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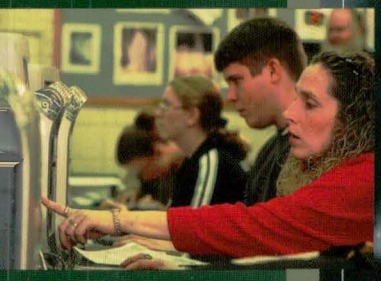

California University of Pennsylvania

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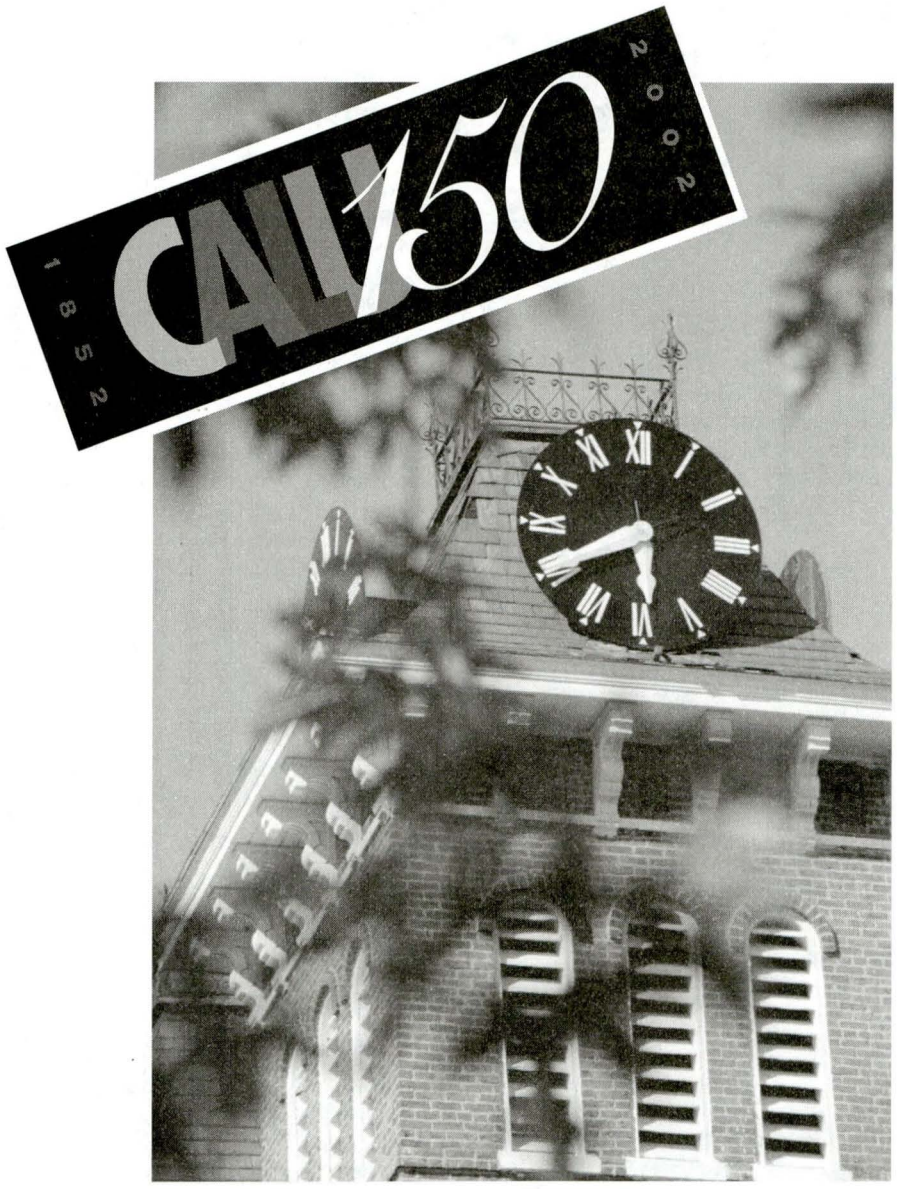

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California University of Pennsylvania

Is a member of the
American Association of State Colleges and Universities
1307 New York Avenue NW, Fifth Floor
Washington, DC 20005-4701
202-293-7070
202-296-5819 Fax
www.aascu_edu.org

American Association of Colleges of Teacher Education
American Association of Colleges of Teacher Education (AACTE)
1307 New York Avenue NW, Suite 300
Washington, DC 20005-4701
202-293-2450
202-457-8095 Fax
www.aacte.org

Accredited by the
Commission on Higher Education of the
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3624 Market Street
Philadelphia, PA 19104
215-662-5606
215-662-5501 Fax
www.msache.org

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Washington, DC 20036-1023
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www.ncate.org
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717-787-8740

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703-683-8099 Fax
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Chicago, IL 60601-2208
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312-553-9616 Fax
www.caahep.org
caahep@caahep.org

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800-669-9656
212-363-5555
212-812-0393 Fax
www.nln.org
nlnweb@nln.org

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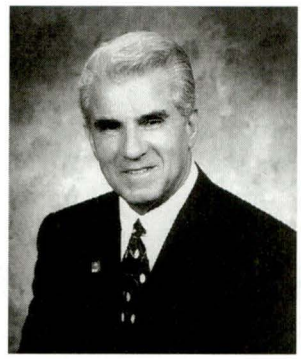
Rockville, MD 20852
800-498-2071
301-897-5700
301-571-0457 Fax
www.asha.org

California University of Pennsylvania is an academic community dedicated to the ideals of justice, fairness and equal opportunity for all. In compliance with federal and state laws, the university is committed to providing equal educational and employment opportunities for all persons without regard to race, color, sex, religion, national origin, age, disability, ancestry, sexual orientation, or status as a disabled or Vietnam-era veteran. The university will not tolerate racial, ethnic or sexual discrimination. Sexual harassment is considered by law to be a form of sexual discrimination and is, therefore, unacceptable. Direct equal opportunity and affirmative action inquires or complaints to the Special Assistant to the President for EEEO/University Ombudsperson, Office of Social Equity, South Hall 112, 724-938-4014. Direct inquiries regarding services or facilities accessibility to the ADA/504 Compliance Officer, Office of Student Development and Services, Johnson Hall 012, 724-938-4076. Direct Title IX inquiries to the Senior Women's Administrator/Title IX Coordinator, Department of Athletics, Hamer Hall 248, 724-938-4351

From The President



California University of Pennsylvania is celebrating its 150th anniversary beginning in June 2001 and concluding in October 2002. For a century and a half, the institution now known as California University of Pennsylvania has helped thousands of men and women realize their dreams.

Looking through this year's edition of the Undergraduate Catalog, I am struck at how different it is from those at the beginning of our history. While some of the courses may share the same name as those long ago offerings, the content and requirements certainly reflect the 21st century.

The great emphasis on technology in our society is reflected in these pages as well. Not only in the number of courses that focus on that topic in one way or another, but in the description of the university and the amenities it provides to our students.

All residence hall rooms are wired for internet access. Students who don't have a PC can find computer labs throughout campus, many open late into the night, including one on every floor of every residence hall.

In the early days of our institution, students were required to supply oil for their kerosene lamps. Lights out was at 10 p.m. Lifestyles have changed considerably in 150 years. This year's edition of the Undergraduate Catalog includes academic policies and procedures and outlines more than 100 areas of study, many of which did not exist 150 years ago.

We recognize today, as then, that much of the education that takes place here occurs outside the classroom. The Natali Student Center is a hub of activity. It not only contains the student dining room, it offers a full-size movie theatre, various recreational activities and computer labs; and our awarding-winning student-operated electronic and print media also have offices there. The many activities offered through our Student Development area are listed in these pages.

Take some time and read the catalog. If you are a student here, it will help to familiarize you with what is available on our campus. If you are thinking of attending, I hope that you will carefully examine the many fine academic options that are described here. I also urge you to make a personal visit to our campus and to talk with our students and our faculty so that you can get a better picture of what we have to offer.

Best wishes to you and your family, and I hope to see you at some of our Sesquicentennial events that are planned throughout the next year.

Sincerely,

Angelo Armenti, Jr.
President

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Mission

California University of Pennsylvania's mission is to provide high-quality education at the lowest possible cost to the students. To this end the university:

(1) offers undergraduate instruction in the liberal arts, education, human resources, the professions, business, science and technology;

(2) offers a graduate education to, and beyond, the master's degree, in certain areas of study;

(3) helps meet the region's economic, social, cultural, and recreational needs;

(4) fosters research and service;

(5) encourages the intellectual growth of its faculty, as well as its students.

California's special mission is to develop programs in science, technology, and applied engineering.

Goals

California University of Pennsylvania is a multipurpose, regional university firmly committed to offering students of widely varied ages, backgrounds, interests and needs, a broad range of educational opportunities and experiences. Thus, the university endeavors to provide a contemporary array of degree programs-associate, baccalaureate and masters-which will enable the student to develop as an intelligent, caring individual who will be able to function as a contributing, productive member of society.

The university recognizes the important relationship that exists between those disciplines which enhance one's ability to think critically, reason analytically, communicate effectively, maintain historical perspective and promote good citizenship, and those disciplines which provide the specialized knowledge and the critical intellectual skills to perform effectively in a wide variety of settings. To this end, it is the purpose of the university to prepare men and women to meet the challenges of the world of work in education, business, industry, government, the professions, the human services, and graduate and professional schools.

As a regional institution, the university strives to present a diversity of programs and services for those residing in its service area. A principal goal of University Advancement, especially in its Mon Valley Renaissance program, is to provide assistance related to economic development.

The university also offers to local residents access to a variety of social and cultural activities.

Objectives

The faculty and students of the university are participating members of an educational institution charged with preservation, discovery, and dissemination of knowledge in the arts, sciences, technologies, vocations and professions, and with the creative application of that knowledge in their lives both as individuals and as members of society.

The objectives of the university are:

(1) to provide a liberal education which aims at developing analytical thinking and individual initiative and responsibility;

(2) to provide flexible, innovative programs and support services that are responsive to a broad range of student and regional needs;

(3) to provide a professional faculty and an effective administration;

(4) to create and maintain a learning environment in which the rights of all are respected;

(5) to provide a wide range of learning opportunities for students interested in associate, baccalaureate, graduate, and non-degree programs;

(6) to promote effective communication among faculty, students, administration, and the general public;

(7) to provide a diversity of intellectual, cultural, social and recreational activities and experiences for the university and surrounding communities;

(8) to encourage thoughtful and responsible faculty and student participation in local, state, national, and international affairs;

(9) to require high standards of teaching and scholarship and to encourage participation in professional activities;

(10) to foster academic research which contributes to human knowledge and the vitality of the institution; and

(11) to maintain an on-going system of self-evaluation whereby the goals of the institution serve as the criteria for determining the institution's effectiveness.

The College of Education and Human Services

The principal goal of the College of Education and Human Services is to maintain a diversity of contemporary curricula appropriate for the preparation of new teachers and the improvement of teachers already in the field. In addition, the College sponsors the development and delivery of a variety of special programs for the purpose of educating practitioners in a number of human service areas.

