatre scores and librettos, give regular reports, write research papers supporting their analysis, and contribute to class discussion regarding the nature and needs of various scripts. Class work will include analysis of a script's historical, structural and biographical qualities, as well as possible production needs for performance, directing, design and technical requirements.

THE141 - Stagecraft I

Introduction to the theory and practice of stagecraft, involving basic set construction, painting, and production technologies. Practical experience for students majoring in performance media.

Course Descriptions

THE143 - Drafting and Rendering for the Theatre

This entry level drafting and rendering course prepares students for more advanced tasks and topics in future design courses. It will create a foundation of necessary skills and good practices and illustrate the ways designers communicate with directors, production staff and other stakeholders. This course incorporates both hand and digital rendering as well as computer aided drafting using VectorWorks, employing conventions typical to theatrical design work.

THE145 - Private Instruction: Estill Voice Training for Theatre Performers I

This course is designed for private instruction in the mechanics and artistry of voice utilizing the Estill Voice Model™ and the techniques/methodologies of Estill Voice Training™. Vocal goals and materials are specifically chosen to strengthen the technical and performing abilities of the individual student, whether singing or non-singing.

THE201 - Voice and Interpretation

Methods of analysis and presentation for effective oral reading and performance of non-literature and dramatic literature, prose, and poetry will be explored.

THE203 - Musical Theatre Performance I

Building upon the skills acquired in MUS 104, Musical Theatre Performance I will begin the specific and focused study of the voice as it relates to musical theatre performance. Not only will the course provide continued focus on the voice and its use in both speaking and singing, but it will incorporate the study of selected musical theatre repertoire and its application of the Cohen method of acting. Using the Estill Voice Model™, students will study in greater depth the anatomy and physiology of the vocal mechanism, demonstrate voluntary control of vocal structures, and apply these skills and knowledge to both spoken text and sung lyrics. Likewise, students will develop a working philosophy and vocabulary that emphasizes maintaining vocal health and utilizing vocal tools to achieve artistry in musical theatre performance.

THE211 - Lighting I

The basic theory and practice of lighting for the stage, film, and television. Practical experience for students majoring in performance media is stressed.

THE220 - Entertainment Audio II

Entertainment Audio II builds upon topics introduced in Entertainment Audio I by focusing upon digital audio integration within audio and sound design workflows. Specific topics of focus in this course include: Analog-to-Digital Conversion, Digital Audio Transmission Through Ethernet (DANTE) Integration/Operation, Musical Instrument Digital Interface (MIDI) integration/operation, Digital Mixing console integration/operation, remote digital mixing and instrument miking techniques. This course culminates with students preparing a professional sound design for a short, one-act production. Working in small groups, students will showcase their creativity in sound design and live-sound reinforcement to their classmates and department faculty.

THE221 - Theatrical Foundations: Physical Theatre and Creative Movement

This course offers an introduction to physical and experimental theater in a creative laboratory approach. The course invites students into the role as creative practitioners by physically investigating the creative elements that can be applied to all aspects of theatre making. Creating theatre in a organic and collaborative manner students will develop a more conscious and able body, and improve their capacity to transform themselves in their craft as an actor. Students will develop their skills of organic movement, physical experimentation, focused play, observation, collaboration, group trust and cohesion, and their ability to transpose experiences in the world into visual, written, vocal and physical forms. Coursework will focus on individual and collaborative movement, the interconnectedness of the body and mind, and ways the body and voice communicates intention in time and space.

THE225 - Costume Construction

Basic pattern drafting and sewing techniques applied to the construction of costumes.

Course Descriptions

THE226 - Makeup II

This course builds upon the basic techniques learned in THE 126: Stage Makeup. Students will explore advanced topics including creating prosthesis, applying bald caps and airbrushing. They will also learn about period makeup and hair styles and create and realize characters using script analysis, research and rendering.

THE231 - Intermediate Acting

The development of a personal and useful acting method to develop believable characters for the stage. The acting method is developed through intense scene work that includes character and script analysis.

THE240 - Creative Dramatics

The stimulation and development of creativity through playmaking exercises, storytelling, improvisation and sensitivity techniques useful for potential teachers and parents.

THE245 - Private Instruction: Estill Voice Training for Theatre Performers II

This course is designed for private instruction in the mechanics and artistry of voice utilizing the Estill Voice Model™ and the techniques/methodologies of Estill Voice Training™. The student will build upon the foundational concepts acquired in THE 145. Vocal goals and materials are specifically chosen to further strengthen the technical and performing abilities of the individual student, whether singing or non-singing.

THE255 - Puppetry

The planning and production of puppet plays.

THE271 - Scene Design I

This course is an introduction to theatrical scenic design. Students will explore a variety of theatrical styles and historical periods. Script will be read, analyzed and designed. Digital design tools for drafting and rendering will be used.

THE272 - Properties Design for Theatre

This course will explore the tools, materials and techniques used for the creation of props for theatrical productions. The course will survey different time periods and emphasis will be placed on creating commonly needed props such as food props, weaponry and paper props. Techniques will include foam carving, carpentry, painting and 3D printing.

THE301 - Voice and Speech II: Stage Dialects

A practical and useful course for the performer who seeks to effectively, consistently, and safely produce common stage dialects other than Standard American English. This course will build upon concepts acquired in THE 101 to expand the students' knowledge of International Phonetic Alphabet to include speech sounds utilized in dialects other than their own. The Estill Voice Model™ will be utilized for identifying a generalized vocal quality of the dialects under study that is consistent and vocally healthy in production. Application of the speech sounds and qualities to various appropriate texts will further illustrate the acquisition of the dialect under study.

THE302 - History of Theatre I

The development of theater from the Classics through the Baroque, including representative plays.

THE303 - Musical Theatre Performance II

Musical Theatre Performance II will provide continued development of skills and concepts necessary for performing vocally in musical theatre as introduced in Musical Theatre Performance I. The course will offer increased exposure and study of selected musical theatre repertoire, further application of the Cohen method of acting, and rigorous application of the Estill Voice Model™ to both speaking and singing. The course will place great emphasis on using the voice to create character and achieve a higher level of artistry in performance.

THE304 - World Drama

Classical to 19th-century plays (excluding Shakespeare) studied as blueprints for theatrical presentation.

Course Descriptions

THE305 - Shakespeare in the Theatre

Representative Shakespearean plays studied as theatrical presentation.

THE309 - Reader's Theatre

Advanced theory and practice of oral interpretation techniques. Focus moves from solo to group performance and the basic staging techniques of both Reader's Theatre and Chamber Theatre.

THE310 - Dance Production

This course will cover the basic technical production needs of the Spring Dance Performance. Students will differentiate the needs compared to other theatrical productions and focus on needs specific to dance such as proper sanitary and safe installation of dance marley floor, stage management and safety concerns specific to dancers First Aid and production needs. Photometrics and lighting needs specific to dance, specifically, the hanging and focusing of side light booms or shadow play/silhouette lighting where applicable. Basic understanding of a playback sound system. Students will study history or technical production for dance as well as participate hands on as the technical work and run crew supporting the dance performance.

THE311 - Lighting II

Advanced theory and practice of lighting design for stage, television and film. Practical experience is stressed.

THE312 - History of Theatre II

The development of Western theater from the Baroque to the present, including representative plays.

THE320 - Fundamentals of Directing

The comprehensive study of the director's pre-production planning of a dramatic production for the stage. The directorial analysis of plays and basic fundamentals of composition, picturization, movement, and improvisation with gesture, costume and properties is studied. The in-class preparation of a complete directorial script of a one act or a cutting from a longer play may be directed as part of a public program of student-directed plays.

THE325 - Costume Design

Basic principles of costume design. Students complete various design projects for specific plays selected from a variety of historical periods.

THE327 - Stage Management

This course will examine the role of the Stage Manager as a key artist within the theatrical event. The course will provide a practical application of the essential communication, organization, planning and leadership skills necessary to manage a theatrical event. Lastly the course will review current professional stage management practices.

THE328 - Scene Painting

The practice of scenery painting for the theater. Students work with a variety of paints, texturing materials and application techniques. Particular emphasis is placed on the enlargement of existing art works to a size suitable for stage use.

THE331 - Advanced Acting

This course challenges the actor's ability to demonstrate a personal and useful acting method through a wide range of textual problems, historical and modern plays, and acting styles.

THE340 - Advanced Theatrical Design

Explore a areas of production design including scenic, costume, lighting, sound and projections in collaboration with other students using various methods of communication including rendering and model making. Survey the history of theatrical design.

THE341 - Stagecraft II

Advanced practice and principles of scenery and property construction. Practical experience with plastics, metals, drafting and advanced woodworking is stressed.

Course Descriptions

THE345 - Private Instruction: Estill Voice Training for Theatre Performers III

This course is designed for private instruction in the mechanics and artistry of voice utilizing the Estill Voice Model™ and the techniques/methodologies of Estill Voice Training™. Vocal goals and materials are specifically chosen to strengthen the technical and performing abilities of the individual student, whether singing or non-singing.

THE350 - Theatre Practicum: Performance

This variable credit course is intended to provide the student with performance experience in theatre. This includes student actors, singers, dancers, musicians or other performers

THE352 - Theatre Practicum: Directing and Choreography

This course provides practical experience to students in the roles of director, assistant director or choreographer. They will work on the conceptualization, rehearsal process and the technical implementation of a production.

THE353 - Theatre Practicum: Design

This variable credit course is intended to provide the student with practical design experience in theatre. Students will create realized or theoretical designs in areas including but not limited to scenic, lighting, costume, sound, projection, properties, makeup or puppetry design. Students will complete a design including all requisite paperwork. They will work with faculty, staff and other students on the production team to revise work and implement feedback. Students serving as assistant designers would also register for this practicum.

THE354 - Theatre Practicum: Management

This variable credit course is intended to provide the student with practical management experience in theatre. Students will take leadership roles including but not limited to stage manager, assistant stage manager, scenic charge artist, wardrobe supervisor, props coordinator, technical coordinator, technical director, assistant technical director, master carpenter, master electrician or other management position as assigned. Students will complete all the requisite paperwork, calendars, budgets, drafting, etc. and present it to advisor at the end of the process. They will learn how to collaborate with and manage their peers. They will work with faculty, staff and other students on the production team to revise work and implement feedback.

THE355 - Theatre Practicum: Technical Direction

This variable credit course is intended to provide the student with practical design experience in theatre. Working with the director, the student designer will design; scenery, and/or lighting, and/or costumes for a fully mounted production. The design process will include all renderings, costume plates, light plots, and designers' drawings. Costume designers will be expected to shop their show and supervise the construction of the costumes. Scenic designers will provide; renderings, paint elevations, and designer's drawings. They will be expected to supervise scenic painting. Lighting designers will provide a light plot and will supervise hanging and focusing of that plot. All designers will attend all technical and dress rehearsals. The course may be repeated for credit provided the assignment varies. The grade is based on; quality of the work, the completion of the contract specifications, and completion of the project to the satisfaction of the instructor. A grade may be assigned retroactively within the student's next regularly enrolled semester provided an agreement is made between the student and the instructor before the assignment is undertaken.

THE356 - Theatre Practicum: Technical Production

This variable credit course is intended to provide the student with practical experience in theatre. Students will serve as a production or run crew member in an assigned area including scenery, lighting, costumes, etc.

THE357 - Theatre Practicum: Tour Theatre

This variable credit course is intended to provide the student with practical experience in touring theatre. Students will participate in aspects of touring theatre in performance, directorial, technical or other roles. They will work with faculty, staff and other students on the production team to revise work and implement feedback. A grade may be assigned retroactively within the student's next regularly enrolled semester provided an agreement is made between the student and the instructor before the assignment is undertaken.

Course Descriptions

THE358 - Theatre Practicum: Summer Theatre

This variable credit course is intended to provide the student with practical experience in theatre. Students will participate in aspects of professional theatre in performance, directorial, technical or other roles. A grade may be assigned retroactively within the student's next regularly enrolled semester provided an agreement is made between the student and the instructor before the assignment is undertaken.

THE371 - Scene Design II

Advanced theory and practice of designing scenery and lighting, with emphasis on designing for various environments.

THE372 - Creative Arts

This course is designed to meet the needs of Elementary Education majors and those students who are looking for a broad based all inclusive fine arts course. Students will have practical experiences in Art, Music and Theatre along with Arts and Education theories.

THE402 - Estill Voice Training: Levels 1 and 2 Combined Intensive

This course will provide a focused experience for vocal performers to explore and optimize voice production for musical and theatrical performance utilizing the Estill Voice Model™. By examining the acoustic, physiologic, and perceptual correlates of voice and by learning to enhance control of the vocal structures that influence vocal quality, the students will acquire tools offered by the Estill Voice Training™ system for adding color, strength, clarity and stamina to the performing voice.

THE403 - Musical Theatre Performance III

Musical Theatre Performance III will provide continued development of skills and concepts necessary for performing vocally in musical theatre, but with advanced application of both the Cohen acting method the Estill Voice Model™. In addition to refining technique and achieving even greater artistry in performance, the course will serve as a final phase of preparation for transition into professional musical theatre.

THE404 - Cultural Studies in Theatre

Performative elements are present in every society; regardless of its complexity and sophistication. The impact of these performative elements influences a society and its people. This course will focus on a specific region of the globe and study its theatre; specifically the impact its performative elements had on the society and, subsequently, the society had on its performative elements.