The College of Liberal Arts

Through traditional courses of study, the College of Liberal Arts attempts to teach reflective thinking that enables graduates to make responsible social decisions in a multi-cultural world. The Liberal Arts programs are designed to present students with options that call upon precise knowledge, cultural perspectives, aesthetics, and personal and professional communication skills in order to create informed, as well as technologically literate, graduates.

The Eberly College of Science and Technology

The Eberly College of Science and Technology's goal is to make available an array of scientific, technological and career-oriented programs which prepare students for the increasingly complex demands of the industrial, business and health fields as well as for further study in graduate and professional schools.

The School of Graduate Studies and Research

The goal of the Graduate School is to provide an opportunity for those who already have undergraduate training to further develop their experience at the graduate or post-graduate level.

About California University

The university is in the Borough of California, a community of approximately 6,000 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 Mid-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) on the Pennsylvania Turnpike, and an hour from Greater Pittsburgh International Airport.

The main campus consists of 37 buildings situated on 90 acres. An additional 98-acre recreation complex, George H. Roadman University Park, is located one 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.

It is also the site of a new student housing complex that is home to 432 students who live in attractive, furnished, four person-suites that feature four bedrooms, each with individual baths, a living room, dining area, completely furnished kitchen, including diswasher and microwave, and a full-size washer and dryer.

The geographic location of the university gives the resident student opportunities to explore and pursue a wide variety of activities. Located on the Appalachian Plateau, an area of rolling hills, the university is a short drive from camping, hiking, fishing, hunting, white water rafting, and canoeing, and skiing in the Laurel Mountains.

In addition to varied cultural activities on campus, the student has easy access to the Pittsburgh metropolitan area, located only 35 miles north of the campus. This provides an opportunity to enjoy the Pittsburgh Symphony, 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.

The institution that is now California University of Pennsylvania began as an academy 150 years ago. It has evolved over the years into a multi-purpose university. One of the fourteen state-owned institutions of higher education in the Pennsylvania State System of Higher Education, it has the strength and stability of a university system, but it retains its own flavor and unique history.

Beginning in June 2001, the University will formally celebrate is Sesquicentennial. For one hundred fifty years, it has been educating students from the Mon Valley and beyond. A 17-month celebration is planned that will highlight the many accomplishments of alumni and celebrate the past and the future of this fine educational institution.

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

1852: A two-story Academy, offering education from kindergarten through college was established in the recently founded community of California. The institution was supported by local taxes and the donations of community residents.

1864: A ten-acre site for the Academy was purchased.

1865: The Academy obtained a charter as a Normal School for its district and became a teacher-preparatory institution.

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

1914: The Commonwealth acquired the institution and renamed it the California State Normal School. The curriculum became exclusively a two-year preparatory course for elementary school teachers.

1928: The institution became California State Teachers College, returning to its previous status as a four-year-degree-granting institution, with increasing opportunities for liberal arts education. Under the presidency of Robert Steele (1928-1951), California began to concentrate on industrial arts and atypical education (what is now called special education) and otherwise expanded its curricula. The campus grew to 35 acres, and a number of new buildings were erected.

1959: During the presidency of Michael Duda (1956-68), liberal arts curricula were introduced, and the college became California State College. In 1962 a graduate program was introduced. The degrees of master of arts and master of science were initiated in 1968. During Dr. Duda's presidency, more than a dozen new buildings were completed, and the size of the student body and faculty increased more than four-fold.

1974: During the presidency of George H. Roadman (1969-1977), the college developed a special mission in science and technology to complement its traditional roles in liberal arts and education.

1983: On July 1, 1983, the college became a part of the State System of Higher Education and changed its name to California University of Pennsylvania. Under the leadership of President John P. Watkins (1977-1992), the College of Science and Technology became fully operational, offering programs in such varied areas as mathematics and computer science, industrial management, nursing, energy technology, robotics, and electrical engineering technology.

1992: Angelo Armenti Jr. appointed president of California University.

1996: College of Science and Technology renamed Eberly College of Science and Technology in honor of the Eberly Foundation for its philanthropic generosity.

1997: Cal U Southpointe Center in the Southpointe Technology Center in Canonsburg, PA, opened in January, offering a variety of courses and programs.

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

1999: The new Eberly Science and Technology Center, a state-of-the-art facility for the study of science and technology, opened at the beginning of 1999-2000 academic year.

Admissions

How to Apply to California University

Address inquiries to:

Admissions Office
California University of Pennsylvania
250 University Avenue
California, PA 15419-1394
Phone: 724-938-4404
FAX: 724-938-4564
E-mail Address: inquiry@cup.edu
Web address: www.cup.edu

1-888-412-0479

We encourage applicants to write or call for an appointment to visit the university.

General Admission Requirements

To be considered for admission as a degree-seeking student, applicants must submit the following:

1. Completed application form
2. Application fee
3. Official high school transcript which includes class rank (or GED certificate)
4. Scholastic Aptitude Test (SAT) or American College Test (ACT) scores (may be waived for applicants who have been out of high school for at least three years or have an Associate, R. N., or Baccalaureate degree)
5. Transfer students must submit official transcripts from all colleges and universities attended.

Students in special categories of admission should check the section on Specific Admission Requirements for required application materials.

Specific Admission Requirements

Freshmen

Students attending a post-secondary institution for the first time are considered new freshmen. All students in this classification must submit the materials included in items 1-4 listed under General Admission Requirements.

Transfers

Students seeking to transfer to California University from another post-secondary institution must submit the materials included in items 1-5 listed under General Admission Requirements. If a degree has not been earned beyond high school, applicants must also submit high school transcripts, including the results of all standardized test scores. The awarding of an associate degree is considered to have satisfied the high school graduation requirement.

Students seeking to transfer to California University must be in good academic and social standing at the last institution attended in order to qualify for admission. In cases where students have been out of school for at least one semester, special consideration will be given. See the Transfer Student Policies for more information on transfer credits.

Early Admission for High-School Students

High school students may be eligible for admission to California University 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 clearance 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 up-coming juniors, ninth- and tenth-grade averages will be used.)
5. The applicant must have taken the PSAT, SAT, or ACT examination and scored at least 1050 on the PSAT or SAT or 23 on the ACT.
6. The student's status will be classified as provisional for each session while still in high school.
7. The student must submit a completed early admission clearance form and a transcript for each session that enrollment at California University is desired.
8. At the completion of the student's high school program, a second application must be submitted with the final high school transcript. A second application fee is not required. At this time the student will be in a degree program.

Graduates of California University

Post-associate and post-baccalaureate students who graduated from California University and are seeking an additional degree must re-apply to the Admissions Office.

Other Post-Baccalaureate Students

Students who graduated from another institution and want to enroll in undergraduate programs at California University must submit a completed application, application fee, and official transcripts from all colleges and universities attended.

International Students

International students are required to submit an international student application form to California University. All official transcripts, TOEFL scores, a statement of financial support, and letters of recommendation must be submitted. 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 Department of Justice, Immigration and Naturalization Service, of the United States.

Applicants from foreign countries must have competency in the use of English as demonstrated through the Test of English as a Foreign Language (TOEFL) examination. The minimum TOEFL score is 450 on the paper version or 133 on the computerized version.

International students must subscribe to the insurance plan of California University. For identification purposes, international students can obtain a United States Social Security number.

Visiting Students

Students who wish to enroll at California University with the expectation of transferring credits to their home institution and do not wish to receive a degree from California University are classified as visiting students.

An application with application fee must be submitted to the Office of Lifelong Learning. Admission is granted for the approved semester only. Please contact the Office of Lifelong Learning for more information.

Non-Degree Students

Students may take courses at California University 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 Lifelong Learning. Tuition and fees are the same as for degree 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 that they do not plan to pursue a degree at California University. Please contact the Office of Lifelong Learning for more information.

Veterans

Veterans of the United States Armed Forces who have not attended an institution of higher education since their honorable discharge are admitted to California University 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. Credits are awarded primarily in elective categories. Each veteran or reservist seeking such an award must submit a copy of DD 214 to the Director of Veterans Affairs. Army veterans who entered the army after October 1, 1981, should submit an A.A.R.T.S. transcript; Air Force veterans who served after 1974 should submit a C.C.A.F. transcript. Evaluations based on the latest American Council of Education Guides will be forwarded by the Veterans Affairs Office to the Articulation and Transfer Evaluation Office.

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 Scholastic Aptitude Test (SAT). 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 Admissions Office considers as many variables as possible in making admission decisions: class rank, cumulative grade point average, type of curriculum completed in relation to proposed major, guidance counselor or other recommendations, on-campus interview, standardized test scores, activities, and maturity. Each of the variables contributes to the overall assessment of applicants.

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 further information, contact the office of the Provost and Vice President for Academic Affairs 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.

Transfer Student Policies

Please contact the Articulation and Transfer Evaluation Office at 724-938-5939 or transfer@cup.edu for answers to any questions regarding articulation agreements or transfer credits.

Academic Passport & Student Transfer Policy

Academic Passport is a transfer program designed to promote and facilitate the transfer of students in community colleges to State System of Higher Education universities, and to support the transfer of undergraduate credits earned by State System students to other System universities.

1. Academic Passport Students:

A. Transferring with an Associate Degree:

- Students transferring with an AA or AS degree must have a 2.0 minimum cumulative grade point average (GPA) in all course work presented for transfer from <u>each</u> institution attended.
- The AA or AS degree recognized for Academic

Passport must contain, as a minimum, 30 hours of liberal arts courses from the following fields of study: Composition/Communications, Humanities/ Fine Arts, Behavioral/Social Sciences, Biological/ Physical Sciences, and Mathematics and Computer Science.

- A maximum of 45 general education credits and liberal arts course credits earned at the two-year college may be transferred to meet lower division requirements (a course by course match shall not be required). All additional course credits will be applied first to major courses and lastly, as electives.

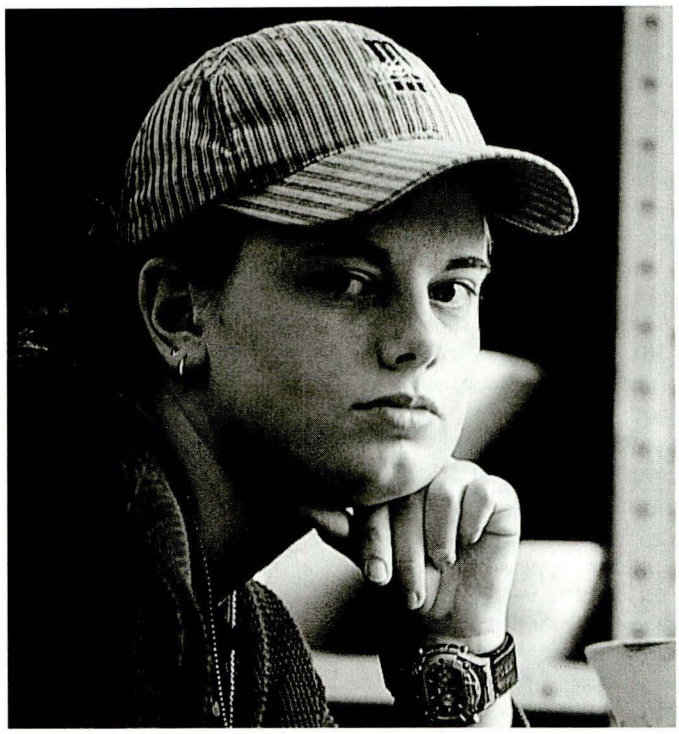
B. Intra-System Transfers:

- Incumbent State System university students who have attained a minimum cumulative GPA of 2.0 or higher with a minimum of 12 credit hours of college level course work shall hold an Academic Passport enabling transfer to any other State System university.
- Up to a maximum of 45 general education credits and/or liberal arts course credits earned at the sending university shall be used to meet lower division university general education requirements (a course by course match shall not be required).
- Capacity limits and/or higher admissions standards may apply to certain high demand academic programs.
- State System students holding the Academic Passport shall be entitled to take any course offered through distance learning and listed in the catalogue at any other System university and have those credits and the grade earned accepted by their home institution.

2. **Students Transferring Without Academic Passport**

Students who have not completed the A.S. or A. A. degree may transfer:

- With a minimum of 12 credit hours of college level course work, up to a maximum of 45 credits in courses designated and credited as general education by an accredited community college which shall be used to meet lower division university general education requirements (a course by course match will not be required). Additional transfer credits will be applied first to major courses and lastly, as electives.
- With a minimum cumulative GPA of 2.0 or greater in all course work presented for transfer from each institution attended.



Transfer Credit Evaluation Policy

1. California University will accept the following transfer credits toward a baccalaureate degree (four years):
   - A maximum of 75 credits from an accredited two-year community or junior college.
   - A maximum of 98 credits from an accredited four-year institution.
   - A maximum of 98 credits from a combination of accredited two-year and four-year colleges.
2. Students transferring with a degree may transfer a maximum of 30 credits towards an associate degree (two years); students transferring without a degree may transfer a maximum of 15 credits towards an associate degree at California University.
3. Developmental courses are not transferable.
4. Grades of D are not transferable unless they are counted as part of the Academic Passport or if they were completed at a college or university that has an articulation agreement with California University.
5. When credits are transferred, only the credits are counted as advanced standing, the grade point average of transfer courses is not calculated with California University earned courses.
6. Although credits will always transfer according to these provisions, regulations that govern the national professional accreditation of certain programs offered at California University of Pennsylvania 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 in this catalog.

Tuition for 2000-2001**

Pennsylvania Residents

Full-time Undergraduate (per semester)	
for 12 to 18 credits	$1,896
for each additional credit	158
Part-time Undergraduate (per semester)	
for each credit (less than 12)	158

Non-Pennsylvania Residents

Full-time Undergraduate (per semester)	
for 12 to 18 credits	$4,740
for each additional credit	395
Part-time Undergraduate (per semester)	
for each credit (less than 12)	395

Special Nonresident Tuition Rates

Business Administration—Maryland residents	
Theatre—All nonresidents	
Art—All nonresidents	
Gerontology/Social Work—All nonresidents	
Summer Term Courses—All nonresidents	
for 12 to 18 credits	$2,844
for each additional credit	237
Part-time for programs listed above	
for each credit (less than 12)	237

Distance Education Courses

Nonresidential Undergraduate—Minimum	
for each credit (less than 12)	161

Note: The part-time rates per credit hour shall pertain to all summer session and interim session course offerings.

Room and Board

Room (per semester)	
Single	$1,798
Double	1,299
Triple	929

Board (per semester)		
19 meals	$1,268	On and off campus
14 meals	1,209	On and off campus
10 meals	1,309	On and off campus
7 meals	774	Off campus only
125 Block with $250 Dine Dollars	1,100	On campus only
125 Block with $125 Dine Dollars	925	Off campus only
75 Block	585	Off campus only

Fees*

University Service Fee	
9 or more credits	$85.00
1 to 8 credits	50.00
Student Association Fee	
Full time (12 or more credits)	$140.00
Part time (6 to 11 credits)	70.00
Part time (1 to 5 credits)	35.00
Student Union Building Fee	
12 or more credits	$81.00
6 to 11 credits	41.00
1 to 5 credits	21.00
Student Center Operations & Maintenance Fee	
12 or more credits	$77.00
6 to 11 credits	54.00
1 to 5 credits	39.00
Academic Support Fee	
Fall/spring semesters	
12 credits or more	$189.60
11 credits	173.80
10 credits	158.00
9 credits	142.20
8 credits	126.40
7 credits	110.60
6 credits	94.80
5 credits	79.00
4 credits	63.20
3 credits	47.40
2 credits	31.60
1 credit	15.80
Summer/special sessions	
Per credit	$5.25

*Southpointe and other off-campus students should contact their site directors for fee information.

Note: All university tuition, fees, room and board rates are subject to change upon proper approval of the Council of Trustees and/or the State System Board of Governors.

** The tuition and fees for the 2001-2002 academic year were not established at the time the catalog went to press. Please contact the Admissions Office (724-938-4404) or the Bursar's Office (724-938-4431) for the correct tuition and fees for the 2001-2002 academic year.

Payment Information
Students who take advantage of early/rolling registration will receive a billing statement with instructions by mail. Students who enroll at residual registration should be prepared to make payment at the time of registration.

Payment at Residual Registration
All fees will be assessed at the time of registration. Payment may be made by cash, check, money order, or certified bank draft made payable to California University of Pennsylvania, or by VISA, MasterCard, or Discover Card. If financial aid has been awarded, this amount will be deducted from the bill. Payment plans (with initial payment) may be contracted at this time.

Payment Plans
Payment plans are available each semester. Payment plans enable you to pay your costs on a monthly basis. Payment plan information and contracts will be included with each semester bill.

Third Party Billing
Some companies and government agencies pay tuition directly to the university. If tuition is to be paid in this manner, please supply authorizing forms or letters to the Bursar's Office.

Veterans Deferment
Military veterans receiving G. I. Bill benefits may request deferment, if needed, from the Veterans Affairs office.

Refund Policy
Tuition is adjusted when a student withdraws or drops/adds a class. Fees are adjusted when a student withdraws from all classes. Refunds are made to the amount of the charge, not the amount that has been paid to date. The refund policy is available in the Bursar's Office.

Financial aid recipients should refer to "refund/repayment policies" located in the Financial Aid section of the catalog.

Advance Deposit
All first-year students, transfers and readmitted students are required to submit a $75 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 non-refundable fee.

Room Deposit
An advance room deposit of $100, held in the student's account and applied toward the spring semester, is required in order to reserve a room for the following academic year. First-year students will receive a housing contract with their admissions packet. The contract and card must be signed and returned to the Bursar's Office with a $100 deposit.

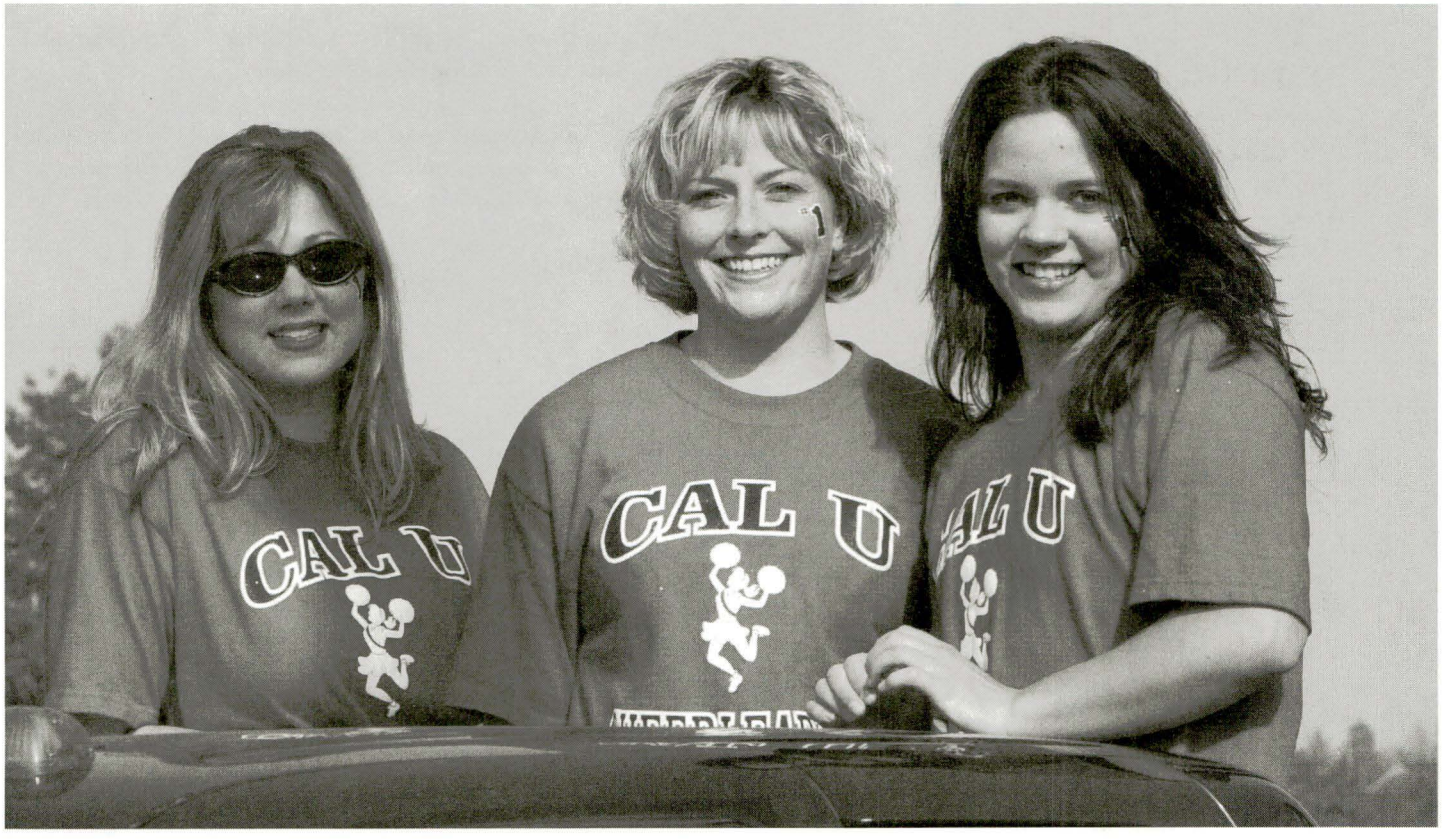
Late Registration Fee
Students who register after the first day of the semester will be charged a $25 late registration fee.

Late Payment Fee
A late payment fee of $25 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.

Return Check Charge
A $25 fee will be charged for any check which is made payable to California University of Pennsylvania and returned by the bank.

Degree Fee
A fee of $10 must be paid by each candidate for a degree from California University of Pennsylvania. A student is not permitted to complete graduation from the university until this fee has been paid.

CLEP Fee
A one-time fee of $25 is charged for the administration and recording of CLEP (College Level Equivalency Program) credits regardless of the number of credits awarded.