THE431 - Acting in Musical Theatre

This is the final course in the acting sequence and is directed solely to the performance of musical theatre. This course combines physical and vocal acting methods utilized in previous coursework with a repertoire specific study in order to create a more well-rounded musical theatre performer. Students aspiring to careers in musical theatre require a firm understanding of the specific needs of the character within a given style of musical theatre.

THE445 - Estill Voice Training for Theatre Performers IV

This course is designed for private instruction in the mechanics and artistry of voice utilizing the Estill Voice Model™ and the techniques/methodologies of Estill Voice Training™. Vocal goals and materials are specifically chosen to strengthen the technical and performing abilities of the individual student, whether singing or non-singing. This level of study builds upon concepts gained in previous levels and challenges the student to explore more challenging material.

THE450 - Senior Thesis

This capstone course will demonstrate, in a practical manner, the students training and ability in the theatre arts to graduate schools and prospective employers. Grading is based upon research, the quality and timely completion of the assigned production duties, and a written thesis.

Course Descriptions

UAS - Unmanned Aerial Systems

UAS110 - Intro to Unmanned Aerial Vehicles

A first course in unmanned aerial vehicles (UAVs), aka “drones”, and the technologies involved in their operation. Coverage includes UAV components, command and control (C2) communication systems, basics of flight, regulatory and regulations, safety and societal considerations. Laboratory activities provide opportunity for students to gain hands-on experience in working with UAVs.

UAS120 - Principles of Aviation

A study of the concepts and factors involved in the flight of aircraft in the National Air Space (NAS). Topics include flight theory, airfoils, aerodynamic forces, navigation, aviation meteorology and weather factors, and aviation law. An overview of FAA Federal Aircraft Regulations (FARs) with particular emphasis on the Small UAS Rule (14 CFR part 107) is included.

UAS160 - UAS Design and Construction

Unmanned aerial systems are realized in a variety of forms such as fixed-wing, rotary wing, multirotor, and dirigibles. This course explores the materials, construction methods, sensors, actuators, and control systems used in various aerodyne and aerostat platforms. Students will also learn power system specification, payload accommodations, and safety considerations relating to aerial vehicles. The laboratory component facilitates student design and construction of their own UAV.

UAS210 - UAS Ethics, Law and Regulations

This course provides students with a basic understanding of legalities of UAS operations and their ethical implications in modern society. An overview of aviation law and more detailed coverage of UAS-specific regulations are presented with emphasis in areas included on the Part 107 exam.

UAS220 - UAV Operations

A performance-based course involving safe and methodical operations of unmanned aerial vehicles consistent with FAA regulations. Students will learn flight planning, crew resource management (CRM), flight line operations, UAV maintenance, and acquire instructor-supervised experience in simulated and hands-on piloting of UA platforms to gain proficiency in UA operations.

UAS250 - UAS Certification Prep

This course prepares the student to sit for the FAA Part 107 aeronautical knowledge test. Passing this test and the required TSA background security screening yields a remote pilot certificate with a small UAS rating which allows the holder to be pilot in command (PIC) of a small UAS in the National Air Space.

UAS270 - UAS Avionic Systems

Avionics are the electronics designed for and used in aerospace vehicles. This course covers the avionic systems as used in unmanned aerial vehicles including telemetry, camera stabilization systems, first-person view (FPV), on-screen displays (OSD), ground control stations (GCS), long-range communication systems, flight software and autopilots. F

UAS310 - UAS Sensing and Analysis

Many applications of UASs from simple situational awareness to areas such as real-estate, disaster reconnaissance, search-and-rescue, photogrammetry, precision farming, wildfire containment, land erosion, and aerial inspections require data acquisition from various sensors and processing / interpretation of the data to extract meaningful information. This course first covers the collection of imagery data from UAS cameras or other electro-optical, infrared, and synthetic aperture radar (SAR) sensors. Subsequent computerized post-processing of the acquired data is then explored for various goals such as spatial analysis, anomaly detection and still-image mosaicking.

UAS320 - Mission Planning

Mission planning for UASs includes those activities to plan, prepare, execute, and record an application based operation involving an unmanned aerial system. Students will learn to specify mission particulars, perform hazard and risk analysis, develop a written mission plan, and create a flight plan with flight planning software tools.

Course Descriptions

UAS350 - UAV Operations II

This course continues with UAV Operations I with emphasis on fixed-wing aircraft operation and procedures. A performance-based course involving safe and methodical operations of unmanned aerial vehicles consistent with FAA regulations. Students will gain increased knowledge of flight planning, CRM, flight line operations, UAV maintenance, and acquire experience in piloting of fixed-wing UA platforms.

UAS400 - UAS Senior Project Proposal

The capstone senior project sequence provides the student with an opportunity to integrate various concepts from the program while supporting pursuit of specialized interests. In this course, the student will develop and submit a written proposal for a project involving a UAS. Minimum requirements for the proposal include mission analysis, UAS component specifications, cost analysis, and implementation schedule.

UAS450 - UAS Senior Project

Following UAS400 Senior Project Proposal, this course focuses on the realization of the student's capstone project. Course objectives include implementation, testing, evaluation, and documentation of the project culminating in a formal presentation.

UAS495 - UAS Internship

Upon acceptance to an internship site, the student will work with an on-site supervisor in the application of UAS technologies in a real-world scenario. Actual nature of the work depends on the application and may involve technician-level skills, mission planning, UAV piloting, and/or processing/analysis of acquired data.

UNI-Co Curricular Activities

UNI093 - GO-GR Tentative Schedule

Used by Calu GO for tracking purposes.

UNI094 - GO-GR Schedule Confirmed

Used by Calu GO for tracking purposes.

UNI098 - Attendance Unconfirmed

Used by Student Success for tracking purposes

UNI099 - Attendance Confirmed

Used by Student Success for tracking

UNI100 - First-Year Seminar

First-Year Seminar helps students to achieve their educational goals through the utilization of a full range of institutional and community resources.

UNI101 - Introduction to University Studies

UNI 101 is the first step to student academic success. The premise of this course is to build a strong academic foundation. The course seeks to help students develop and apply essential academic success skills, enhance critical thinking and communication skills, plus explore interests, abilities, values and options regarding the choice of a major and career.

UNI104 - Tentative First Year Seminar

Used by Student Success to track students

UNI200 - Career Readiness

This course provides knowledge of a practical preparation for the world of work. Students conduct self-assessment for career planning; learn how to research particular jobs, careers and employers; develop skills needed for obtaining a job; learn how the workplace is organized; and explore the options for combining career and life expectations.

Course Descriptions

UNI499 - Internship Intent

Internship Intent. Register for this class if you would like to have an Internship. You must have Junior or Senior standing to be considered. Some department require Senior only.

UNI-Co Curricular Activities

UNI093 - GO-GR Tentative Schedule

Used by Calu GO for tracking purposes.

UNI094 - GO-GR Schedule Confirmed

Used by Calu GO for tracking purposes.

UNI098 - Attendance Unconfirmed

Used by Student Success for tracking purposes

UNI099 - Attendance Confirmed

Used by Student Success for tracking

UNI100 - First-Year Seminar

First-Year Seminar helps students to achieve their educational goals through the utilization of a full range of institutional and community resources.

UNI101 - Introduction to University Studies

UNI 101 is the first step to student academic success. The premise of this course is to build a strong academic foundation. The course seeks to help students develop and apply essential academic success skills, enhance critical thinking and communication skills, plus explore interests, abilities, values and options regarding the choice of a major and career.

UNI104 - Tentative First Year Seminar

Used by Student Success to track students

UNI200 - Career Readiness

This course provides knowledge of a practical preparation for the world of work. Students conduct self-assessment for career planning; learn how to research particular jobs, careers and employers; develop skills needed for obtaining a job; learn how the workplace is organized; and explore the options for combining career and life expectations.

UNI499 - Internship Intent

Internship Intent. Register for this class if you would like to have an Internship. You must have Junior or Senior standing to be considered. Some department require Senior only.

Veterinary Technology

VET101 - Introduction to Veterinary Technology

This course introduces students to the Veterinary Technology profession, medical terminology and record keeping. The technicians' role in veterinary ethics, legal regulations, the veterinary team, and the human animal bond will be emphasized throughout the course. Common animal breeds, general principles of behavior, hospital care, handling equipment, and hospital management are presented. This course includes a 45 hour clinical experience observing in an animal hospital.

VET160 - Care and Management of Exotic and Laboratory Animals

This course will introduce students to the many facets of exotic and laboratory animal care and management. Emphasis will be placed on the laws and ethics governing animal research as well as the unique features of each species and how these features affect housing and nutritional needs. Common diseases of each species will be explored in regard to signs, prevention and treatment. Registration for both the lecture and lab is required. Lab exercises will include basic clinical procedures and essential skills. In addition, students are required to participate in animal care rotations in the vivarium.

Course Descriptions

VET202 - Small Animal Management and Clinical Procedures

This course will focus on the fundamentals of veterinary nursing knowledge and skills for dogs and cats. Topics will include behavior, nutrition, handling, disease recognition, prevention and treatment as well as other topics associated with canine and feline health. The laboratory exercises will focus on the clinical skills associated with nursing in the small animal practice such as blood draws, catheter placement, bandaging, and CPR. Registration for both the lecture and lab is required. In addition, students will be required to participate in animal care rotations.

VET210 - Veterinary Clinical Technology and Laboratory Procedures

This course illustrates the importance of laboratory procedures and clinical technology in veterinary medicine. The clinical examination of blood, urine, feces, and cytological samples will be used to demonstrate the diagnostic value of laboratory results and the physiological response of the body to disease. Laboratory procedures will focus on proper sample collection, handling, processing, and storage of biological specimens. The identification, life cycles, and pathogenesis of ecto- and endoparasites will be explored.

VET220 - Large Animal Management and Clinical Procedures

This course will focus on the fundamentals related to the veterinary technician and large animal practice. Topics will include anatomy and physiology, nutrition, handling, disease recognition, prevention and treatment as well as other topics associated to equine and production animals. Clinical procedures will be practiced in the laboratory portion of the course at area large animal facilities. Registration for both the lecture and lab is required. 45 hours of clinical experiences will be gained during this course.

VET230 - Digital Diagnostic Imaging

This course emphasizes techniques involved in the acquisition, digital management, and manipulation of radiographic, electrocardiographic and ultrasound images. Focus will be placed on the skills necessary to produce images of diagnostic quality and the theory of how these images are produced. Registration for both the lecture and the lab are required

VET240 - Veterinary Pharmacy and Pharmacology

This course will familiarize the student with dosage, mechanisms of action, routes of administration, and known toxicities of the commonly used drugs in veterinary medicine. Emphasis will be placed on dosage calculations and drug dispensing as it relates to the veterinary technician.

VET250 - Surgical Nursing, Anesthesia and Pain Management

This course acquaints the student with pre-operative, surgical, and post-operative responsibilities of the veterinary technician. Topics include drug and fluid calculations, patient monitoring, and care of the surgical suite and surgical instruments. Laboratory procedures will include surgical preparation, anesthesia, surgical assisting, post-operative care and client communication. Registration for both the lecture and lab is required. Students will also be required to participate in animal care rotations. This course includes 45 hours of clinical experience.

VET292 - Clinical Experience

This course enables the student to apply knowledge and hone skills by spending 120 hours in the veterinary clinic setting. Experience will be gained in duties that are regularly performed by a licensed or certified veterinary technician under the guidance of veterinarians and qualified clinic personnel. Clinical sites must be approved by the veterinary technology program director or designee.

VET301 - Contemporary Issues in Veterinary Medicine

This course will explore the trends and issues that relate to veterinary medicine. Emphasis will be placed on the role of the veterinary technician and the issues that directly affect the veterinary technician profession.

VET302 - Animal Behavior for the Veterinary Technician

This course will familiarize the student with the role of the veterinary technician in regard to companion animal behaviors commonly encountered in practice. Topics addressed will be the underlying cause of common behaviors, companion animal communication, strategies for behavior modification, client communication, and creating a safe and comfortable environment for the patient, client and veterinary team.

Course Descriptions

VET303 - Shelter Medicine I

Shelter medicine has emerged as a veterinary specialty as a result of the realization that medicine and care of the animals within shelters is far different than caring for pets. This course will introduce the student to the basic principles in shelter medicine. Topics will include housing, husbandry, behavior, and infectious disease of various species of animals that inhabit animal shelters.

VET321 - Animal Reproduction

The study of animal reproduction is of great importance in veterinary medicine. This course will cover reproduction in several companion species, both large and small, but will emphasize large animals where reproduction is of the utmost importance in production. In this course students will be familiarized with the many aspects of animal reproduction including topics such as cycle manipulation, embryo transfer, timed insemination, dystocia, and pregnancy support methods.

VET326 - Zoonotic Diseases

It has been postulated that approximately 75% of emerging diseases are zoonotic. This statement makes the role of the veterinary professional pivotal in preventing, and recognizing, diseases in both animal and human populations. This course will explore the type, transmission, immune response, recognition, prevention, and management of zoonotic diseases.

VET450 - Case Studies in Veterinary Medicine

This course is intended to challenge student understanding from earlier courses in the veterinary technician program. The course will require students to apply previous knowledge and evaluate decisions from case study presentations.