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 insure fairness in disbursing available funds to qualifying students. The Financial Aid Office strives to insure that courteous, timely, and accurate financial aid services are delivered to all students seeking assistance from our office.

Location & Office Hours

The Financial Aid Office is located on the first floor of the Azorsky Administration Building. The office hours are 8:00-4:00, 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 calling 724-938-4415 or by Fax at 724-938-4551. In addition, a 24-hour voice mail and question/answer box telephone system is available to assist students and parents with general financial aid information or to request financial aid materials.

How to Apply

About Financial Aid

A college education is one the most important investments a student and family can make. You and your family will be expected to contribute as much as you can from your own resources (income, savings, and assets) to help meet your college expenses.

The purpose of financial aid is to help students and families meet educational expenses that cannot be met through their own resources. Financial aid can be either need-based or non-need-based. The results of the Free Application for Federal Student Aid (FAFSA) along with the cost-of-education will determine whether a student has financial need.

There are several types of financial aid available. Grants and scholarships are considered "gift aid" because they generally do not have to be repaid. Loans and employment are considered "self-help aid" because loans have to be repaid and by working, you earn money for educational expenses. Loans are by far the largest source of financial aid for the majority of students and families. Most grants, some loans (Subsidized Stafford and the Perkins Loan), and Federal Work-Study are need-based financial aid programs. The Unsubsidized Stafford and the Parent Loan for Undergraduate Students (PLUS) are considered non-need-based. Scholarships can be based upon merit, financial need or both.

Approximately 78% of all students attending California University receive some type of financial aid.There are four main sources of financial aid. These include the federal government, the state government, the institution and private entities. The federal government is by the far the largest source of financial aid.

Eligibility Requirements

In order to be eligible for most federal financial aid programs, you must meet the following eligibility requirements:

- have financial need, except for some loan programs.
- have a high school diploma or a General Education Development (GED) Certificate, pass a test approved by the U.S. Department of Education, or meet other standards established by your state and approved by the U.S. Department of Education.
- be enrolled or accepted for enrollment as a regular student working towards a degree or certificate in an eligible program.
- be an U.S. citizen or eligible non-citizen.
- have a valid Social Security Number.
- make satisfactory academic progress.
- sign a statement of educational purpose and a certification statement indicating that you neither are not in default on a student loan nor owe an overpayment on a grant. Both statements are found on the FAFSA.
- register with the Selective Service, if required. You can register online at the Selective Service System's WWW site. (**www.sss.gov**)

Completing the FAFSA

Each year, you must complete the Free Application for Federal Student Aid (FAFSA) or Renewal FAFSA. The 2001-2002 FAFSA or Renewal FAFSA is available now. Prior year aid recipients will receive a renewal version of the FAFSA that can be used to apply for federal financial aid for the new award year. The Renewal FAFSA will be sent to the address you used on your 2000-2001 FAFSA and will have some information about you preprinted as well as items you must update. If you do not receive your Renewal FAFSA or you are a new aid applicant, you must complete a blank 2001-2002 FAFSA. You can obtain the 20001-2002 FAFSA from a high school guidance counselor, public library, or the financial aid office of a college or university, including the Financial Aid Office at California University.

It is important that you read the instructions before completing your FAFSA because the instructions should answer most of your questions. If, after reading the instructions that accompany the FAFSA, you need help completing your form, there are several places you can contact to receive assistance. You can call 1-800-4-FED-AID (1-800-433-3243), consult your high school guidance counselor, or contact the Financial Aid Office.
Please Note: California University does not have an institutional financial aid application.

FAFSA on the Web

FAFSA on the Web is an Internet application developed by the U.S. Department of Education which allows students to complete and submit an **electronic version** of the **2001-2002 Free Application for Federal Student Aid (FAFSA)** directly to the federal processor. The *"FAFSA on the Web"* site supports both Netscape Navigator (4.0 or higher) and Internet Explorer (5.0 or higher) Internet browsers. Students wanting to complete their 2001-2002 FAFSA via the web can do so **after January 1, 2001.** After transmitting an application over the Internet, students mail their signed signature page to the Department (see Personal Identification Number topic listed below for additional information on signature options). The federally approved Central Processing Service (CPS) provider will determine their eligibility for financial aid immediately after receiving the completed application. The FAFSA on the Web site provides students/parents with numerous electronic options, such as

checking on the status of the student's FAFSA form, requesting a duplicate set of SAR's, tips and shortcuts, and requesting a Personal Identification Number (PIN). The FAFSA on the Web site is located at: www.fafsa.ed.gov. In addition to the web site, a customer service line (1-800-801-0576) is available in order to assist students/ parents access the same type of information provided at their web site.

The Benefits of FAFSA on the Web

- FAFSA on the Web is *free.*
- Students can save their application information for up to 45 days so that it can be completed and transmitted later.
- FAFSA on the Web does not require software to be installed, so it takes less time before students can actually use the application.
- Students can access the FAFSA on the Web page from anywhere, including school or home, making it more convenient to complete the application.
- FAFSA on the Web automatically edits applicant answers before transmitting, resulting in better information and fewer applications rejected by the CPS.
- FAFSA on the Web uses skip logic, so it will only ask students those questions that they need to answer.
- FAFSA on the Web can support an unlimited number of users, allowing thousands of students to apply at once.

Renewal Financial Aid Applicants

As a renewal financial aid applicant, you have two choices in completing your 2001-2002 Renewal FAFSA. You can complete the paper version of the Renewal FAFSA or submit an electronic version of the form over the Internet. To use the electronic version you will need a special code called a Personal Identification Number (PIN). The PIN serves as your identifier to let you access your personal information in various U.S. Department of Education systems. The PIN is similar to the Personal Identification Number that you get from your bank that enables you to access your bank account. Because your PIN serves as your electronic signature, you should not give it to anyone. Students can request a PIN by going to the FAFSA on the Web site www.pin.ed.gov and select the Concentration *"Requesting a PIN."* Once you successfully complete a request, the federal processor will mail your PIN to you via the U.S. Postal Service. It will take approximately 7-10 days after you request your PIN for you to receive it in the mail. Your PIN is a valuable electronic tool, which allows you to electronically complete your Renewal FAFSA on the Web, sign your Free Application for Federal Student Aid (FAFSA) or Renewal FAFSA and make electronic corrections. The application process is faster if you use a PIN to sign your Renewal FAFSA on the Web application. PIN mailers will be sent out to all 2001-2001 FAFSA applicants as well.

Both versions of the Renewal FAFSA contain preprinted information that you and your family (if applicable) reported last year, making it faster and easier for you to complete. Please carefully review and update any preprinted information, which needs to be change for 2001-2002 school year.

Federal Campus-based Aid

At California University, we want to have the results of your 2001-2002 FAFSA or Renewal FAFSA by May 1, 2001 for you to be considered first-priority for federal campus-based aid (Federal Supplemental Educational Opportunity Grant, Perkins Loan and Federal Work-Study). In order for California University to receive the results of your FAFSA by our first-priority deadline, we

Important Deadline Dates

Financial Aid Time Line Items to Complete:	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**
Gather financial aid documentation necessary for completion of the FAFSA	X	X	X	X	X			
Obtain a Free Application for Federal Student Aid (FAFSA)	X	X	X	X	X			
Mail your FAFSA to the Federal processor. **THE EARLIER THE BETTER!** (Keep a copy for your records!)	X	X	X	X	X			
Review your Student Aid Report (SAR) for errors and make any necessary corrections.		X	X	X	X			
Provide the Financial Aid Office with all requested information.			X	X	X	X	X	X
Financial aid award letters mailed to students. Students must sign and return letter to FAO.				X	X	X	X	X
May 1- FAFSA priority deadline for consideration for Federal Campus-Based Programs (FWS, FSEOG, & Perkins)					X			
May 1- FAFSA deadline for PHEAA State Grant.					X			
File Master Promissory Note with PHEAA. (See Stafford Loan Processing Cycle for additional information.)					X	X	X	X
Receive results of PHEAA Grant eligibility.					X	X	X	X
Receive billing statement form Bursar's Office.							X	
Due date for paying Fall semester bill.								X

strongly recommend that you file your FAFSA as soon as possible but no later than April 1, 2001, even if you have to use estimated financial information. This will allow the federal government enough time to process your FAFSA and send the results to California University by May 1, 2001. If you cannot or do not file your FAFSA by our first-priority deadline, please file as soon as you can; and, you will be considered for the Pell Grant, student loans, etc.

PHEAA State Grant

In order to receive state grant assistance from PHEAA, students must file their 2001-2002 FAFSA or Renewal FAFSA by May 1, 2001. All students are urged to apply even if the deadline has passed, since late applications are considered if funds permit.

Handling Special Circumstances

Although the process of determining a student's eligibility for financial aid is the same for all students, an adjustment sometimes can be made if a student has special circumstances. Special circumstances may include a reduction in income due to loss of employment, death or disability of a wage earner, divorce or separation, loss of social security benefits, unusual medical expenses, etc. In addition, a student who does not meet the federal definition of an independent student for financial aid purposes may be able to document those exceptional circumstances in order to be considered an independent student.

The Financial Aid Office has a Change of Income Information Form (CIIF), which should be used when the special circumstances involve a loss of income/benefits or unreimbursed medical expenses which exceed 7.5% of the family's adjusted income. The Change of Income Information Form will be available after January 2, 2002, by contacting the Financial Aid Office.

A student who wants to appeal his or her dependency status for financial aid purposes should file the Dependency Appeal Form for the appropriate school year. A student who does not meet the federal definition of an independent student normally must file as a dependent student and include parental information on the FAFSA. Only students with exceptional circumstances should file the Dependency Appeal Form. Unfortunately, parents' unwillingness to help pay for college, not being claimed as an exemption on parents' tax return, or living on your own does not make a student independent for financial aid purposes. The Dependency Appeal Form is available upon request from the Financial Aid Office.

If you think you have special circumstances that you want to discuss with a financial aid counselor, please feel free to contact our office.

After You Apply

FAFSA Results

The federal government will process your Free Application for Federal Student Aid (FAFSA) and electronically send the results to the Financial Aid Office provided you listed California as one of the schools to receive the results of your FAFSA. You should receive a paper Student Aid Report (SAR) in the mail approximately two weeks after the federal processor receives your FAFSA. You should review the SAR to see if any corrections are necessary. Otherwise, you can keep the SAR for your records.

When you apply for Federal student aid the information reported on the FAFSA is used in a formula approved by Congress. This Federal formula determines a student's Expected Family Contribution (EFC), the amount the family (student and parents, if applicable) is expected to contribute toward the student's education. The basic elements included in determining the EFC are:

- ☑ contribution from the parents' income and assets
- ☑ contribution from the student's income and assets
- ☑ number of members in the household
- ☑ number of family members enrolled at least half-time in college

You can obtain an estimate of your EFC yourself by using the web calculator available at **www.finaid.org/calculators/finaidestimate.phtml**. The lower your EFC, the more financial need you will have. The lowest EFC possible is zero; the highest is 99,999 or above.