VET492 - Specialty Internship

There are many areas within veterinary medicine that lead to specialties. This course will enable students to explore these specialties and develop skills that will help prepare them if the student chooses to pursue certification in a veterinary technician specialty

WFD-Workforce Development

WFD199 - Special Topics in Workforce Development

These courses provide opportunities for students who have enrolled in or have completed structured certificates, apprenticeships or in-house workforce training programs, as well as life experiences, to document and demonstrate their competencies in order to obtain academic credit for degree-seeking purposes. These classes will plug directly into flexible options of the Associate of Science degree in Workforce Development, as well as the Bachelor of Science degrees in General Studies: Science and Technology and Industrial Technology.

WFD299 - Special Topics in Workforce Development

These courses provide opportunities for students who have enrolled in or have completed structured certificates, apprenticeships or in-house workforce training programs, as well as life experiences, to document and demonstrate their competencies in order to obtain academic credit for degree-seeking purposes. These classes will plug directly into flexible options of the Associate of Science degree in Workforce Development, as well as the Bachelor of Science degrees in General Studies: Science and Technology and Industrial Technology.

WFD399 - Special Topics in Workforce Development

These courses provide opportunities for students who have enrolled in or have completed structured certificates, apprenticeships or in-house workforce training programs, as well as life experiences, to document and demonstrate their competencies in order to obtain academic credit for degree-seeking purposes. These classes will plug directly into flexible options of the Associate of Science Degree in Workforce Development, as well as the Bachelor of Science degrees in General Studies: Science and Technology and Industrial Technology.

WFD499 - Special Topics in Workforce Development

These courses provide opportunities for students who have enrolled in or have completed structured certificates, apprenticeships or in-house workforce training programs, as well as life experiences, to document and demonstrate their competencies in order to obtain academic credit for degree-seeking purposes. These classes

Course Descriptions

will plug directly into flexible options of the Associate of Science degree in Workforce Development, as well as the Bachelor of Science degrees in General Studies: Science and Technology and Industrial Technology.

WST-Women's Studies

WST200 - Introduction to Women's Studies

Women's Studies 200 examines both the diverse and the collective experiences of women and men. The complex intermingling of privilege and inequality that intersect and diverge among women's and men's identities and roles will be analyzed. The impact of gender in arenas such as education, work, family, sexuality, identity, entertainment, sports, religion, and social policy will be explored.

WST350 - Finding Our CHEA: Compassion, Happiness, Empathy, and Activism; The Science of Improving Our World

This course affords students a focused examination of emerging and dynamic fields that highlight how do we make ourselves, our communities, and the world happier, more empathic, more compassionate places? Science finds that increasing our empathy, compassion, and connection with others, while focusing on experiences and relationships are central to these goals. This course uses content from women's/gender studies, social work, sociology, psychology, political science, history, medicine, and more. Women's Studies courses, including this course, engage students in critical analysis of gender, race, class and sexuality, and social justice issues. By the end of the course, students will hold some of the scientific "secrets" to making themselves and others happier and to making communities better places to live.

WST-Women's Studies

WST200 - Introduction to Women's Studies

Women's Studies 200 examines both the diverse and the collective experiences of women and men. The complex intermingling of privilege and inequality that intersect and diverge among women's and men's identities and roles will be analyzed. The impact of gender in arenas such as education, work, family, sexuality, identity, entertainment, sports, religion, and social policy will be explored.

WST350 - Finding Our CHEA: Compassion, Happiness, Empathy, and Activism; The Science of Improving Our World

This course affords students a focused examination of emerging and dynamic fields that highlight how do we make ourselves, our communities, and the world happier, more empathic, more compassionate places? Science finds that increasing our empathy, compassion, and connection with others, while focusing on experiences and relationships are central to these goals. This course uses content from women's/gender studies, social work, sociology, psychology, political science, history, medicine, and more. Women's Studies courses, including this course, engage students in critical analysis of gender, race, class and sexuality, and social justice issues. By the end of the course, students will hold some of the scientific "secrets" to making themselves and others happier and to making communities better places to live.

XCP-Career Planning

XCP194 - Career Planning

A self-discovery course that provides first and second year students the opportunity to develop career interests and goals. Students will gain an understanding of their interests and personal preferences by completing and critically analyzing various career inventories. Topics include the role of career planning in life planning, decision-making, sources of career information and the relationship between careers and a college education.

Undergraduate Catalog

Financial Aid

Mission Statement

The primary mission of the Financial Aid Office at California University of Pennsylvania is to provide financial planning and assistance to students and their families in meeting the costs of education. In fulfilling this mission, each student will be given careful consideration, and the University will determine financial assistance based on federal state and institutional guidelines. Financial aid programs have been established to provide access to higher education with guidelines to ensure fairness in disbursing available funds to qualifying students. The Financial Aid Office strives to ensure that courteous timely and accurate financial aid services are delivered to all students seeking assistance from our office.

For current information on the following items, please visit the Financial Aid Web pages at www.calu.edu/financial-aid:

- Eligibility requirements
- Financial aid application process, including FAFSA
- Cost of attendance
- Grants
- Student employment
- Scholarships
- Loans
- Disbursement of financial aid
- Financial aid warning, financial aid suspension, financial aid probation

Location and Office Hours

The Financial Aid Office is located on the first floor of Dixon Hall. The office hours are 8 a.m. to 4 p.m., Monday through Friday. Appointments are encouraged, but a daily on-call counselor is available to assist walk-ins.

Students can contact the Financial Aid Office by phone at 724-938-4415 or by fax at 724-938-4551. In addition, general financial aid information may be obtained at www.calu.edu/financial-aid. Specific financial aid and student account information is available 24 hours a day through the Vulcan Information Portal (VIP).

General Education Courses

General Education Courses

California University of Pennsylvania believes that a liberal education is essential for all students, regardless of the profession for which they may be preparing. The purpose of the General Education program is to provide the foundation on which a student's education rests and can continue to expand throughout life. The goals, objectives and courses that comprise the General Education program are designed to provide students with the knowledge, understanding and skills they will need to pursue their careers and to lead productive and rewarding lives.

As stated in the Pennsylvania State System of Higher Education Board of Governors Policy 1993-01, "The most important outcomes [of the General Education Curriculum] consist not so much in the mastery of particular bodies of knowledge as in the acquisition of skills, values, awareness, understanding, perspective and appreciation needed for continuing professional and personal growth in a rapidly changing world."

General Education includes a broadly defined essential skills and knowledge needed to live healthy, ethical, fulfilling and productive lives in the modern world. However, General Education goes beyond simply fostering a particular set of skills, but additionally aims to place those skills in a wider context so that students develop the ability and habit of applying them to every aspect of their lives. General Education ensures that our graduates' education is comprehensive, introducing a wide variety of experiences, worldviews and methodologies by sampling diverse academic disciplines.

At California University of Pennsylvania, the General Education curriculum follows naturally from the core values of the University: integrity, civility and responsibility. Students experience these values not only in their chosen area of specialization, but also more broadly in their exposure to the arts, humanities and social and natural sciences. This liberal education provides the essential basis for building character and careers in an increasingly dynamic world.

Students are required to complete 40-41 credits of General Education coursework. This requirement is achieved by taking courses in a series of different "menus," each of which is designed to address a particular set of educational goals. Each menu has a list of courses that satisfy the menu goals. Students may select any course from the menu, unless their major program of study mandates a particular choice. Students should always consult with an academic adviser or their department chair regarding program-specific requirements.

General Education Courses

Building a Sense of Community (1 Cr.)

Overview

Students will have a common core of integrated educational experiences, learning how to become excellent students; how to survive and thrive in a college environment; and how to achieve their educational, personal and career goals. Students will develop the skills necessary to adjust to University life; they will sense that the curriculum is organically related and holistic, not a collection of courses.

Educational Goals:

- To foster academic success through understanding the University;
- To establish a foundation of knowledge on resources and skills necessary to be a successful college student;
- To cultivate campus connections and supportive networks of faculty, staff and students;
- To increase awareness of career choices and opportunities available for professional growth and development; and,
- To develop and enhance critical-thinking skills.

Note: UNI 100 will not be required for incoming students in the fall of 2020; however, students must still complete the total number of credits required by their program (generally 60 for an associate degree and 120 for a bachelor's degree) to graduate.

General Education Courses

Composition (3-6 Crs.)

Overview

Students will have the ability to develop and present ideas clearly in writing. Communication skills include "those required for effective reading, writing, speaking and listening" and "awareness of the challenges of cross-cultural communication" (PASSHE BOG Policy 1993-01).

Educational Goals:

Knowledge and Comprehension

- To demonstrate a capacity to carry out the planning, drafting, revising and editing stages of the writing process;
- To construct, explain and illustrate the interpretations of readings; and
- To recognize both what a text says and how it works (its rhetorical strategies).

Application and Analysis

- To analyze the elements of the writing situation (subject, purpose, audience) as a foundation for writing, and
- To apply rhetorical strategies in writing.

Intermediate Composition

Intermediate Composition is not required for all academic majors. Please consult with your adviser or department chair to determine the specific requirements for your program.

Educational Goals:

Application and Analysis

- To produce prose that is clear, coherent, convincing and correct, and
- To apply strategies for effective cross-cultural communication.

Synthesis and Evaluation

- To write papers that formulate original positions on a problem or issue in the context of a synthesis of multiple primary and/or secondary sources;
- To assess the usefulness and reliability of potential print, electronic and primary research for a proposed research report; and
- To plan, develop and write appropriately documented and formatted academic and/or professional texts.

NOTE: "Effective cross-cultural communication" here entails writers paying attention to how their texts might best be crafted for particular audiences, whether those audiences be professional or general.

Composition Course Menu

Introductory Composition Courses

- **ENG 101** Composition I
- **HON 150** Honors Composition I

Intermediate Composition Courses

- **ENG 102** Composition II
- **ENG 211** Business Writing I
- **ENG 217** Scientific and Technical Writing
- **HON 250** Honors Composition II

General Education Courses

Ethics and Multicultural Emphasis List (EMEL)

Overview

All academic programs are required to devote at least 3 credits of the General Education Options category to the Ethics and Multicultural Emphasis List (EMEL), a list of courses focused on values, ethics or multiculturalism. Programs may choose to require a specific course (or subset of courses) from the list. Students should check their advisement sheet or consult with an adviser to be sure of any specific requirements.

All EMEL courses are General Education menu courses that have a particular focus and primary emphasis on (at least) one of these two areas:

Multicultural Awareness

Students will become knowledgeable about cultural similarities and differences. Students will gain an "understanding of how people's experiences and perspectives are shaped by gender, ethnicity, culture and other factors that distinguish groups of people, coupled with recognition of common elements within human experiences that transcend time, space, race and circumstance" (PASSHE BOG Policy 1993-01).

Multicultural awareness assists individuals, regardless of ethnicity, gender, disability, social class or race, to understand and appreciate events and people from various points of view. The primary focus of a course on this list must be one or more of the following: gender or gender expression, sexual orientation, ethnicity, racial diversity, world religious belief systems or cultural diversity.

Educational Goals:

- To recognize one's own cultural background and views, including biases and prejudices toward other groups, while comparing and contrasting them with the values, beliefs and practices of other cultural groups;
- To outline diversity, either historically or cross-culturally, for the population(s) under study;
- To explain how cultural groups define social constructs (e.g., gender roles, gender attribution, gender ideology and gender identity) and how these are expressed;
- To identify and explain the social behavior of the population(s) under study; and
- To explain why tensions exist between cultural groups and how such tensions are expressed, such as attribution and ideology.

Values

Students will gain an "understanding of the role of values in personal, professional and civic life; experience in recognizing and analyzing ethical issues" (PASSE BOG Policy 1993-01). The study of ethical values includes the acts, customs and institutions regarded in a particular, usually favorable, way by a group of people. Ethical and moral values must be the primary focus of the course, not just a topic. The phrase "ethical values" here should be understood in contrast to values applicable only to limited contexts, such as personal or professional success, or adherence to laws and regulations.

Educational Goals:

- To apply bodies of knowledge to form the basis for an analysis of ethical values;
- To explain how ethical values are developed within diverse human frameworks;
- To analyze, synthesize and evaluate how ethical concepts are formed;
- To apply an analysis of ethical values to other branches of knowledge or to issues of universal human concern; and
- To adhere to ethical standards in the world at large and within professional settings.