If the student's EFC is below 3100, the student may qualify for a Federal Pell Grant (only students pursuing their first baccalaureate degree are eligible). To determine eligibility for other Federal aid, a student's EFC is used in the following equation:

Cost of Attendance
less: Expected Family Contribution (EFC)
= Financial Need

Your demonstrated financial need will determine which programs you qualify for. Even if you have no financial need, you will still qualify for the Unsubsidized Federal Stafford Loan and/or Parent Loan for Undergraduate Student (PLUS). Your parent must be willing to apply for the PLUS Loan and have a satisfactory credit history.

Verification

Some of our financial aid applicants are selected in a process called verification. During this verification process, the FAO office must verify the accuracy of FAFSA data reported by students. If your FAFSA is selected for verification by the federal government, we will notify you and tell you exactly what documents we need from you. Typically, the students selected for verification will receive an award packet, however these awards are tentative (estimate only) pending the completion and outcome of verification. Federal Stafford Loans are not certified until the verification process has been completed.

Cost of Attendance

Each year the University establishes a total *"cost of attendance"* budget based on a student's housing status (commuter, dormitory, or off-campus), enrollment status (full-time or part-time), and residency status (in-state or out-of-state). The cost of attendance budget represents the total educational expenses a student may incur while attending our University, and is a critical element in determining a student's eligibility for Federal Stafford Loan Assistance. The elements of this budget are both "direct" institutional expenses (tuition/fees and/or University room/board), as well as "indirect/living costs" (off-campus housing, books/supplies, and/or personal expenses) not billed by the University.

In some cases, we can build an individual budget for a student or add additional educational expenses with appropriate documentation. Some of the more common expenses for which we can adjust a budget include the following:

- art supplies
- costs associated with studying abroad
- dependent child care
- Purchase or lease of a Personal Computer (not to exceed $1,200)

In order to discuss having your budget adjusted, you would need to obtain appropriate documentation detailing the additional expenses and contact the FAO to schedule an appointment with a counselor.

Please Note: *The indirect/living expenses a student actually incurs will vary significantly from student to student. A student's program of study, year-in-school, housing/board arrangements, student's budgeting skills, and many other variables will affect a student's total expenses within this budget element. The University determines the indirect/living costs for each student type based on data collected f rom students, local bookstores, and local landlords. This data is analyzed to arrive at "average" expenses incurred by most students.*

Award Letters

California University typically starts the awarding process in early April of each year. If you are an accepted freshman/new student and we have received the results of your FAFSA by the date we begin our awarding cycle, you can expect to receive your Award Letter Packet by mid-April. For students who have not been

accepted and/or their FAFSA has not been received at the point the awarding process begins, our office will send award packets to these students throughout the summer as their file becomes complete (accepted to the University and receipt of FAFSA record). **Please Note:** Only accepted students receive an award packet.

Upper class or graduate student Award Letter Packets are mailed once we have received the results of your FAFSA and we have determined that you are making Satisfactory Academic Progress for financial aid purposes.

Satisfactory Academic Progress

In order to receive financial aid, you must make Satisfactory Academic Progress (SAP) for financial aid purposes as defined by the Financial Aid Office. Our definition of SAP is different from the University's definition of being in good academic standing. Satisfactory Academic Progress (SAP) standards include three elements: 1) maximum time frame within which a degree or certificate must be granted, (2) minimum credit hours earned per academic year, and (3) minimum cumulative grade point average (g.p.a.).

The review of a student's "Satisfactory Academic Progress" (SAP) standing occurs annually at the end of the spring semester. A student's SAP standing will be based on his/her academic performance during the academic year [fall and/or spring semester(s)]. Students who are not making satisfactory academic progress are typically notified in early summer. A student who is found deficient in one or more components is put on Financial Aid Probation for the next school year. Students on financial aid probation will be eligible to receive federal Title IV financial aid assistance during this probationary period. **Please Note:** Students will not be granted financial aid probation for two consecutive academic years.

If a student is on probation for a year and is found deficient, the student is ineligible to continue to receive financial aid for the next school year. In order to be reinstated, the student must successfully achieve the required grade point average as mandated by the SAP Policy and/or successfully make up his/her credit hour(s) deficiency at his/her own expense. Students may use the summer or any semester of the academic year to resolve their deficiencies.

Students who make up their deficiencies must complete and return the "Satisfactory Academic Progress Form", along with all required documents, to the Financial Aid Office before clearing their deficiency status. Only successfully earned credits, not grades, are transferable to California from another approved institution.

All Title IV recipients have a right to appeal a financial aid suspension decision by submitting a "SAP Appeal Form" to the Financial Aid Office. Written explanation of the reason(s) why the student failed to meet the Satisfactory Academic Progress Standards must be attached to the appeal form. Appeal forms are available in the Financial Aid Office. The deadline date for filing an appeal for fall is Oct. 2, 2001, and for spring, Feb. 23, 2002. Students will be notified of a decision within 7 to 10 days after filing the appeal form. If the appeal is denied, a student may file a final appeal to the Director of Financial Aid. This appeal must be filed within 10 working days from the date of the first denial letter.

Grants

About Grants

Grants are considered gift aid and do not have to be repaid. Most grant aid is based on some type of need-based eligibility requirement; therefore, you must complete the FAFSA to apply for most grants. Sources of grants include federal, state, private, and institutional funds. Although grants are a very desirable source of financial aid, the availability of grants is generally limited to the neediest students. For more information about grants and other types of financial aid call 1-800-4-FEDAID and ask for The Student Guide or read it on the Web at **www.ed.gov/prog_info/SFA/StudentGuide/.**

Federal Pell Grants

Federal Pell Grants are awarded based upon the analysis of the FAFSA, cost-of-attendance, and enrollment status (full time or part time). Pell Grants are awarded only to undergraduate students who have not earned a bachelor's degree or professional degree. Pell Grants often provide a foundation of financial aid to which other aid is added for the neediest students.

The United States Department of Education uses a standardized formula, established by Congress and called the Federal Needs Analysis Methodology, to evaluate the information you report on the FAFSA and produce **an Expected Family Contribution (EFC) number.** Your Student Aid Report (SAR) contains this number and will tell you if you are eligible for a Pell Grant. You can get a booklet called the EFC Formula Book, which describes how a student's EFC is calculated, by writing to:

Federal Student Aid Programs
P.O. Box 84
Washington, DC 20044

The Pell Grant for 2001-2002 will range from $400 to $3750. The maximum Pell Grant award can change each year based upon Congressional funding levels. However, if you are eligible for a Pell Grant based upon your EFC number, you are guaranteed to receive it. For the 2001-2002 school year, full-time students with EFCs from zero to 3550 qualify for a Pell Grant award. Those with EFCs greater than 3550 are not eligible for a Pell Grant but could be eligible for other types of aid.

Federal Supplemental Educational Opportunity Grants

The Federal Supplemental Educational Opportunity Grant (FSEOG) is for undergraduate students with exceptional financial need, i.e., students with the lowest Expected Family Contributions (EFCs). Preference is given to Pell Grant recipients who file their FAFSA by our first priority deadline of May 1 in order to be considered for this grant; therefore, you should submit your FAFSA by April 1 of the award year. The FSEOG annual award typically ranges from $600 to $1200.

Pennsylvania State Grants

PHEAA Grants provide need-based state grant assistance of up to $3,200 per year. The grant program is funded by the Commonwealth of Pennsylvania and is administered by PHEAA Grant Division. Student receives up to eight full-time semesters of PHEAA Grant assistance or sixteen semesters of part-time assistance.

Eligibility Criteria:

The student must:

- ☑ be a Pennsylvania resident.
- ☑ complete the FAFSA by May 1 each year.
- ☑ be enrolled on at least a half-time basis in a PHEAA-approved undergraduate program of study.
- ☑ be a high school graduate or the recipient of a GED.
- ☑ demonstrate academic progress for continued aid.

Athletic Grant-in-Aid

California University of PA is a Division II member of the National Collegiate Athletic Association (NCAA). There are 11 intercollegiate teams for men and women. If you are interested in participating in intercollegiate athletics and possibly obtaining an athletic scholarship, you should contact the head coach of your preferred sport.

Student Employment

About Student Employment

Part-time employment offers you the opportunity to 1) earn part of your educational expenses; 2) gain valuable work experience; and, 3) work with staff, faculty, and/or community members. Students who work a moderate number of hours per week often are able to manage their time better than those students who do not work at all. Of course, there are many factors you will want to consider when deciding if working is appropriate for you.

If you do decide to work on a part-time basis while pursuing your education, California University has two student employment programs, Federal and Institutional Work-Study. In order to establish a reasonable balance between your academic efforts and your work schedule, students typically work eight hours per week during the academic year. Students in both programs are paid the Federal minimum wage.

California University is an Equal Opportunity/Affirmative Action Employer. The Financial Aid Office reaffirms the University's commitment to the policy that there shall be no discrimination against any individual in educational or employment opportunities because of race, color, religion, national origin, sex, status as a disabled veteran or veteran of the Vietnam era, or disability. Also, there shall be no discrimination because of age except in compliance with requirements of retirement plans or state and federal laws and guidelines.

Federal & Institutional Work-Study

Federal Work-Study is a federal financial aid program which allows you to earn money to help pay educational expenses and encourages community service work and work related to your course of study to the extent possible. In order to qualify for Federal Work-Study you must demonstrate sufficient financial need as determined from the results of your FAFSA. In addition, the Financial Aid Office must receive the results of your FAFSA by our first-priority deadline of May 1. If selected to receive a Federal Work-Study award, the FAO will send you an award notice requesting your acceptance or rejection of the award. If you are not awarded Federal Work-Study and you are still interested in working, you are eligible to apply for an Institutional Work-Study position on campus.

Our Institutional Work-Study Program, which is funded by the University, provides student employment opportunities to enrolled students regardless of financial need or the date your FAFSA is submitted to our office.

Application Procedures

In order to apply for either the Federal or the Institutional Work-Study Program, you must complete the FAFSA and mark "yes" to the question on the FAFSA that asks you if you are interested in student employment. A Work-Study Eligibility Card is automatically generated for any student who meets the following criteria:

- ☑ files a FAFSA;
- ☑ is making Satisfactory Academic Progress; and
- ☑ is currently enrolled at least half time.

A "white card" is generated for those students awarded a Federal Work-Study position while a "pink" card is generated for students interested in our Institutional Work-Study Program. Either card authorizes you to interview for a position (federal or institutional) in one of our many on-campus and a number of off-campus employment locations. In addition, a work-study information packet will also be sent to you before the beginning of fall semester.

California University does not assign or place students in positions, but rather our office posts the jobs that are available (both Federal and Institutional). Because the job posting service is centralized, students are assured an equal opportunity to apply for available jobs. Job postings appear on the Job Posting Board located outside the Financial Aid Office in Dixon Hall. Students are encouraged to check the postings on a daily basis. Jobs are posted when new positions become available and when vacancies occur.

Summer Employment

During summer sessions both part-time (10 hours a week) and full-time (maximum of 300 hours during May-August) employment opportunities are available to qualified students.
Students interested in summer employment must complete a FAFSA and a "Summer Work Study Application." You can obtain this application by contacting the Financial Aid Office or clicking on "Forms" at the bottom of our opening webpage.