Ethics and Multicultural Emphasis List Course Menu

EMEL Courses

- **ANT 231** Medical Anthropology
- **ANT 280** Indians of North America
- **ANT 300** Cultural Views of Women
- **ARB 203** Intermediate Arabic I
- **ART 243** Introduction to Asian Art

General Education Courses

- **CHD 350** Family and Community Collaboration Partnerships
- **CIS 352** Global, Economic and Social Ethical Issues in Computing
- **EAS 469** Global Climate Change
- **EDU 310** Teaching in a Multicultural Society
- **ENG 112** Myth, Magic, and Mysticism
- **ENG 127** Woman as Hero
- **ENG 135** Re-Reading Harry Potter
- **ENG 136** Women's Memoirs
- **ENG 137** Northern Appalachian Literature
- **ENG 148** Horror in Literature
- **ENG 155** Introduction to African American Literature
- **ENG 156** Introduction to Native American Literature
- **ENG 179** Introduction of the Animated Film
- **ENG 181** Cultures of American Humor
- **ENG 306** Press Law and Media Ethics
- **ENG 325** World Literature to 1600
- **ENG 326** World Literature from 1600
- **GEO 100** Introduction to Geography
- **GTY 200** Aging in American Society
- **HIS 317** African American History to 1877
- **HIS 318** African American History since 1877
- **HIS 322** History of Religious Persecution in the US
- **HIS 324** The History of Women, Gender and Sexuality in the Modern World
- **HIS 325** Women in U.S. History
- **HIS 347** History of Race and Ethics in the U.S.
- **HIS 352** Native American History to 1850
- **HIS 353** Native American History from 1850
- **HIS 380** Readings in African American Studies
- **JUS 415** Multiculturalism and the Criminal Justice System
- **MAT 202** Math Around the World
- **MUS 300** Jazz: History, Form and Analysis
- **MUS 305** African American Gospel and Caribbean Music
- **PHI 200** World Religions
- **PHI 220** Ethics
- **PHI 307** Medical Ethics
- **PHI 308** Bioethics
- **PHI 320** Ethical Theory
- **PHI 326** Social and Political Philosophy
- **POS 315** Constitutional Law: Civil Liberties and Civil Rights
- **POS 322** Politics of the Middle East
- **POS 325** Politics of Asia
- **POS 330** American Political Ideas
- **POS 340** The Politics of Empires
- **POS 347** Development of Political Thought: Classical and Medieval
- **POS 348** Political Thought: Medieval and Modern
- **PSY 211** Social Psychology
- **PSY 320** Black Psychology
- **REC 361** Parks and Recreation for Diverse Populations
- **SOC 205** Contemporary Social Problems
- **SOC 290** Gender and Work
- **SOC 325** Sociology of the Family
- **SPN 304** Spanish for Law Enforcement
- **SPN 305** Spanish for Business
- **SPT 305** Ethics in Sport
- **THE 140** Script Analysis

General Education Courses

- **THE 404** Cultural Studies in Theatre
- **WST 200** Introduction to Women's Studies
- **WST 300** Special Topics in Women's Studies
- **WST 320** Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ) Studies
- **WST 330** Examination of Gender, Race, Sexuality and Class in Media
- **WST 340** Violence Against Women: A Global Perspective
- **WST 400** Capstone, Advanced Women's Studies

General Education Courses

Fine Arts (3 Crs.)

Overview

Students will have an "appreciation of and experience with ... the arts" (PASSHE BOG Policy 1993-01). Fine arts courses are those that present organized values, beliefs or emotions using the senses and physical expression as the creative vehicle, and include courses in art, dance, music and theater.

Educational Goals:

- To present, critique or analyze human values, beliefs and emotions as they are conceptualized, formulated and expressed through verbal, aural and physical action and artifacts and perceived through the senses; and
- To attend and react to a performance or exhibit related to the discipline studied.

Additionally, a fine arts course must demonstrate *at least one* of the following goals:

- To compare and contrast the artistic expression of different cultural groups (where culture is defined broadly to include issues such as gender, ethnicity, racial diversity, religious belief, lifespan, etc.); and/or
- To recognize how values, ethics or social norms impact artistic expression; and/or
- To apply the tools of critical thinking to the fine arts (for example, compare opposing critiques of a work of art and ask probing questions about the sources of any difference of opinion).

Fine Arts Course Menu

Courses

- **ART 106** Art Appreciation
- **ART 109** Landmarks of World Art
- **ART 110** Drawing I
- **ART 112** Introduction to New and Emerging Art Media
- **ART 119** Design 2-D
- **ART 120** Design 3-D
- **ART 215** Digital Painting I
- **ART 233** Natural Science Drawing
- **ART 243** Introduction to Asian Art
- **ART 295** Surface Design
- **ART 310** Advanced Drawing
- **ART 323** Women in Art
- **ART 326** Contemporary Art
- **ART 328** Italian Renaissance Art
- **ART 350** Printmaking: Relief
- **ART 351** Printmaking: Intaglio
- **ART 352** Printmaking Processes
- **ART 376** Jewelry/Metals: Casting
- **ART 377** Jewelry/Metals: Fabrication
- **ART 382** Ceramics Studio
- **ART 383** Painting Studio
- **ART 385** Sculpture Studio
- **ART 388** Critical Writing in Art
- **ART 410** Teaching Visual Art in Pre-K through Grade 8
- **ART 411** Teaching Art in Grades 9-12
- **ART 438** Figure Drawing
- **ART 448** Figure Modeling
- **ART 458** Figure Drawing and Modeling
- **ART 493** Advanced Ceramics
- **ART 496** Advanced Painting
- **ART 498** Advanced Sculpture
- **DAN 132** Ballet Technique I

General Education Courses

- **DAN 133** Jazz Technique I
- **DAN 134** Tap Dance Technique I
- **DAN 232** Ballet Technique II
- **DAN 301** Theater Dance I
- **DAN 302** Theater Dance II
- **DMT 101** Time-Based Media
- **ENG 110** Introduction to Creative Writing
- **ENG 179** Introduction to the Animated Film
- **HON 230** Introduction to Disciplinary Research in Humanities
- **MUS 100** Introduction to Music
- **MUS 104** Voice Class I
- **MUS 186** Clavinova Ensemble
- **MUS 187** Guitar Ensemble
- **MUS 188** String Ensemble
- **MUS 191** University Choir
- **MUS 192** California Singers
- **MUS 193** University Gospel Choir
- **MUS 196** Jazz Ensemble
- **MUS 198** Marching Band
- **MUS 199** University Concert Band
- **MUS 211** Keyboard Class
- **MUS 215** Comprehensive Musicianship I
- **MUS 300** Jazz: History, Form and Analysis
- **MUS 304** American Musical: History, Form and Analysis
- **MUS 305** African-American Gospel and Caribbean Music
- **MUS 306** Opera
- **MUS 307** Special Music Project
- **MUS 310** Music in Media
- **MUS 313** Rock and Roll: History, Form and Analysis
- **MUS 314** The Music Industry: History, Form and Analysis
- **MUS 315** Comprehensive Musicianship II
- **MUS 372** Creative Arts for Elementary Education and Early Childhood
- **PHI 335** Aesthetic Theory
- **PHI 336** Philosophy of Film
- **THE 100** Introduction to Theatre
- **THE 101** Voice and Speech
- **THE 126** Makeup
- **THE 131** Fundamentals of Acting
- **THE 201** Voice and Interpretation
- **THE 203** Music Theatre Performance I
- **THE 221** Theatrical Foundations
- **THE 231** Intermediate Acting
- **THE 309** Reader's Theatre
- **THE 328** Scene Painting

General Education Courses

General Education (9-12 Crs.)

The General Education Options category exists so that colleges, departments and programs can tailor the allocation of General Education credits to best meet their students' educational goals and needs. Students should consult their advisement sheet, academic adviser or department chair to determine the exact requirements for the General Education Options credits for their program.

General Education Options account for 9-12 credits of the General Education program. Departments/programs requiring an Intermediate Composition course will have 9 credits of General Education Options, while those not requiring Intermediate Composition will have 12 credits.

All students are required to complete 3 credits (one course) from the Ethics and Multicultural Emphasis List. The remaining General Education Options credits are allocated based on the student's major field of study. (See individual program advisement sheets.)

General Education Courses

Health and Wellness (3 Crs.)

Overview

Students will have an understanding of the various means by which they may fulfill their potential as healthy people living in healthy communities across the lifespan. Wellness is the result of individuals making intelligent decisions concerning the various factors that can affect their physical, emotional, social, spiritual, intellectual and environmental health. Courses must include one or more of the following emphases: eating and exercising toward a healthy active lifestyle; building healthy relationships; understanding and preventing disease; explaining alcohol and drug use and abuse; making healthy choices; and building healthy communities.

Educational Goals:

- To compare and contrast healthy and unhealthy (relationships, drug use, choices, etc.) lifestyle factors that influence health;
- To assess one's level of health and wellness, and develop skills for behavioral change;
- To assess one's own sense of self (emotional health) and identify qualities of good emotional/mental health;
- To analyze, design and assess culturally competent health and wellness promotion plans for individuals and communities; and
- To determine barriers to achieving optimal health and wellness among all populations including those which experience health disparities.

Health and Wellness Course Menu

Courses

- **ATE 340** Sports Nutrition
- **BIO 112** Biology of Sexually Transmitted Diseases
- **BIO 117** Introduction to Human Biology
- **CHD 350** Family and Community Collaboration Partnerships
- **DAN 233** Jazz Technique II
- **DAN 260** Modern Dance
- **GTY 380** Wellness and Aging
- **HSC 115** Current Health Issues
- **HSC 250** Nutrition for Health and Wellness
- **HSC 315** First Aid and Personal Safety
- **PSY 222** Psychology of Stress Management
- **REC 165** Introduction to Recreation and Leisure
- **REC 195** Leisure and Wellness Recreation
- **SOW 303** Human Sexuality and Society

General Education Courses

Humanities (3 Crs.)

Overview

Students will have an "appreciation of and experience with literature" (PASSHE BOG Policy 1993-01), as well as with other traditional areas of the humanities. The humanities deal with human values, beliefs and emotions and the way these are expressed through human creations. Humanities courses present organized values, beliefs or emotions using language as the creative vehicle, and include literature, philosophy and foreign language study.

Educational Goals:

- To present, critique or analyze human values, beliefs or emotions regarding the human condition as they are conceptualized, formulated and expressed through language.

Additionally, a humanities course must demonstrate *at least one* of the following goals:

- To compare and contrast the human condition as expressed by different cultural groups (where culture is defined broadly to include issues such as gender, ethnicity, racial diversity, religious belief, lifespan, etc.); and/or
- To recognize and analyze values, individual or cultural attitudes about values, relations between values and attitudes about values, and/or relations between any of these and other aspects of human behavior; and/or
- To recognize how critical analysis and reasoning are used to address problems in the humanities.

Humanities Course Menu

Courses

- **ARB 101** Elementary Arabic I
- **ARB 102** Elementary Arabic II
- **ARB 203** Intermediate Arabic I
- **ARB 341** Contemporary Arabic Culture
- **CMD 350** Sign Language and Braille I
- **CDC 351** Producing Media Messages II
- **EDU 210** Critical Thinking and Reading
- **ENG 106** Introduction to Poetry
- **ENG 107** Introduction to Fiction
- **ENG 108** Introduction to Drama
- **ENG 112** Myth, Magic and Mysticism
- **ENG 127** Woman as Hero
- **ENG 135** Re-Reading Harry Potter
- **ENG 136** Women's Memoirs
- **ENG 137** Northern Appalachian Literature
- **ENG 148** Horror in Literature
- **ENG 152** The Lord of the Rings
- **ENG 155** Introduction to African American Literature
- **ENG 156** Introduction to Native American Literature
- **ENG 178** Literature and Film
- **ENG 180** Literature and Natural Environments
- **ENG 181** Cultures of American Humor
- **ENG 203** Great Books
- **ENG 301** British Literature I
- **ENG 306** Press Law and Media Ethics
- **ENG 315** Survey of American Women Writers
- **ENG 337** Survey of American Literature I (to 1865)
- **ENG 338** Survey of American Literature II
- **ENG 354** Media History
- **ENG 487** American Literary Genres
- **ESP 100** Social Contexts of Disability in Popular Media
- **ESP 210** Special Education Foundations and Collaboration

General Education Courses

- **FRE 101** Elementary French I
- **FRE 102** Elementary French II
- **FRE 203** Intermediate French I
- **FRE 204** Intermediate French II
- **FRE 341** 17th Century & Classical Age
- **FRE 343** Age of French Romanticism
- **FRE 344** The Age of French Realism
- **FRE 345** Birth of Modern French Culture in the Arts 1900-World War II
- **FRE 346** Contemporary French Culture/Arts
- **HIS *** Any Course
- **HON 230** Introduction to Disciplinary Research in Humanities
- **PHI 100** Perspectives in Philosophy
- **PHI 115** Logic and Language
- **PHI 200** World Religions
- **PHI 201** Ancient Philosophy
- **PHI 206** 16th-18th Century Philosophy
- **PHI 220** Ethics
- **PHI 305** Medieval Philosophy
- **PHI 307** Medical Ethics
- **PHI 308** Bioethics
- **PHI 311** Formal Logic I
- **PHI 312** Formal Logic II
- **PHI 320** Ethical Theory
- **PHI 326** Social and Political Philosophy
- **PHI 355** Philosophy of Religion
- **PHI 405** Epistemology
- **PHI 410** Metaphysics
- **PHI 415** Philosophy of Mind
- **PHI 426** Phenomenology and Existentialism
- **PHI 431** Analytic Philosophy
- **SOC 210** Social Inequality
- **SOC 211** Sociology Collective Behavior
- **SOC 225** Sociology of Aging
- **SOC 240** Social Institutions
- **SOC 300** Sociology of Deviance
- **SOC 309** Sociology of Sport
- **SOC 378** Charismatic Leaders
- **SPN 101** Elementary Spanish I
- **SPN 102** Elementary Spanish II
- **SPN 304** Spanish for Law Enforcement
- **SPN 305** Spanish for Business
- **SPT 305** Ethics in Sport
- **THE 140** Script Analysis
- **THE 271** Scene Design I
- **THE 304** World Drama
- **THE 305** Shakespeare in the Theatre
- **THE 306** Modern Drama
- **THE 404** Cultural Studies in Theatre
- **WST 200** Introduction to Women's Studies
- **WST 320** Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ) Studies
- **WST 330** Examination of Gender, Race, Sexuality and Class in Media

General Education Courses

Laboratory Component Courses (one course)

Overview

A Laboratory Component course must include at least 25% evaluation and assessment of student performance directly from activities and experiences that fulfill the Laboratory Component educational goals. A Laboratory Component course may be a course in the student's major field of study or may be a General Education menu course. Students should consult with their academic adviser or department chair to determine whether any required courses for their major fulfill this component.

Educational Goals:

- Use discipline-specific methodologies and practices to systematically investigate the world;
- Organize data into trends and patterns using quantitative and/or qualitative methods (spatial, graphical, symbolic, etc.) to sort, analyze and interpret natural phenomena;
- Effectively communicate results of a set of applied experiments or observations; and
- Assess differences between theory and experimental results during evaluation of experimental design.

Laboratory Component Course Menu

Courses

- **ANT 254** Introduction to Forensic Anthropology
- **ANT 341** Research Laboratory in Archaeology
- **ART 130** Biological Illustration: Form and Function
- **ART 233** Natural Science Drawing
- **BIO 117** Introduction to Human Biology
- **BIO 130** Biological Illustration: Form and Function
- **BIO 215** Introduction to Cellular and Molecular Biology
- **BIO 232** Fundamentals of Biological Anthropology
- **BUS 381** Management Science II
- **CHE 101** General Chemistry I
- **CHE 102** General Chemistry II
- **DMT 180** Foundations of Digital Media
- **EAS 100** Introduction to Earth Science
- **EAS 104** Introduction to Meteorology
- **EAS 150** Introduction to Geology
- **EAS 245** Weather Analysis and Forecasting
- **ECO 421** Applied Econometrics
- **EET 110** Electrical Circuits I
- **GCM 180** Multimedia Foundations
- **GTY 400** Adult Development and Aging
- **JUS 380** Crime Scene Imaging
- **JUS 487** Computer Forensics
- **MAT 213** Data Visualization
- **MAT 261** Big Data Analytics
- **MAT 376** Applied Regression
- **NUR 470** Family Health Nursing
- **PHS 120** Basic Physical Science with Lab
- **PHS 137** Introduction to Environmental Chemistry
- **PHY 101** College Physics I
- **PHY 202** College Physics II
- **POS 319** Campaign Management
- **PSY 301** Sensation and Perception Lab
- **PSY 306** Cognitive Psychology
- **PSY 335** Psychology of Learning
- **PSY 340** Psychological Measurement Lab
- **PSY 420** Social Psychology Lab
- **SOW 201** Interviewing for the Human Services

General Education Courses

- **TED 304** Design in Bio-related Technology
- **THE 255** Puppetry
- **THE 272** Properties Design in Theatre
- **THE 310** Dance Production
- **THE 311** Lighting II

General Education Courses

Mathematics and Quantitative Literacy (3 Crs.)

Overview

Students will have the "ability to understand numerical data and use mathematical methods for analysis and problem solving" (PASSHE BOG Policy 1993-01). Mathematics is the science of numbers and their operations, interrelations, combinations, generalizations and abstractions and of space configurations and their structure, measurement, transformations and generalizations.

Educational Goals:

- To apply a variety of appropriate strategies to solve mathematical problems;
- To construct mathematical arguments and proofs;
- To express ideas precisely using the language of mathematics;
- To construct, analyze and interpret mathematical models of physical, social or other phenomena; and
- To apply mathematics in contexts outside of mathematics.

Mathematics and Quantitative Literacy Course Menu

Courses

- **MAT 100** Survey of Math
- **MAT 110** Applications of Math
- **MAT 120** Elementary Topics in Mathematics I
- **MAT 130** Elementary Topics in Mathematics II
- **MAT 181** College Algebra
- **MAT 191** College Trigonometry
- **MAT 199** Pre-Calculus
- **MAT 202** Math Around the World
- **MAT 205** Statistics for the Health and Social Sciences
- **MAT 215** Statistics
- **MAT 225** Business Statistics
- **MAT 272** Discrete Mathematics
- **MAT 273** Applied Calculus
- **MAT 281** Calculus I
- **MAT 282** Calculus II
- **MAT 290** Technology for Mathematics
- **MAT 303** Geometry
- **PSY 331** Inferential Statistics in Psychology

General Education Courses

Natural Sciences (3-4 Crs.)

Overview

Students will have a basic understanding of the natural sciences, which are concerned with people's relationship with the natural and physical world. The various branches of natural science seek to understand the processes, components and interactions of the natural world, encompassing physics (matter and energy and their interrelations and transformations), biology (living organisms and their essential processes), chemistry (the physical properties and composition of nature and its products) and other subdisciplines that connect the major branches of natural science.

Educational Goals:

- To identify major concepts in natural science disciplines, which provide insights into the breadth of those disciplines and their relationship to other disciplines;
- To explain the method by which the sciences seek to explain the natural world and the development of hypotheses, models, theories and laws;
- To identify and assess the basis of the numerous scientific issues that affect the society in which the students live;
- To apply concepts and knowledge as they relate to research, problem solving and effective decision-making in the natural sciences;
- To analyze and evaluate the limitations of collected data and to explore possible alternative interpretations; and
- To recognize that "good" science operates on the same set of "ethical values" that govern society to include, but not limited to, honesty, objectivity, openness and respect for others.

Natural Sciences Course Menu

Courses

- **ART 233** Natural Science Drawing
- **BIO 103** Contemporary Issues in Biology
- **BIO 130** Biological Illustration: Form and Function
- **BIO 232** Fundamentals of Biological Anthropology
- **CHE 101** General Chemistry I
- **CHE 102** General Chemistry II
- **CHE 103** Chemistry for the Everyday World
- **CMD 221** Speech Science
- **CMD 310** Anatomy and Physiology
- **EAS 100** Introduction to Earth Science
- **EAS 104** Introduction to Meteorology
- **EAS 105** Extreme Weather
- **EAS 131** Introduction to Environmental Geology
- **EAS 142** Introduction to Climate Science
- **EAS 150** Introduction to Geology
- **EAS 163** Introduction to Oceans and Climate
- **EAS 469** Global Climate Change
- **ENS 101** Introduction to Environmental Science
- **HSC 110** Anatomy and Physiology I
- **HSC 120** Human Anatomy and Physiology II with Lab
- **PHI 325** Philosophy of Science
- **PHS 120** Basic Physical Science with Lab
- **PHS 137** Introduction to Environmental Chemistry
- **PHY 101** College Physics I
- **PHY 121** General Physics I
- **PHY 122** General Physics II
- **PHY 202** College Physics II

General Education Courses

Public Speaking (3 Crs.)

Overview

Students will have the ability to develop and present ideas through oral communication.

Educational Goals:

- To be able to demonstrate the theory and application of public speaking;
- To construct and arrange arguments, evidence, information and appeals in speeches designed to accomplish informative and persuasive communication goals;
- To demonstrate the use of language in speeches designed to accomplish informative and persuasive communication goals;
- To prepare and deliver effective communication with audiences in the presentation of speeches;
- To make critical and ethical evaluation of public speeches; and
- To apply strategies for effective cross-cultural communication.

Public Speaking Course Menu

Courses

- **CDC 101** Public Speaking
- **CDC 201** Argumentation and Advocacy
- **EDU 350** Supporting English Language Learners

General Education Courses

Social Sciences (3 Crs.)

Overview

Students will have a "basic understanding of ... the social sciences and their significance in contemporary society" (PASSHE BOG Policy 1993-01) and will have an "awareness of the social, economic, political and environmental interdependence of countries and regions of the world" (PASSHE BOG Policy 1993-01). The social sciences focus on human behavior, how people interact with each other in the past and present; how people interact with the environment; and how people organize, govern and trade among themselves.

Educational Goals:

- To discuss, explore or utilize the scientific method to understand human behavior and address the question of "why do people do what they do?";
- To identify major concepts in one or more social science disciplines and provide insight into the breadth of these disciplines and their relationship to other disciplines; and
- To recognize how critical analysis and reasoning are used to address problems in the social sciences.

Additionally, a social science course must demonstrate *at least one* of the following goals:

- To identify, explain, apply or evaluate the moral and ethical codes of a social science discipline; and/or
- To recognize, describe or analyze how cultural differences impact human behavior (where culture is defined broadly to include issues such as gender, ethnicity, racial diversity, religious belief, lifespan, etc.).

Social Sciences Course Menu

Courses

- **ANT 100** Introduction to Anthropology
- **ANT 231** Medical Anthropology
- **ANT 232** Fundamentals of Biological Anthropology
- **ANT 280** Indians of North America
- **ANT 300** Cultural Views of Women
- **BUS 100** Introduction to Business
- **CMD 100** Survey of Speech Pathology
- **CMD 105** Language and Speech Development
- **CMD 108** Nature of Language
- **CMD 220** Communication Across the Lifespan
- **ECO 100** Elements of Economics
- **ECO 102** Economics for Elementary Education
- **ECO 201** Principles of Microeconomics
- **ECO 202** Principles of Macroeconomics
- **EDU 310** Teaching in a Multicultural Society
- **GEO 100** Introduction to Geography
- **GEO 102** Geographic Systems for Elementary Education
- **GEO 150** Introduction to Tourism Studies
- **GEO 217** Demographic Analysis
- **GEO 220** Geography of North America
- **GEO 360** Emergency Management
- **GTY 100** Introduction to Gerontology
- **GTY 200** Aging in American Society
- **JUS 101** Introduction to Criminal Justice Studies
- **JUS 361** Court Systems
- **JUS 415** Multiculturalism and the Criminal Justice System
- **LEA 100** Introduction to Leadership Studies
- **POS *** Any Course
- **PSY 100** General Psychology

General Education Courses

- **PSY 211** Social Psychology
- **PSY 320** Black Psychology
- **REC 361** Parks and Recreation for Diverse Populations
- **SOC 100** Principles of Sociology
- **SOC 205** Contemporary Social Problems
- **SOC 290** Gender and Work
- **SOC 311** Sociology of Crime
- **SOC 312** Sociology of Organizations
- **SOC 315** Social Minorities
- **SOC 316** Urban Sociology
- **SOC 317** Substance Use and Abuse
- **SOC 318** Sociology of Addiction, Excess, and Exploitation
- **SOC 320** International Women's Movement
- **SOC 324** Child Abuse and Neglect
- **SOC 325** Sociology of Family
- **SOC 380** Society and the Sociopath
- **SOC 395** Sociology of Elite Deviance
- **SOC 400** Structural and Institutional Violence
- **SOC 411** Symbolic Interaction
- **SOW 150** Introduction to Social Work
- **SOW 201** Interviewing for the Human Services
- **SOW 215** HBSE: The Life Course
- **SOW 316** HBSE II: Groups, Organizations and Communities
- **SOW 330** Child Welfare
- **SOW 364** Juvenile Delinquency
- **WST 300** Special Topics in Women's Studies
- **WST 340** Violence Against Women: A Global Perspective
- **WST 400** Capstone, Advanced Women's Studies

General Education Courses

Special Experience Component Courses (one course)

Overview

The Special Experience Component provides students with opportunities to demonstrate the application of the knowledge and skills developed through both the major discipline of study and the General Education program.

Special Experience Component courses are characterized by reflective thinking and the ability to synthesize information and ideas, to integrate knowledge and to express ideas acquired throughout the college experience. These courses reinforce the overall General Education experience by emphasizing ethics, values and norms, and multicultural awareness as broadly defined.

NOTE: Many departments and programs designate specific courses (either within or outside their major/program) to fulfill the Special Experience Component requirement. Students should consult with their academic adviser or department chair regarding specific requirements for their program of study.

Educational Goals:

- Examine interrelationships within and across disciplines;
- Apply problem-solving and/or critical analysis skills using a variety of methods and tools;
- Demonstrate information literacy skills, including the ability to access, evaluate, interpret and use information from a variety of sources; and
- Address issues in the community, or consider community or social implications of the course (i.e., multicultural issues, values, ethics).