Payroll Procedures

All students employed by California University must complete the following payroll forms:

1. A Work-Study Eligibility Card signed by the hiring Department.
2. Federal I-9 Employment Authorization Form, which requires both your driver's license and a social security card (or other acceptable documents).
3. W-4 Withholding Form to determine the number of exemptions you are claiming for federal, state, and local income tax withholding purposes.
4. Exemption or Personal History Form to determine if retirement will be deducted from your earnings.
5. Payroll Authorization Card.

Most students are paid by check every two weeks for the hours worked the previous two weeks. You pick up your paycheck from your student employment department. Your earnings are not credited to your account to apply towards your tuition, room and board, and/or other charges although you can use your earnings to make payments yourself. Direct deposit to a bank account is available by contacting the Payroll Office.

Scholarships

About Scholarships

California University of Pennsylvania offers academically talented and creatively gifted students a variety of University and Endowed Scholarship opportunities. Each scholarship has special selection and awarding criteria, which was agreed upon by the University and the scholarship donor (if applicable). In order to streamline the selection process, California University does not use a scholarship application. Rather, all accepted students and currently enrolled students are considered for all possible University scholarships. However, selected applicants for some of the scholarship awards may be required to complete additional information for final determination of the award.

The scholarships offered range from $100 to full-tuition for an academic year. Many of the scholarships are renewable awards based on the student maintaining minimum academic standards and demonstrating financial need, if applicable. The Financial Aid Office or designated selection committee will select the best applicant(s) from the "pool" of students who met the minimum qualifications for the scholarship.

Most incoming freshman scholarships are awarded by May 1st , therefore all new students wishing to be considered must have applied and been accepted to the University by March 15th. Most scholarships are awarded solely on academic merit or special talent, however some also require verification of financial need. Therefore, you are strongly encouraged to complete the Free Application for Federal Student Aid (FAFSA) by March 15 if you wish to be considered for all scholarship possibilities. If you do not have a FAFSA on file at the time we make our scholarship selections, you will not be considered for any scholarship that has a need-based requirement.

If you are accepting an awarded scholarship, it means that you agree to abide by any applicable university, federal, and/or state regulations. In addition, you must:

- ☑ be registered for at least 12 credit hours for each semester during the academic year for which you receive a scholarship, and
- ☑ be making Satisfactory Academic Progress (not on financial aid suspension) as defined by the Financial Aid Office.

Scholarship Directory

AAUW Scholarship: The California Branch of the American Association of University Women awards a $400 per year scholarship to a full-time, female upperclassman over 30 who wants to complete her undergraduate degree at the University. The scholarship may be renewed upon maintenance of a 3.00 grade point average. Those interested should submit a resume and cover letter by October 1st to the Financial Aid Office.

Alumni Scholarships: Renewable scholarships up to $1,000 are given to freshmen entering with an SAT score of at least 1100, a grade point average of 3.25, and a rank in the first or second tenth of their graduating class. Inquiries should be directed to the Admissions Office (724-938-4404).

Angelo Sr. and Adele Tavani Armenti Memorial Scholarship: This annual renewable scholarship is awarded to a full-time undergraduate student enrolled in his/her junior year at the University. Students who have achieved outstanding academic records and who are involved in one or more of the music programs at the University (e.g., band, choir, musical theatre, music minor, or future music majors, etc.) will be considered for this scholarship. Interested candidates should contact the Music Department at (724-938-4242).

Colonel Arthur L. Bakewell Veterans Scholarships: the Veterans Club offers scholarships to honorably discharged veterans who are full-time undergraduate sophomores with a minimum 3.00 g.p.a. Eligible individuals should contact the Veteran Affairs Office (724-938-4076).

Lillian Bassi Scholarship: This non-renewable scholarship is awarded to three academically talented women at CUP who are junior education majors. The School of Education shall select the recipient of this award.

Gabriel P. Betz Scholarship: This annual scholarship is awarded to a student who is a junior majoring in Geography. A departmental scholarship committee announces the award during the fall semester. Interested candidates should contact the Earth Science Department (724-938-4180).

Blizman Memorial Scholarship: This annual scholarship is awarded during the Fall semester to an outstanding freshman baseball player.

Board of Governors' Scholarships: These scholarships, which waive tuition every semester for four years, are given to entering freshmen with at least a 2.5 grade point average and a combined SAT score of 850. Recipients must make academic progress and remain in good standing as defined by the University catalog to continue receiving this award. Interested students should contact the Admissions Office (724-938-4404).

Bill and Candice Booker Student Leader Scholarship: This annual renewable scholarship is awarded to a full-time undergraduate student. Selection will be based on academic achievement, and demonstrated financial need. Applicants must submit an essay describing their leadership or potential for leadership through participation in such groups as Student Government, Council of Trustees, or other student or community organizations by October 1st to the Financial Aid Office.

The Edward McNall Burns Scholarship: This annual scholarship is apportioned to a student or students majoring in Social Science, Economics, or History and Urban Affairs who have completed between 45 and 60 credits at the University. Applicants must submit a signed and dated letter of intent, a recent transcript showing outstanding academic ability, and proof of financial need as determined by the Financial Aid Office. Interested students should contact the Social Science Department (724-938-4042).

California Area Chamber of Commerce Scholars Fund: This annual non-renewable $500 scholarship is awarded to a full-time freshman who meets the following criteria: (1) graduated from California High School; (2) ranked in the top two-fifths of their class; (3) have a competitive SAT score; (4) who are active in the community; and (4) demonstrate financial need. The Financial Aid Office will select the recipient of this award.

California PTA Scholarship: The California High School PTA awards a $500 scholarship to a freshman student who has graduated from California High School. The scholarship is based on academic performance and financial need. Applications are available in the California High School's Guidance Office after February 1st of each year. The Financial Aid Office will select the recipient of this award.

California University of Pennsylvania Faculty Scholarships: The CUP faculty awards a limited number of full-tuition (in-state) schol-

arships per year to freshmen at the University. Minimum qualifications are: (1) admission as a full-time student at California University of Pennsylvania; (2) a combined SAT score above 1200; and (3) rank in the upper 10% of their high school graduating class. Each renewal recipient must maintain at least a 3.6 g.p.a. to continue receiving this award each year.

Carmichaels Area High School Scholarship: This annual renewable scholarship is awarded to a full-time undergraduate student enrolled or planning to enroll at the University who has obtained a 3.0 grade point average, and is a Carmichaels School District graduate or Carmichaels resident. The Financial Aid Office will select the recipient of this award.

Charles and Mary Coen Scholarship: This annual non-renewable scholarship is awarded to a junior who resides in Washington County. Selection is based on scholastic achievement and financial need. The Financial Aid Office will select the recipient of this award.

Leonard and Donna Fisher Colelli Scholarship: This annual non-renewable scholarship is awarded to a full-time undergraduate student. The scholarship will be awarded to a student who has an appreciation for the "fine arts" and will be based on academic merit. To be considered, applicants must write a 250-word essay describing their reason(s) for majoring in their chosen filed of study, their reason for applying for the scholarship, and their career goals they hope to pursue after graduation. The essay must be submitted by October 1st to the Financial Aid Office.

J. Robert Craig Scholarship: A first-semester scholarship is awarded to an incoming freshman or transfer student exhibiting excellence in the natural sciences. A letter of recommendation from the applicant's science teacher must verify proof of this ability. Interested freshmen should contact the Educational Studies Department (724-938-4140) or the Physical Sciences Department (724-938-4147).

Pete J. Daley II Government Scholarship: This $250 scholarship is awarded each semester to a deserving student who resides in the 49th Legislative District, first priority will be given to Political Science majors. The scholarship is based on academic performance and financial need. Applications are available in the Financial Aid Office.

James T. & Martha E. Davis Scholarship: This annual non-renewable scholarship is awarded to an academically talented junior who demonstrates financial need and resides in one of the following Pennsylvania counties: Fayette, Greene, Washington, or Westmoreland. The Financial Aid Office will select the recipient of this award.

Walter and Romaine Layton Davis Scholarship: This annual non-renewable scholarship is awarded to a full-time undergraduate student who has demonstrated financial need, and who shows evidence of personal responsibility, unselfishness, and self-reliance. Students must have a 3.00 g.p.a., or in the case of incoming freshmen, show promise of academic success. Students should demonstrate evidence of participation in community, service or church organizations. Applicants must submit an essay to the Financial Aid Office by October 1st describing their past and current activities and any volunteer services, explain why they chose their particular field of study, and indicate what personal sacrifices they have made in order to fund their college expenses.

Earth Science Faculty Scholarship: This scholarship is awarded to a senior majoring in Earth Science, Geography, or Geology. The applicant must have a minimum 3.00 grade point average in their major. The award is made at the end of the student's junior year. Those interested should contact the Earth Sciences Department (724-938-4180).

Eberly Family Scholarships: These renewable scholarships are awarded to freshmen that have demonstrated academic promise and reside in Fayette County. The scholarship value is up to full tuition for an academic year. Each recipient must be full-time and maintain sufficient academic progress to continue receiving this award (Starting with the 1999-00 academic year, students must maintain a 3.00 g.p.a. to continue receiving this scholarship. The Financial Aid Office and Admissions Office select the recipient.

Clemens and Anna Mologne Fischer Scholarship: This scholarship is awarded to a full-time undergraduate student who has demonstrated financial need, shows evidence of personal responsibility, unselfishness, and self-reliance. Students must have a 3.00 g.p.a., or in the case of incoming freshmen, show promise of academic success. Students should demonstrate evidence of participation in community, service or church organizations. Applicants must submit an essay to the Financial Aid Office by October 1st describing their past and current activities and any volunteer services, explain why they chose their particular field of study, and indicate what personal sacrifices they have made in order to fund their college expenses.

Dr. Calvin Fleming Scholarship: This scholarship is awarded to an outstanding student majoring in the Natural or Physical Sciences with a preferred composite SAT score of 1200. Interested students should contact the Chemistry and Physics Department (724-938-4147).

Kenny Hager Memorial Scholarship for Graphic Communications: This non-renewable scholarship is awarded to a student majoring in Graphic Communications, who has completed at least 64 credits, has a minimum grade point average of 3.00, and demonstrates financial need. Interested students should contact the Applied Engineering and Technology Department (724-938-4085).

Carol Hallam Scholarship: This non-renewable scholarship is awarded to a full-time junior or senior who demonstrates financial need. First preference will be given to pre-medical biology students. Second preference will be given to health care related majors, i.e., medical technology, nursing, chemistry, etc. The Scholarship Committee shall select the recipient of this award.

David W. Hambacher Scholarship: A $500 scholarship is awarded to a senior who is attending graduate school, who has a 3.0 g.p.a. or greater, who participates in community service, and who has financial need. Interested students should contact the Psychology Department (724-938-4100).

Joseph and Debra Hardy Baseball Award: This annual non-renewable award will be given to a full-time undergraduate student who has demonstrated academic merit with at least a 3.00 g.p.a., who is committed to providing service to the community, and has demonstrated an ability to contribute to the overall success of the baseball team.