Special Experience Component Course Menu

Courses

- **ACC 491** Account Internship
- **ANT 455** Anthropology of Death and Dying
- **ANT 499** Senior Seminar in Anthropology
- **ART 490** Senior Studio Thesis
- **ATE 405** Athletic Training Clinical Education IV
- **BIO 418** Biological Research Investigations
- **BIO 492** Biological and Environmental Science Internship
- **BUS 492** Business Internship
- **CHD 322** Professional Education Internship
- **CIS 492** System Development and Implementation
- **CMD 450** Intro to Clinic Procedures
- **CSC 492** Senior Project II
- **DMT 485** Senior Seminar
- **DMT 495** Internship
- **EAS 391** Geology of the Northwestern U.S. Field Course
- **EAS 392** Geology of the Southwestern U.S. Field Course
- **EAS 393** Geology of the Eastern U.S. Field Course
- **EAS 431** Digital Media for Weather and Climate Applications
- **EAS 492** Field Course in Geology
- **ECO 492** Economic Internship
- **EET 450** Senior Project
- **ELE 461** Student Teaching and School Law PreK-4
- **ELM 461** Student Teaching and School Law Grades 4-8
- **ENG 499** English Studies Capstone Class
- **ENS 480** Topics in Field Biology
- **ESP 461** Student Teaching Practicum
- **FIN 420** Securities Industry Essentials Exam Prep
- **FIN 492** Finance Internship
- **FIT 410** Wellness Seminar II
- **GCM 495** Graphic Communications Internship
- **GEO 360** Emergency Management

General Education Courses

- **GEO 383** Dark Tourism and Extreme Topics
- **GEO 479** Geography Internship
- **GTY 440** Gerontology Internship
- **HIS 491** Readings in History
- **HRM 492** HRM Internship
- **JUR 310** Medieval Jurisprudence
- **JUS 499** Seminar in Criminal Justice Studies
- **LAW 410** Law and Ethics
- **LEA 399** Selected Topics in Leadership
- **LST 490** Seminar in Liberal Studies
- **MAT 400** Mathematical Modeling
- **MAT 401** Data Analysis Capstone Project
- **MAT 419** Math Internship
- **MDI 300** Dialogue and Differences
- **MFL 460** Modern Languages and Cultural Internship
- **MFL 481** Modern Languages Internship
- **MGT 492** Management Internship
- **MIS 492** Management Information Systems Internship
- **MKT 492** Marketing Internship
- **MUS 482** Music Technology Practicum -Marketing
- **MUS 483** Music Technology Practicum – Post Production
- **MUS 484** Music Technology Practicum - Sound Engineer
- **MUS 485** Music Technology Practicum
- **MUS 488** Music Technology Internship
- **MUS 499** Senior Project/Recital
- **NUR 475** Community Health Nursing
- **PGM 425** Senior Internship in Professional Golf Management
- **PHI 325** Philosophy of Science
- **PHI 335** Aesthetic Theory
- **POS 450** Seminar in Politics
- **PSY 469** Psychology Internship
- **SEC 461** Student Teaching
- **SOC 379** Special Problems in Sociology
- **SOC 429** Sociology Intern
- **SOC 495** Seminar in Sociology
- **SOW 435** Field Education Seminar
- **SPT 430** Sport Management Senior Seminar
- **TED 436** Engineering Design and Development
- **THE 450** Senior Thesis
- **VET 492** Specialty Internship
- **WST 350** Finding our CHEA

General Education Courses

Technological Literacy (3 Crs.)

Overview

Students will have a basic understanding of the current and potential significance of technology, as well as its impact on contemporary society. Technological literacy means knowing how to use tools, resources, processes and systems to change or to control the natural and artificial environment, thus altering the human condition. (International Technology Education Association)

Educational Goals:

- To explain major concepts in technology, providing insights into its breadth and into its relationship to other areas of study;
- To use technologies as they apply to systems designed to meet human needs;
- To design, produce, test and analyze possible solutions to technological problems; and
- To critically evaluate the implications and varying interpretations of technological changes as they relate to and determine impacts on individuals, society, the environment and the future.

Technological Literacy Course Menu

Courses

- **BIO 201** Survey of Biotechnology
- **CIS 110** Introduction to Information Systems
- **CIS 120** Application Programming I
- **CIS 220** Application Programming II
- **CIS 352** Global, Economic and Social Ethical Issues in Computing
- **CSC 101** Personal Productivity Software
- **CSC 120** Problem Solving and Programming Constructs
- **CSC 124** Computer Programming I
- **CSC 201** Internet Concepts
- **CSC 306** FORTRAN
- **DMT 100** Foundations of Print Media
- **DMT 180** Foundations of Digital Media
- **DMT 250** Digital Imaging
- **EAS 245** Weather Analysis and Forecasting I
- **EDU 333** Technology in Teaching and Learning
- **EDU 335** Teaching in an Online Environment
- **GCM 180** Multimedia Foundations
- **GCM 220** Black and White Photography
- **GCM 300** Digital Photography
- **GCM 410** Digital Portfolio
- **GET 130** Introduction to Engineering Technology
- **GIS 222** Geo-Business
- **GIS 303** Crime Mapping and Spatial Analysis
- **GIS 311** Geographic Information Systems
- **GIS 350** Remote Sensing of the Environment
- **ITE 341** Quality Control
- **JUS 220** High Technology Crime Investigations
- **JUS 380** Crime Scene Imaging
- **JUS 405** Cyber Security
- **JUS 487** Computer Forensics
- **JUS 488** Cyber Crime Investigation
- **MIS 201** Management Information Systems
- **SEC 360** Technology Integration in Secondary Education
- **TED 111** Information Systems
- **TED 302** Energy and Control Systems
- **TED 316** Structural Design
- **TED 426** Manufacturing Enterprises
- **THE 141** Stagecraft I

General Education Courses

- **THE 150** Introduction to Theatrical Design
- **THE 211** Lighting I
- **THE 341** Stagecraft II
- **THE 480** Digital Performance
- **VET 230** Digital Diagnostic Imaging

General Education Courses

Upper-Division Writing Component Courses (two courses)

Overview

Students must complete two Upper-Division Writing Component courses in, and as specified by, their major discipline of study. Upper-Division Writing Component courses emphasize professionally oriented writing within a particular discipline. The Upper-Division Writing Component gives students the opportunity to practice and demonstrate the skills of written communication as they are specifically applied to their major field of study. The Writing Component courses require at least 20 pages, or the equivalent thereof, of formal writing that has undergone significant revision based on peer or instructor feedback. The 20-page total may be attained through multiple assignments of varying page length.

Educational Goals:

Application and Synthesis

- To produce prose that is clear, coherent, correct and convincing for readers within the writer's major discipline of study; and
- To apply strategies for effective cross-cultural communication.

Synthesis and Evaluation

- To write papers that formulate original positions on a problem or issue *within the writer's major discipline of study* in the context of a synthesis of multiple primary and/or secondary sources;
- To assess the usefulness and reliability of potential print, electronic and primary research for a proposed research report *within the writer's major discipline of study*; and
- To plan, develop and write *discipline-appropriately-documented* academic and/or professional texts *within the writer's major discipline of study*.

NOTE: "Effective cross-cultural communication" here entails writers paying attention to how their texts might best be crafted for professional audiences (the usual case in discipline-specific writing) or general audiences (the occasional case).

Upper-Division Writing Component Course Menu Courses

- **ANT 355** Prehistoric American Indians
- **ANT 421** Anthropological Thought
- **ANT 446** Advanced Forensic Anthropology
- **ARB 350** Advanced Arabic I
- **ARB 351** Advanced Arabic II
- **ARB 480** Selected Topics in Arabic Language and Culture
- **ART 345** Methods of Art History
- **ART 422** Art History: The Art World After Modernism
- **ART 490** Senior Studio Thesis
- **BIO 326** General Microbiology
- **BIO 410** Developmental Biology
- **BIO 414** Plant Ecology
- **BIO 478** Evolution
- **BIO 480** Cell Biology
- **BIO 488** Water Pollution Biology
- **BUS 499** Integrated Strategic Capstone
- **CET 360** Microprocessor Engineering
- **CHE 472** Advanced Chemistry Lab II
- **CHE 492** Chemistry Research II
- **CIS 352** Global, Economic and Social Ethical Issues in Computing
- **CIS 490** Systems Analysis II
- **CIS 492** Systems Development and Implementation
- **CMD 321** Common Organic Disorders
- **CMD 322** Technical Writing in Health Care and Education

General Education Courses

- **CSC 352** Global, Economic and Social Ethical Issues in Computing
- **CSC 490** Senior Project I: Software Engineering
- **CSC 492** Senior Project II
- **DMT 445** Digital Media Project Planning
- **EAS 323** Atmospheric Instrumentation and Measurement
- **EAS 427** Tectonics
- **EAS 438** Computer Applications in Earth Science
- **EAS 441** Advanced Environmental Geology
- **EAS 448** Watershed Evaluation
- **EAS 465** Seminar in Atmospheric Science
- **EAS 542** Applied Climatology
- **ECO 402** Games and Behavior
- **ECO 421** Applied Econometrics
- **EET 450** Senior Project
- **ELE 410** Pre-K-4 Field Experience
- **ELE 411** Field Experience K-4
- **ELM 411** Field Experience 4-6
- **ELM 412** Field Experience 7-8
- **ENG 334** Reporting
- **ENG 337** Survey of American Literature I (to 1865)
- **ENG 372** Advanced Composition
- **ENG 448** Practical Criticism
- **ENG 499** English Studies Capstone Class
- **ENS 420** Principles of Wildlife Management
- **ENS 424** Fisheries Management
- **ENS 425** Principles of Aquaculture
- **ENS 475** Wetlands Ecology
- **ESP 339** Special Education Field Experience I
- **ESP 349** Special Education Field Experience II
- **GEO 358** Comprehensive Tourism Planning
- **GEO 420** Disaster Vulnerability
- **GEO 474** Developing the Master Plan
- **GTY 410** Research Methods in Gerontology
- **GTY 430** Seminar in Gerontology
- **HIS 491** Reading in History
- **HIS 495** Seminar in History
- **HSC 310** Special Populations and Pathology of Disease
- **HSC 360** Holistic and Alternative Medicine
- **JUR 300** Classical Jurisprudence
- **JUR 310** Medieval Jurisprudence
- **JUS 376** Criminal Procedure
- **JUS 496** Criminological Theories
- **LAW 310** Legal Research and Writing
- **LAW 410** Law and Ethics
- **MAT 400** Mathematical Modeling
- **MAT 461** Statistical Analysis I
- **MKT 431** Marketing Research
- **MUS 375** Music and Recording Technology II
- **MUS 477** Music and Recording Technology V
- **NUR 375** Leadership and Change in Nursing
- **NUR 470** Family Health Nursing
- **PGM 210** Golf Shop Management
- **PGM 410** Teaching of Golf II
- **PHI 335** Aesthetic Theory
- **PHI 336** Philosophy of Film

General Education Courses

- **PHI 405** Epistemology
- **PHI 410** Metaphysics
- **PHY 301** Intermediate Electricity and Magnetism
- **PHY 495** Physics Seminar
- **POS 301** Research Methods in Political Science
- **POS 450** Seminar in Politics
- **PSY 345** History and Systems of Psychology
- **PSY 365** Research Methods in Psychology
- **REC 412** Recreation Program Planning and Evaluation
- **REC 415** Challenges and Trends in Parks and Recreation
- **SEC 420** Assessment and Interventions
- **SEC 460** Professional Practices in Secondary Education
- **SOC 410** Social Theory and Society
- **SOC 415** Social Science Research Methods
- **SOW 370** Policy Practice in Social Work
- **SOW 405** Social Work Research Methods
- **SPN 311** Spanish Conversation, Composition and Phonetics I
- **SPN 312** Spanish Conversation, Composition and Phonetics II
- **TED 450** Teaching Technology in the Secondary School
- **TED 451** Teaching Technology in the Elementary School
- **VET 301** Contemporary Issues In Veterinary Medicine
- **VET 492** Specialty Internship
- **WST 400** Capstone, Advanced Women's Studies

Undergraduate Catalog

Honors Program

Honors Advisory Board

Arrigo-Nelson (biological and environmental sciences); Aune (English), director; Fox (philosophy), associate director; Gould (chemistry and physics); Hess (exercise science and sport studies); Hettler (business and economics); Lyles (health science); McClintock-Comeaux (women's studies); Prest (library services); Cormas (childhood education); Hackett (psychology)

Purpose

The Honors Program at California University of Pennsylvania provides an opportunity for an enhanced educational experience to our most talented students and faculty. Honors Program students desire to pursue intellectual and creative growth beyond the usual requirements of their major field of study and intend to cultivate their individual and personal aspirations to learn. Honors Program students and faculty expect to explore and participate in scholarly, professional and artistic exercises outside the classroom; they engage in community service activities, which complement their academic studies and nurture their personal sense of commitment and communal responsibility. Honors students anticipate exercising leadership while at California University of Pennsylvania; they prepare to become leaders while students in our program, and they expect to continue as leaders when they graduate.

Membership

Membership in the University Honors Program is by invitation only. However, the Honors Program promotes outstanding intellectual achievement throughout the University, and undergraduate students in any program or division of the University may participate in the Honors Program. Each year, the applications of all incoming first-year and transfer students are reviewed, and those students with the very highest indicators of past and future academic success are invited to apply to participate in the Honors Program.

Programs

Each summer (since 1985), two Honors Program students receive scholarships to participate in the PASSHE Summer Honors Program. This program is noted for its academic quality and its opportunity, typically, to study abroad in such places as:

- Egypt (2010)
- Oxford, England (2012)
- London, Salzburg, Vienna, Venice and Rome (2013)
- Canada (2014)
- Norway (2015)
- Spain (2016)
- Belize (2017)
- Vienna and Sarajevo (2018)
- Poland (2019)

Honors Program students have the opportunity to participate in the Honors Program residence hall, which includes specialty housing in Smith Hall, as well as educational, social and recreational programming. The Honors Program maintains a high-quality computer facility in the residence hall complex reserved for the exclusive use of its students and faculty. Each academic year, the Honors Program conducts and coordinates a special grouping of courses for its students and faculty. Honors Program students are encouraged to be active scholars, and have presented their work at local, regional, national and international conferences and in international publications.

Awards

Currently, the Honors Program annually presents the following awards:

- Senior Thesis Project Award
- Outstanding Honors Program Graduating Senior Award
- Outstanding Honors Program Service Award

Undergraduate Catalog

Curriculum

Courses designated as honors courses are restricted to members of the Honors Program and are offered at all class levels. In such courses, enrollment is kept low to encourage and ensure close interaction between student and professor. Additionally, most regular University course offerings at all levels may have an honors component. In such courses (called addenda), honors students fulfill the same requirements as other students in the class, but honors students perform certain independent work, which is designed to enhance the regular departmental courses and which is agreed upon in writing by the student, the professor, and the Honors Program. In all such courses, the successful completion of the course and its honors component is indicated on the student's transcript.

Honors Program students are expected to maintain a minimum grade-point average sufficient to achieve the dean's list and to graduate with honors. Additionally, students must complete a minimum of 24 credits, including addenda and thesis project, within the Honors Program.

Inquiries about the Honors Program may be made of the director at:

California University of Pennsylvania

250 University Avenue

Box 100

California, PA 15419

Phone: 724-938-4535/1544

Fax: 724-938-5710

Email: honors@calu.edu

Undergraduate Catalog

Louis L. Manderino Library

LOUIS L. MANDERINO LIBRARY is committed to providing the resources needed to support the research needs of Cal U students. This includes a substantial collection of peer-reviewed journals, books (including e-books), online research databases and audiovisual materials. In addition to our collections, the library provides both individual and collaborative study areas, including private rooms for group use. To help reduce the stress of studying, the library has vending machines with drinks and snacks, a collection of popular DVDs, a graphic novel collection and a selection of popular reading books.

Electronic Resources: Online information retrieval has made library research more thorough and more efficient. Using the library's research databases and online catalog, students can quickly locate and access an impressive collection of scholarly journals, magazines, books, e-books, newspapers and audiovisual materials. All of the library's electronic resources are accessible from on- and off-campus locations, so students can research anywhere they have Internet access. Since the library is constantly working to provide the best resources for our students, please visit the library's website (<https://library.calu.edu>) for the current list of library resources.

Research Services and Library Instruction: With so many research options available, it can be daunting to know how to search effectively. Help with this process is available to students from the research librarians. Students are encouraged to contact the librarians through scheduled personal appointments, in the library or by telephone, email, chat, text or a Zoom online meeting. Cal U librarians are faculty members and work with classroom professors to provide instruction sessions to students regarding the effective use of library resources in their coursework.

Shared Library Resources and Interlibrary Loan: Beyond our own collections, Cal U participates in several resource-sharing programs that offer students a wealth of additional resources. When Manderino Library does not have the book a student needs, the online E-ZBorrow system allows students to request books from scores of academic libraries in Pennsylvania, West Virginia, New Jersey and New York. This system is both fast and free. If the book cannot be obtained from an E-ZBorrow library, or if a student needs an article that is not available in the library's journal resources, these can be requested from other libraries through our Interlibrary Loan Office.

Undergraduate Catalog

Military and Veterans Affairs

The Office of Military and Veterans Affairs offers **comprehensive support** for veterans, eligible dependents, service members of the National Guard and Reserve and active-duty service members.

We understand the unique demands of service members' and veterans' lives. Whether you are attending classes through Cal U's Global Online programs or are pursuing your education on campus, let us help you achieve your best. Connect with diverse and dynamic veterans who are attending Cal U and share many of the same struggles, excitement, concerns and points of pride. Cal U understands the complex challenges of transitioning from combat or the formal structure of the military to the world of higher education. This new journey requires a great deal of determination, dedication, responsibility, perseverance and support to get through. The Veterans Club is also here to give you that support with regular meetings that build a strong community that will assist you throughout your Cal U experience. Please visit the Office of Veterans Affairs website: calu.edu/veterans.

For more information, call California University's Office of Military and Veterans Affairs at 724-938-4076 or email veterans@calu.edu.

Undergraduate Catalog

Nondiscrimination Statement

California University of Pennsylvania is an academic community dedicated to the ideals of social justice and equal opportunity for all. In compliance with federal and Pennsylvania state laws, the University is committed to providing equal educational and employment opportunities for all persons without regard to race, color, sex, sexual orientation, religion, national origin, age, disability or status as a veteran or disabled veteran. The University will not tolerate any type of discrimination, harassment or violence. Sexual harassment is considered by law to be a form of sexual discrimination and is, therefore, unacceptable, which includes stalking and domestic/dating violence.

Direct **discrimination/sexual harassment, equal opportunity, and Title IX inquiries or complaints** to the Special Assistant for Equal Employment and Educational Opportunity (EEEE) and Title IX Coordinator, Office of Human Resources, Dixon Hall 408, 724-938-5425.

Direct **student ADA inquiries** regarding services or facilities accessibility to the ADA/504, Compliance Officer, Office of Student Affairs, Carter Hall G-52, 724-938-1603, or a message can be left at the Counseling Center, Carter Hall G-53, 724-938-4056.

Direct **faculty and staff ADA inquiries** regarding services or facilities accessibility to the Director of Human Resources, Office of Human Resources, Dixon Hall 408, 724-938-4427.

Office of Human Resources

Human Resources

The Office of Human Resources supports the University's goal of creating and maintaining a learning environment in which the rights of all are respected. This office encourages the entire University to become personally involved in enriching the campus through support of enhanced equal opportunity and diversity. The Human Resources office reaffirms the University's commitment to equal opportunity and diversity through the promotion of understanding, tolerance and respect for others, and ensures that the University community understands and complies with federal and state laws and California University policies with respect to Equal Opportunity, ADA and Title IX.

Services

The Human Resources office helps students and employees resolve concerns and complaints regarding harassment, discrimination and disability. It strives to help any student, faculty member or employee who needs information or assistance or has a concern about Equal Opportunity, ADA, Title IX or Sexual Harassment policies. For more information, visit: <https://www.calu.edu/inside/faculty-staff/administrative-offices/human-resources/>

The Human Resources office's support services are provided in the following areas in compliance with state and federal laws:

Equal Opportunity, Diversity, Compliance and Equity

The Special Assistant for EEO (who is also the Title IX Coordinator) strives to enhance diversity in the University community through working with diversity committees/groups, special projects, trainings, etc.

Discrimination and Title IX Complaints

The responsibility for investigating complaints is vested in the Human Resources office under the direction of the Special Assistant for EEO (who is also the Title IX Coordinator). The **Complaint Intake Form** is available at: <https://www.calu.edu/inside/faculty-staff/administrative-offices/human-resources/equal-opportunity/complaint-form.jsp>

Complete information regarding policies, procedures, and the informal and formal complaint processes can be found in both the **Campus EEO Policy** (*Policy Statements and Compliance Procedures on Equal Education and Employment Opportunity*) and the **Gender-Based/Sexual Misconduct (Title IX) Policy**, which are both available at: <https://www.calu.edu/inside/faculty-staff/administrative-offices/human-resources/equal-opportunity/social-equity-policies.aspx>

Equal Opportunity: Online Training Programs

Pennsylvania's State System of Higher Education mandates that all universities conduct sexual harassment awareness training with new students. Additionally, the University is committed to providing an environment free from discrimination on the basis of sex. *Title IX of the Education Amendments of 1972* protects persons from sex discrimination in educational programs and activities at institutions that receive federal financial assistance. California University of Pennsylvania provides many resources to administration, faculty and staff, as well as students, to address concerns relating to discrimination on the basis of sex, which includes sexual misconduct, stalking and dating/domestic violence. To this end, California University of Pennsylvania also offers through the Human Resources office an online training program(s) regarding Title IX legislation. In addition to the Title IX online training program, the Human Resources office is requiring that **all personnel** (*administration, faculty and staff*) and **all students** complete the required E.O./discrimination prevention training courses annually.

Location and Hours

Human Resources is located in Dixon Hall, Room 408, 724-938-4427. Office hours are 8 a.m. to 4 p.m. Monday through Friday. Evenings and weekends are by appointment only.

Policies

The Office Human Resources' policies are available at: <https://www.calu.edu/inside/faculty-staff/administrative-offices/human-resources/> and you can access the complaint form at: <https://www.calu.edu/inside/faculty-staff/administrative-offices/human-resources/equal-opportunity/complaint-form.jsp>

Office of Human Resources

Equal Opportunity

Our equal opportunity statement is available at: <https://www.calu.edu/inside/faculty-staff/administrative-offices/human-resources/>

The campus EEO policy, *Policy Statements and Compliance Procedures on Equal Education and Employment Opportunity and Social Equity*, is available at: https://www.calu.edu/inside/policies/_files/social-equity/EEEE-POLICYforweb.pdf. This document also includes California University of Pennsylvania's *Anti-Discrimination Policy 2010-700*.

Sexual Harassment

The *Gender-Based / Sexual Misconduct (Title IX) Policy* is available at: https://www.calu.edu/inside/policies/_files/social-equity/TitleIX.pdf.

ADA/504

Services for students with disabilities are provided through the Office for Students with Disabilities (OSD). For more information, visit the OSD at Carter Hall G-35, or call 724-938-5781, or view online at: <https://www.calu.edu/inside/student-resources/disabilities/>. This page includes information on ADA compliance.

Contact Information

Direct discrimination/sexual harassment, equal opportunity and Title IX inquiries or complaints to the Special Assistant to the President for Equal Employment and Educational Opportunity (EEEE) and Title IX Coordinator, Office of Human Resources, Dixon Hall, Room 408, 724-938-5425.

Direct student ADA inquiries regarding services or facilities accessibility to the ADA/504, Compliance Officer, Office of Student Affairs, Carter Hall G-52, 724-938-1603, or a message can be left at the Counseling Center, Carter Hall G-53, 724-938-4056.

Direct faculty and staff ADA inquiries regarding services or facilities accessibility to the Director of Human Resources, Office of Human Resources, Dixon Hall, Room 408, 724-938-4427.

State Authorization

State Authorization

Information about current legal authorization for California University of Pennsylvania to offer online education nationwide and the steps that Cal U is taking to achieve necessary authorizations in all 50 states, the District of Columbia and U.S. Territories is located at: <https://www.calu.edu/online/state-authorization/index.aspx>

Questions may be directed to Doug Hoover, Associate Provost, at 724-938-4096 or hoover@calu.edu.

Global Online Complaint Process

Global Online undergraduate and graduate students who have a grievance, complaint or concern related to Global Online courses (or who have other Global Online concerns unrelated to courses) can follow the steps outlined at: <https://www.calu.edu/online/state-authorization/complaint-process.aspx>

Questions may be directed to Doug Hoover, Associate Provost, at 724-938-4096 or hoover@calu.edu.

Student Affairs

Student Affairs

Student Affairs is a critical component of a student's learning experience that goes beyond the classroom and provides a safe and healthy living and learning environment. Student Affairs oversees life on campus, including student organizations, activities, wellness, housing, dining, recreational sports and much more. The professionals who work in Student Affairs are committed to helping all students enrich and deepen their lifetime journey of growth and self-exploration.

Mission

Inherent in the University's educational mission is a commitment to the total development of all students. The division of Student Affairs, under the direction of the vice president, is administratively responsible for the implementation of this commitment. The central focus of the Student Affairs division, therefore, is the personalization of the university experience, with concern for not only individual intellectual development, but for personal, social and physical development as well. The division is committed to recognizing and assisting in the realization of human potential, which includes promotion of the concepts of safety, freedom, justice, individual dignity and the right of the dissenter and openness of mind.

Student Affairs Committees

- **Senior Staff Management Team** sets the vision and priorities for strategic planning and assessment efforts across the Division of Student Affairs in alignment with University goals, trends and best practices.
- The **Student Affairs Council** serves as a recommending body for strategic plan development; coordination of division-wide assessment efforts; and committee oversight.
- The Student Affairs **Diversity Committee** serves as a catalyst for change through awareness and understanding of diversity and inclusion.
- The Student Affairs **Retention Committee** serves to identify opportunities to create and enhance engagement to support student retention and success.
- The **Targeted Programming Committee** identifies trends and hot topics to forecast division-wide programming opportunities.

Services

Student Affairs works to personalize your Cal U experience and develop your personal and professional skills by providing a full range of University support services and programs, including:

- Dining, Hospitality and Vending Services
- Cal Card Services
- Center for Volunteer Programs and Service Learning
- Commuter and Non-Traditional Student Services
- Conference Services and Convocation Center
- Fraternity and Sorority Life
- LGBTQA+ Support Services
- Natali Student Center
- Office of Diversity, Equity and Inclusion
- Office for Students with Disabilities
- Recreational Services
 - Herron Fitness Center
 - Indoor and Outdoor Recreation
 - Intramurals and Group Fitness
 - Sports Clubs
- Student Association, Inc./SAI Farm/Clubs and Organizations
- Student Activities, Programming and Leadership
- Student Media Services
 - Multimedia Access Center (Mac Lab)
 - CUTV
 - WCAL Radio
 - Cal Times Newspaper
- University Housing/Residence Life

Student Affairs

- Vice President's Office
 - Class Excuses
 - Administrative/Medical Withdrawals
 - Student Conduct
 - Student Liaison Services and more
- Wellness Center
 - Alcohol and Other Drug Education
 - Counseling Center
 - End Violence Center
 - Health & Wellness Education
 - Student Health Center
 - Student Wellness Support Services
 - The PARC (Alcohol and Drug Recovery Center)
 - Women's Center

Vice President's Office / Dean of Students

Student Affairs can help you get answers, discover resources and explore student life, all of which will enhance your life while at Cal U. The primary goal of the division is to provide essential support services that assist students as they pursue their academic goals. The Office of Student Affairs is located on the third floor of the Natali Student Center and our main phone number is 724-938-4439.

Attendance Concerns

Except in cases of emergency, it is your responsibility to inform your professors in advance if you expect to be absent from class. If your absence is the result of hospitalization or an emergency family concern, contact the Dean of Students for an attendance memo as soon as possible at 724-938-4439.

The Dean of Students will verify documentation related to your absence, contact your instructors regarding the issue and provide support to you during the time of crisis. The Dean of Students may not be able to provide a memo if you do not make contact for support within a reasonable timeframe.