Majorie Henshaw Holman Award: This annual non-renewable scholarship is awarded to a full-time freshman that meets the following criteria: (1) majoring in elementary education; (2) has a g.p.a of 3.0 or higher; and (3) is a graduate of Uniontown High School. The Financial Aid Office will select the recipient for this award.

Oren Holman Scholarship: This renewable scholarship is awarded to an undergraduate student based on academic achievement and financial need. The Financial Aid Office will select the recipient of this award.

Delila C. Jenkins Scholarships: These renewable scholarships are awarded to freshmen Education majors demonstrating financial need. The scholarship value is up to full tuition for an academic year. Each recipient must maintain satisfactory academic progress in order to

continue receiving the award. Applicants must submit the "Free Application for Federal Student Aid" to be considered. The Financial Aid Office will select the recipient for this award.

Michael Kara Scholarship: This annual non-renewable scholarship is awarded to a full-time freshman that graduated from Belle Vernon High School. First preference will be given to students who come from a foster home. Students considered for this scholarship shall demonstrate high moral character, a respect for their teachers and elders, involvement in the community and self-reliance as demonstrated by holding a job to help pay for their own education or to assist with providing for their family. The guidance counselor of Belle Vernon High School shall forward a recommendation to the Financial Aid Office for selection.

Rotary District #733 Charles C. Keller Endowment Fund Scholarship: This annual scholarship is awarded to a student based on academic achievement and financial need. Priority is given to a student whose parents or grandparents were Rotarians from District #733, or to the student who participated in Rotary youth-related programs such as Interact, Rotaract, or youth exchange. If no applicant meets either of the Rotarian criteria, priority consideration will then be given to non-traditional students. Applications are available in the Financial Aid Office.

Michael Keller Scholarship: This annual non-renewable scholarship is awarded to a non-traditional student who is at least 30 years old. This scholarship is based on academic performance (minimum 3.0 g.p.a.) and financial need. Interested students should contact the Office of LifeLong Learning (724-938-5840).

Paul J. Killius Jr. Special Education Scholarship: This annual scholarship is awarded to a freshman student majoring in Special Education who resides in the local area of the University and demonstrates financial need. The Financial Aid Office will select the recipient for this award.

Joseph A. Main AFGE/UMWA Scholarship: This annual $550 scholarship is available to an undergraduate student who is a current member or employee, or the child of a current member or employee, of either the AFGE or UMWA. If no candidate meets this requirement, the scholarship will be awarded to an academically talented and financially needy undergraduate. Preference will be given to students born and raised in the following Pennsylvania counties: Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Washington, or Westmoreland. Selection is made by a committee established by the AFGE/UMWA. Interested candidates can request an application from the Foundation or from AFGE Local 1916, located in Bruceton, PA. Applications must be submitted by March 31st each year for the scholarship covering the ensuing fall and spring semester. Applications should be mailed to the Joseph A. Main AFGE/UMWA Scholarship Committee, c/o AFGE Local 1916, P.O. Box 231, Library, PA 15129.

Debra Maley Scholarship: This annual renewable scholarship is awarded to a freshman from Bentworth High School. The scholarship value is up to full tuition for an academic year. The scholarship is based on academic performance and financial need. Each recipient must maintain sufficient academic progress to continue receiving the award. The Financial Aid Office will select the recipient of this award.

Donald Maley Technology Education Scholarship: This annual scholarship of $1000 is awarded to an incoming freshman majoring in Technology Education. Selection is based on scholastic achievements and financial need. Interested students should contact the Department Chair of Applied Engineering and Technology at (724-938-4085) for an application and additional information.

Albina R. Malpezzi Memorial Scholarship: This non-renewable scholarship is awarded to a female student enrolled in the College of Liberal Arts, who has completed at least 64 credits but not more than 96 credits, has a minimum grade point average of 3.25, and demonstrates financial need. The Financial Aid Office will select the recipient for this award.

Joseph Lynn Marino Memorial Award: This award is granted to a full-time undergraduate with a 3.50 overall grade point average. The applicant must be enrolled in the College of Liberal Arts and must have completed six credits in Anthropology. Those interested should contact the Chair, University Scholarship Committee (724-938-5863).

Amylyne Marunyak Memorial Band Scholarship: This annual $1000 scholarship is awarded to a full-time undergraduate who is entering their senior year and who meets the following criteria: 1) demonstrates financial need, 2) achieved at least a 3.2 grade point average, and 3) is a member of the California University band. Priority is given to business majors who are graduates of Albert Gallatin School District and other Uniontown area high schools. Interested candidates should contact the Music Department at (724-938-4242).

Merlin Scholarship: This non-renewable scholarship is awarded to a junior or senior special education major from Fayette County with a minimum 3.0 g.p.a.

Minor Major Memorial Award: This annual award is given to a scholastically outstanding student in any of the English curricula. There is no application. Those interested should contact the English Department (724-938-4070).

Minority Scholarship: This annual non-renewable scholarship is awarded to a deserving minority student. Interested students should contact the Director of the Women's Center/Disabled Student Services (724-938-5857).

Mon Valley NAACP Scholarship: A $600 renewable scholarship is awarded to a freshman who graduated from one of the following school districts: Charleroi, Belle Vernon, Ringgold, Monessen, Yough, California, or Bentworth. Nominations must be made by the school district. Minimum qualifications are: (1) a combined SAT score of 800 or ACT score of 17; (2) rank in the upper 25% of the high school graduating class; (3) attained at least a 2.50 cumulative grade point average; (4) demonstrate financial need beyond other financial aid grant programs; (5) an Afro-American high school senior; and (6) admitted as a full-time student at California University. Those interested should contact the Admissions Office (724-938-4404).

Paul Mudry Memorial Scholarship: The non-renewable scholarship is awarded annually to a full-time undergraduate student who has completed two previous assignments and is currently assigned as a work-study student in the Physical Plant Department. Candidates must have successfully completed 32 undergraduate credits at CUP, have maintained a minimum 3.0 g.p.a., and have demonstrated financial need. Applications are available in the Physical Plant Department.

Elmo Natali Endowment Fund: This annual scholarship is awarded to a deserving student who is a member of the California University Football Team. Interested students should contact the Athletic Department (724-938-4019).

Kurt Nordstrom Memorial Scholarship: This scholarship is awarded to a student majoring in Printing Management. A departmental committee announces its decision. Interested students should contact the Applied Engineering and Technology Department (724-938-4085).

Mary Noss Freshmen Scholarships: A $750 non-renewable scholarship is awarded to an incoming freshman from each of Washington County's fourteen public schools. The recipients, chosen by a committee in each high school, must attend the University full-time in order to receive the award. Eligible applicants should contact their high school guidance counselor.

Dr. & Mrs. Arthur William Phillips Scholarship: These annual renewable scholarships are awarded to full-time undergraduate students who are Pennsylvania residents living in Butler, Clarion, Crawford, Mercer, or Venango Counties, who manifest promise of academic success and good moral character. Interested students must submit a "letter of interest" to the Financial Aid Office and provide evidence of participation in community, service, and religious organizations.

Walter Radishek Outstanding Future Teacher Award: This non-renewable scholarship is awarded to a scholastically outstanding senior education major that has completed student teaching. The College of Education will select the recipient.

Reighard Award for Outstanding Leaders: This annual non-renewable scholarship shall be awarded to a full-time undergraduate student who has achieved a 2.75 g.p.a. and who has completed a minimum of 60 credits. The Vice President for Student Affairs shall invite nominations. Letters of recommendation should include a description of the leadership accomplishments of the nominee involving both on and off campus activities. A committee consisting of the Vide President for Student Affairs, the Dean for Student Development, and the Dean for Student Services shall select recipients.

Laverne Bazilwich Richey Scholarship: This non-renewable scholarship is awarded to a full-time woman undergraduate student with a minimum 3.0 g.p.a. whose major is medicine and/or law and show's empathy with women's issues. The Scholarship Committee shall select the recipient of this award.

Rudez-Pezo Scholarship Fund: This annual scholarship is awarded to an academically talented and financially needy undergraduate. First preference will be given to students majoring in the College of Education and Human Services. If an appropriate candidate is not selected from that College, it will be open to students enrolled in the Eberly College of Science and Technology. The Financial Aid Office will select the recipient for this award.

Elsbeth E. Santee Scholarship: This scholarship is awarded to an outstanding student majoring in one or more of the Foreign Languages. Minimum qualifications are a 3.00 grade point average in the Foreign Language Major(s) and at least two completed courses in the Foreign Languages. Inquiries should be directed to the Foreign Languages Department (724-938-4246).

School District Scholarships: These $500 annual non-renewable scholarships will be awarded to full-time incoming freshmen. The guidance counselors from the various schools districts represented shall forward recommendations to the Financial Aid Office for selection.

Shaltenbrand/Westerwald Pottery Scholarship: This non-renewable scholarship is awarded to an incoming freshman that graduated in the upper 10% of his/her class. This scholarship is awarded first to anyone from the following counties: Allegheny, Fayette, Greene, Washington, or Westmoreland; and second to a Pennsylvania resident. The Financial Aid Office will select the recipient for this award.

Charles W. Slick Football Scholarship: This annual scholarship is awarded to a deserving student who is a member of the California University Football Team. The scholarship is awarded based on academic performance and good citizenship qualities. Interested students should contact the Athletic Department (724-938-4019).

T. Philip Stout Entrepreneurial Scholarship: This renewable scholarship is awarded to a sophomore, junior, or senior business major from Washington County with a minimum 3.0 g.p.a. Preference will be given to any student who has demonstrated financial need. The Scholarship Committee shall select the recipient of this award.

William B. and Mary Watkins Stout Scholarship: This renewable scholarship is awarded to a sophomore, junior or senior from Washington County who has a minimum 3.0 g.p.a. Preference will be given to any student who has demonstrated financial need. The Scholarship Committee shall select the recipient of this award.

Tselepis Football Scholarship: This annual scholarship is awarded to a freshman or upper class student from Aliquippa High School who is a member of the California University Football Team. Interested students should contact the Athletic Department (724-938-4019).

Undergraduate Assistantships: Ten $1,000 renewable scholarships are awarded to outstanding first-time freshmen entering on a full-time basis. Minimum qualifications are a 3.25 grade point average and a combined SAT score of 1100. Interested students should contact the Admissions Office (724-938-4404).

Welsh Scholarship: This annual scholarship is awarded to an Education major who has completed at least 96 credits, has a minimum grade point average of 3.00, and demonstrates financial need. The Dean of the College of Education and Human Services chooses the recipient. The College of Education will select the recipient for this award.

Jay and Cissy Zeffiro Scholarship: This non-renewable scholarship is awarded to an undergraduate student who majors in business, economics, or in the arts and sciences. A first year entering freshman must demonstrate academic promise with a minimum 2.5 g.p.a. All undergraduate students must show academic achievement with a minimum 2.5 g.p.a. The Scholarship Committee shall select the recipient of this award.

State Scholarship Programs

SciTech Scholarship Program

The SciTech Scholarship is awarded to students majoring in an approved science or technology field of study. This award is up to $3,000 per year, for a maximum of three years.

The Pennsylvania Higher Education Assistance Agency (PHEAA) and the Pennsylvania Department of Education (PDE) jointly administer the SciTech Scholarship.(See below to view list of approved programs).