Remember, it is still your responsibility as a student to be in contact with your professors when you are able to return. Ultimately, it is up to you and your faculty member to negotiate any course adjustments.

Office of Student Conduct

The Student Code of Conduct is intended to provide guidance and structure for students in their relations with others, use of University and other's property and development of appropriate decision-making abilities. Students learn from each situation they are involved in to refine decision-making and problem-solving skills and reflect on actions and decisions. In addition, students come to understand how their actions affect others and future career goals. All students should review the [Student Code of Conduct](#) and the University's policies on reporting and handling alleged violations. Additional information is found on the university's website under Office of Student Conduct.

Student Handbook

For additional information, the Student Handbook offers students a quick and easy guide to University programs, activities and services. While not always encyclopedic in its descriptions, it does tell you where to go for information: https://www.calu.edu/inside/policies/_files/general/Student-Handbook.pdf

Accommodations for Students with Disabilities

Office for Students with Disabilities

California University of Pennsylvania welcomes otherwise qualified students with disabilities. The University recognizes its responsibility to these students and is committed to providing reasonable accommodations to insure equal access and full participation as guided by Section 504 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act (ADA/AA).

Students with disabilities follow the same admission procedures and standards as required by California University of Pennsylvania's Admissions Office for all students.

Student Affairs

Accommodations

Accommodations for students with disabilities are approved through the Office for Students with Disabilities (OSD). It is the responsibility of the student to adhere to OSD procedures for self-identifying, providing documentation to substantiate requests and requesting reasonable accommodations in a timely manner. Students must meet the academic/technical standards of the classes/programs for which they are applying and/or in which they are enrolled. In those instances where class/program requirements simulate responsibilities of in-service personnel, students must meet the essential functions of the job. Inquiries regarding disability access for students should be directed to:

Office for Students with Disabilities
Carter Hall, Room G35
Phone: 724-938-5781
Email: osdmail@calu.edu
OSD website: www.calu.edu/current-students/student-services/disability/index.htm

Parking

Parking spaces for persons with disabilities are marked as such on campus. These spaces are solely for the use of persons who have the required state DOT-issued ADA parking credentials displayed. Persons who wish to request a temporary disabled parking permit (six weeks or less) must submit appropriate documentation to the Department of Parking and Transportation (724-938-4677). Persons with disabilities needing to obtain required DOT-issued credentials can make application to the respective state Department of Transportation in which the vehicle is licensed. Additional information regarding parking on campus at www.calu.edu/parking.

Contact Us

Inquiries regarding disability access for students should be directed to:

Office for Students with Disabilities
Carter Hall, Room G35
Phone: 724-938-5781
Email: osdmail@calu.edu
OSD website: www.calu.edu/current-students/student-services/disability/index.htm
(or use the search word "disability" on the Cal U website: www.calu.edu)

Center for Volunteer Programs and Service Learning

The Center for Volunteer Programs and Service Learning, located in 119 Natali Student Center, serves as a catalyst for students to connect with, build and sustain meaningful service initiatives in partnership with communities surrounding Cal U. Students enhance their learning and leadership development by engaging in educationally purposeful and diverse co-curricular experiences through volunteer opportunities.

The Center also operates the **Cal U Cupboard**, a food pantry for students experiencing food insecurity.

Commuter and Nontraditional Student Services

Commuter and Nontraditional Student Services assist commuting and nontraditional students with a student affairs staff member as a full time advocate for student needs. Assisting with alternate forms of transportation and parking issues, alerting students of available housing options and helping students connect to campus are just a few of the services offered to our commuting population. Student Affairs recognizes the needs of students seeking a degree after a hiatus from schooling, seeking a second degree, seeking career skills enhancement or taking non-degree or continuing education courses. The office is located in 123 Natali Student Center, near popular commuter lounge areas.

Counseling and Psychological Services

Counseling Center services are available for students seeking confidential help for personal as well as interpersonal difficulties. Services are free of charge to Cal U enrolled students. The Counseling Center, located in the Wellness Center, provides an array of short-term counseling and psychological services to University students with problems that interfere with their adjustment to campus life, personal development or effective educational performance. The Counseling Center provides the following services to students:

Student Affairs

- Evaluation
- Consultation
- Brief therapy
- Emergency intervention

Students requiring intensive or specialized care will be referred to community mental health providers. All therapists working in the Counseling Center adhere to federal and state ethical and legal standards and laws concerning confidentiality. Enrolled students can make an appointment by calling 724-938-4056.

Dining Services

The goal of the University dining services is to provide a quality, cost-effective, innovative dining program for students living on and off campus. The University encourages student involvement and awareness to help provide quality, nutritious meals at a reasonable cost. Dining locations provide an important environment for student interaction and socialization. Students living in the residence halls, as well as commuters, may choose from a variety of meal plans. All students who live in lower-campus University residence halls must participate in the meal program. Detailed university dining services information is available on the university website.

End Violence Services

The End Violence Center works proactively to raise awareness and provide prevention education for the campus community on the issues of sexual violence, intimate partner violence and stalking. In addition, the Center works reactively to offer survivors and secondary victim's advocacy, crisis intervention, supportive services and outreach.

The End Violence Center is located in Room 117 of Natali Student Center or call 724-938-5707.

Housing

Cal U has some of the best university housing in the nation. No cramped dorm rooms here -- you will feel right at home in our modern housing that's convenient, safe and exceptionally comfortable.

Whether you are an out-of-town or local student, you will find our housing fosters academic success and personal growth. Studies show that students who live on campus during their first years outperform students who choose to live off campus. Residence halls provide a living environment that complements classroom learning. Students are encouraged to participate in learning communities with study groups and computer labs readily accessible. Students tell us one of the best things about living in university housing is that you meet so many people and learn so much about yourself and others.

Check out our website for housing options: <https://www.calu.edu/student-life/living-at-cal/u/housing-options.aspx>

Office of Diversity, Equity and Inclusion

The **Office of Diversity, Equity and Inclusion**, formerly known as the Office of Multicultural Affairs and Diversity Education, is committed to transforming the holistic learning experiences of all students. We believe that an inclusive community fosters an understanding of and appreciation for diversity among our students, faculty, staff and administrators. The office provides resources, programs and workshops to support, embrace and empower each member of the campus community. For more information, please contact Sheleta Camarda-Webb at 724-938-5878 or camardawebb@calu.edu.

Recreational Services

Herron Recreation and Fitness Center is located in Herron Hall and serves the university community. Students are admitted upon presentation of their valid CalCard. Students may purchase memberships for their spouse and/or children (age 16 or older) for a fee. The facility includes a lap pool, steam room, whirlpool, saunas, weight training equipment, fitness classes, cardiovascular equipment, two gymnasiums, climbing wall, indoor walking track and a variety of exercise machines. The facility also coordinates and manages University sports clubs, intramural and extramural sports, and the outdoor recreation program.

For additional information, visit: <https://www.calu.edu/student-life/living-at-cal/u/sports-recreation.aspx>

Student Affairs

Wellness (Health) Center

The Wellness Center is available to students:

- 24 hours Monday-Friday
- 12 hours (7 p.m. - 7 a.m.) Saturday and Sunday

A full-time staff of registered nurses is on duty during hours of operation. A University physician conducts regular hours and a Nurse Practitioner is available Monday-Friday.

A University health form must be completed by your family doctor and returned. For a copy of the form, visit: https://www.calu.edu/inside/forms/_files/medical/medical-information-form.pdf

For additional information, call 724-938-4232.

Alcohol and Other Drug (AOD) Services

AOD programs are located on the ground floor of Carter Hall in Suite G-45. Intervention, education and prevention comprise the operational components of Cal U's AOD programs. The BASICS and CASICS programs provide intervention, while education and prevention are provided by the Health and Wellness Education Center and the AOD education specialist.

PARC

The Prevention Awareness Recovery Center (PARC) is on campus for students who are in recovery from drug and alcohol addiction as well as students who are allies and supporters of those in recovery. PARC is a safe, worry-free lounge area where students are welcome to hang out, meet other students in recovery and hold Cal Clean and Sober groups. The PARC is full of resources and referrals for students in need of support or treatment services.

Student Wellness Support Services

Student Wellness Support Services offers support and guidance for all University:

- Students experiencing an acute crisis or who are in a situation that is greatly impacting their ability to successfully engage in daily activities.
- Students who require information or guidance to navigate University and/or community resources.
- Faculty and staff who are concerned about a student and would like some additional expertise or guidance.

Undergraduate Catalog

Tuition and Fees

For the most up-to-date information on tuition, fees, and room and board charges, visit

- <https://www.calu.edu/inside/student-resources/student-accounts/>
- www.calu.edu/current-students/housing/index.htm

Payment of Tuition and Fees for Semester Registration

All fees will be assessed approximately four weeks prior to the beginning of the each term. Payment in full is expected for each term or enrollment in an online payment plan (with initial payment) by billing due date. Cal U accepts American Express, Discover, MasterCard and Visa along with electronic (ACH) check payment online at calu.edu/paymybill. Paper checks and money orders payable to California University of Pennsylvania payable in U.S. dollars should be mailed to:

California University of Pennsylvania

Student Accounts Office
Box 83
250 University Ave.
California, PA 15419

Please include the student's CWID (Campus Wide ID Number) on all correspondence.

Billing Information

California University of Pennsylvania utilizes online e-billing. Students who take advantage of early/rolling registration should receive a Cal U email announcing that the billing statement is available for viewing online through the VIP approximately four weeks prior to the start of the term. Students who enroll within four weeks of the first day of the term should be prepared to make payment at the time of registration. A paper bill will be sent for the initial term billing for each term and last term billing for past due balances only.

Payment Plans

Payment plans are available each term. Payment plans enable students to pay their costs on a monthly basis. Enrollment for the payment plan can be completed online via VIP. For the most up-to-date information on tuition, fees and room and board charges, visit calu.edu/paymybill and calu.edu/current-students/housing/index.htm.

Third-Party Billing

Some companies and government agencies pay tuition directly to the University. If tuition is to be paid in this manner, authorizing forms or letters must be sent to the Student Accounts Office. This payment must be received by the Student Accounts Office during the semester in which charges originate and cannot be used in lieu of a personal payment for an authorized payment plan. This payment option does not apply to corporate tuition reimbursement policies or when the payment amount is based on grades and received after the term has ended.

Refund Policy

Tuition and fees are adjusted for class withdrawals during the first week of the fall and spring semesters. After the add/drop period ends, adjustments are made ONLY if a student withdraws from all enrolled classes. Refunds are made to the amount of the charge, not the amount that has been paid to date. The refund policy is available online and in the Student Accounts Office.

Financial aid recipients should refer to "refund/repayment policies" on the Cal U website for the financial aid adjustment policy.

Advance Deposit

All first-year, transfer and readmitted students are required to submit a \$100 advance deposit payable to California University of Pennsylvania. It is to be paid in advance of registration and is credited to the student's account for the first semester. This is a nonrefundable fee.

Undergraduate Catalog

Housing Application Service Fee

An application is required in order to reserve a room for the following academic year. This fee is nonrefundable and is not deducted from room charges. Additional information regarding the housing application process is located on the housing website: www.calu.edu/current-students/housing/index.htm.

Late Payment Fee

A late payment fee of \$50 per month will be assessed when a student fails to pay the required fees by the due date or when a student fails to pay according to an approved payment plan. (The structure of fees is subject to change without prior notice and such changes shall take precedence over existing charges set forth in this catalog.)

Return Check Charge

A \$25 fee will be charged for any check (paper or ACH) that is made payable to California University of Pennsylvania and returned by the bank because funds are unavailable for any reason or incorrect bank account information (numbers) were entered by the student. (The structure of fees is subject to change without prior notice and such changes shall take precedence over existing charges set forth in this catalog.)

Proxy

A completed **Proxy** Access form is required by University offices to release account information via phone. **Proxy** Access Management is available through the Vulcan Information Portal - Academic/Banner Self Service/Proxy Access.

Undergraduate Catalog

University Police

The California University Police Department is a fully recognized law enforcement agency as authorized by 71 P.S. 646, the Administrative Code of 1929 as amended and Title 18 of the Pennsylvania Consolidated Status (Crimes and Offenses), and 24 P.S. 20-1006-A (14) 20-10A (5) of the State System of Higher Education Act.

The department consists of professionally trained individuals capable of responding to requests for assistance in routine and emergency situations. The department, a diverse group of police officers, communications officers and secretarial staff, provides continuous 24-hour assistance to the University community.

The staff includes a director/chief, assistant chief, four lieutenants (three patrol supervisors and one criminal investigator), one specialist/K-9 handler and 11 additional commissioned police officers that have received certification from a MPOETC- approved Act 120 police academy. Two security officers (dispatchers) and an administrative assistant contribute to the operation of the department.

Cal U's Police Department has also recently established a K-9 unit that will help track lost persons, recover evidence and engage in drug searches and public relations activities, in addition to day-to-day patrol of campus.

Additional services offered to University students, faculty and staff include parking and traffic management, criminal investigations, health, fire and safety surveys, special event planning, accident investigation and crime prevention information and presentations.

Pursuant to the Pennsylvania College and University Security Act and the Federal Crime Awareness and Campus Security Act of 1990, postsecondary institutions, including colleges and universities, must annually make available to all applicants, students and employees information with respect to campus crime statistics and the security policies of the institution.

The information is compiled by California University and made available through the Office of Admissions, Office of Student Affairs and University Police and on the University website.