To Qualify, A student must:

- Be a resident of the Commonwealth of Pennsylvania.
- Be a high school graduate.
- Be at least a sophomore who is enrolled as a full-time student pursuing a bachelor's degree in an approved science or technology field at an approved Pennsylvania public or private college or university.
- Have had at least a 3.0 cumulative grade point average (on a 4.0 scale) at the time of application for this program and maintain at least that average throughout post-secondary

study.
- Complete an approved internship or relevant work experience in a technology-intensive field with a Pennsylvania company prior to receiving a degree.
- Begin employment in the state within one year after completion of studies, one year for each year that the grant was awarded. A deferment of the work obligation is available for full-time graduate study that begins within one year of the student's receipt of a baccalaureate degree.
- Apply for a Federal Pell and Pennsylvania State Grant.

Please Note: The scholarship will convert to a loan if a student fails to satisfy the requirements of the eligible program or fails to perform the internship or work obligation.

Postsecondary Educational Gratuity Program

The Postsecondary Educational Gratuity Program was established to assist the children of Pennsylvania police officers, firefighters, rescue and ambulance squad members, correction employees and National Guard members who died in the line of duty. The program recognizes and honors those individuals who lost their lives protecting the citizens of this Commonwealth by providing their children with a waiver of tuition, fees, and room and board charges.

Eligible students receive waivers that cover tuition, fees, room and board charged by the institution, less awarded scholarships and federal and State Grants. This benefit is available for a maximum of five academic years, depending upon program of study.

Eligibility Criteria:
- Be a resident of the Commonwealth of Pennsylvania.
- Be a child by birth or adoption of a deceased police officer, firefighter, rescue or ambulance squad member, correction employee or an active National Guard member who died as a direct result of performing his or her official duties.
- Be 25 years of age or younger at the time of application for the program.
- Completed the Free Application for Federal Student Aid (FAFSA) and listed California University of PA as one of school choices.
- Be enrolled full-time leading to an associate or baccalaureate degree.

In submitting an application, the student must include a certified copy of the student's birth certificate or adoption record and a copy of the letter of admission to an eligible school. The program is available to students whose parents have died in the line of duty since January 1, 1976.

The Postsecondary Educational Gratuity Program is administered by The Pennsylvania Higher Education Assistance Agency (PHEAA). PHEAA will send an application to the family once it receives notification of the parent's death.
Individuals who believe they qualify and have not received an application should contact PHEAA directly. To request an application or to receive additional information, please write or call PHEAA at:

POSTSECONDARY EDUCATIONAL GRATUITY PROGRAM
PHEAA Grant Division
1200 North Seventh Street
Harrisburg, PA 17102-1444
1-800-692-7435

Electronic Scholarship Search Engines

The Financial Aid Office staff is frequently asked the following questions:

- "Which awards made by California University might I qualify to receive?"
- "Are there other scholarships I should pursue?"
- "If so, where can I get a listing of them and then obtain an application?"

We trust that the links provided below will assist you in your search.

FastWEB www.fastweb.com
is the largest and most complete scholarship search on the Internet. It provides access to a searchable database of more than 400,000 private sector scholarships, fellowships, grants, and student loans available to students.

MACH 25 www.mach25.com
is a simple and fast scholarship resource locator. Students develop a profile of themselves to locate scholarships that best match their qualifications.

We also encourage you to visit the University's Financial Aid Office homepage at **www.cup.edu/financial_aid.**

Loans

About Loans

Student loans are a major source of financial aid for many students. All loans, including student loans, represent debts that must be repaid; however, most student loans do not go into repayment until after you leave school or graduate. In addition to delayed repayment, most student loans have relatively low interest rates, several repayment options from which to choose, circumstances under which you can postpone repayment, and other favorable terms and conditions. Student loans can be thought of as an investment in your future as long as you are prepared to meet your repayment responsibilities. Failure to repay your student loans will have serious adverse consequences.

It is true that most students would prefer not to borrow; but student loans represent the largest source of financial aid assistance available to students today. Building a budget is one of the most important aspects of student loan borrowing. When borrowing, it is important to carefully plan your budget so that you only borrow what you need, keep track of the total amount borrowed each year, and have some idea as to how you will pay your loans back when the time comes. The Loan Estimator and Repayment Calculator are two electronic tools that can help you with this task. These are available at **www.salliemae.com.** In addition, the Career Services Office can provide you with information concerning entry level salaries in most fields.

At California University, the federal government funds nearly 95% of all loans processed. Over 50% of all financial aid awarded at California University comes from the Federal Stafford Loan Programs.

Federal Family Educational Loan Programs (FFELP)

In order to apply for any type of FFELP (subsidized, unsubsidized, and/or a PLUS loan), you must complete the Free Application for

Federal Student Aid (FAFSA) or the Renewal FAFSA for the appropriate school year and meet all general student eligibility requirements necessary to receive federal financial aid.

In addition, you can receive a loan if you are a regular student (must be admitted to California University as a degree seeking student; non-degree students are not eligible), enrolled in an eligible program of study, and attending at least half-time each term. Half-time enrollment is defined as six hours for undergraduate students and five graduate hours for graduate students.

Federal Stafford Loan Program (Subsidized/Unsubsidized)

The Federal Stafford Loan that you, the student, can borrow in your own name can be either subsidized or unsubsidized or a combination of both. In order to qualify for a subsidized loan, you must have financial need. To determine if you have financial need, your Expected Family Contribution, which is determined by the results of your FAFSA, is subtracted from the cost-of-education. Also, any other aid that you are receiving or are expected to receive is subtracted from the cost-of-education to determine if you have any remaining financial need in order to qualify for a Federal Subsidized Loan. If you do qualify for a subsidized loan, the federal government pays the interest on the loan, i.e., subsidizes the loan, while you are in school, during your six month grace period prior to repayment and during any authorized period of deferment. Students without financial need are eligible for the Federal Stafford Unsubsidized Loan. This means that you will be responsible for the interest on the loan from the time you receive the funds until the loan is paid in full. You have the option of allowing the interest to accumulate, or accrue, on the loan while you are in school and during your six-month grace period before repayment. You also have the Concentration of paying the interest on the loan as it accumulates. If you decide to delay interest repayment, the interest that accumulates will be "capitalized", that is, will be added to your loan principal when you begin repayment. This means your total loan principal will increase. It is better to pay the interest, if you can, because you will save money in the end. However, not all students can afford to pay the interest while still in school and that is why you have the option of letting the interest accumulate.

How much you can borrow in a subsidized and/or unsubsidized loan depends upon several factors including your grade level in school and your dependency status for financial aid purposes.

Stafford Loan Borrowing Chart

Grade Level	**Annual Amount ***
Freshman	Up to $2,625
Sophomore	Up to $3,500
Junior/Senior	Up to $5,500
Graduate	Up to $8,500

* - combined total of Subsidized & Unsubsidized

Please Note: Independent students and dependent students, whose parents cannot obtain a PLUS Loan, may increase their "Unsubsidized" Stafford Loan limit by the following amounts:

Grade Level	**Annual Amount**
Freshman/ Sophomore	Up to $4,000
Junior/Senior	Up to $5,000
Graduate	Up to $10,000

The interest rate on your Federal Stafford Subsidized or Unsubsidized Loan is variable, which means that the interest rate could change each year of repayment but will never exceed the cap of 8.25 percent. The interest rate is adjusted each July 1. A two or three percent fee is deducted proportionately from each disbursement of your student loan. This fee is kept by the federal government to help reduce the cost of the loans.

Federal PLUS Loan

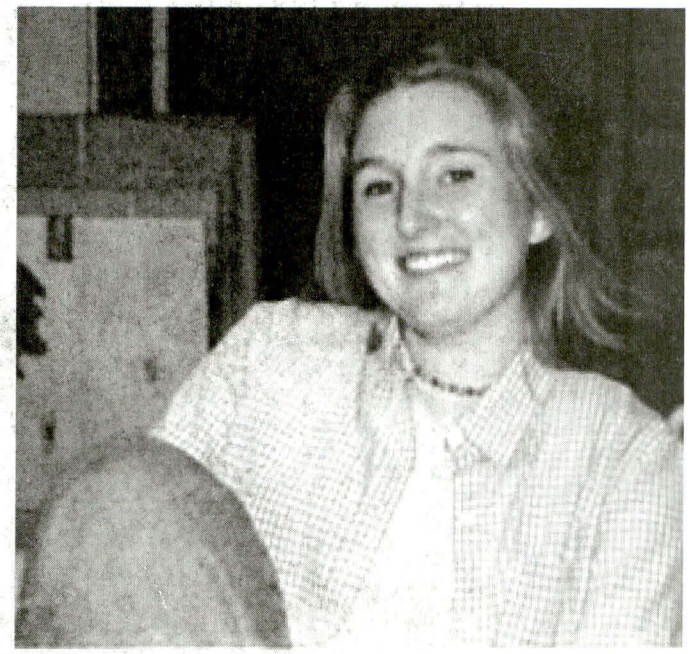
The Federal Parent Loan for Undergraduate Student (PLUS) is a loan for the natural parent, adoptive parent, or legal guardian of a dependent undergraduate student. In certain circumstances, a stepparent may be eligible to borrow. The first step in applying is to complete the Free Application for Federal Student Aid (FAFSA) for the appropriate year. The maximum PLUS Loan a parent can borrow is the difference between the cost of education and any other financial aid.

A parent can obtain a PLUS Loan application from a lender or the Financial Aid Office. The PLUS Loan application is then submitted to the lender. The lender and/or servicer does a credit check on the parent borrower. The parent borrower must have a good credit history in order to be able to borrow a PLUS Loan. If the parent borrower does not pass the credit check, the loan may be denied outright or the parent may be offered the Concentration of obtaining a creditworthy endorser. The endorser would have to be able to pass the credit check, agree to endorse the Promissory Note, and agree to repay the loan if your parent would fail to do so.

If your parent is denied a PLUS Loan outright or does not have someone who is willing to be the endorser if offered that Concentration, then you are eligible to borrow an unsubsidized loan in your own name. Freshmen and sophomores (0 to 64 hours) can borrow up to $4000 and juniors and seniors (96 or more hours) can borrow up to $5000.

The PLUS Loan interest rate is variable, but it will never exceed its cap of nine percent. The interest rate is adjusted each July 1.
A three or four percent loan fee will be deducted from each disbursement. The loan fee is kept by the federal government to help reduce the costs of loans.

The PLUS Loan goes in to repayment within 60 days of the final loan disbursement for the school year. Your parent can choose the Standard, Extended, or Graduated Repayment Plan. (PLUS Loans do not have a delayed repayment Concentration as do subsidized



and unsubsidized loans.) There is no grace period on a PLUS Loan so interest begins to accumulate at the time the first disbursement is made. Your parent must begin repaying both principal and interest while you are in school.

Federal Perkins Loan

The Federal Perkins Loan (formerly called the National Defense and National Direct Student Loan) is a federally funded low-interest loan. California University is the lender using funds from the federal government and/or payments collected from previous borrowers. The interest rate on the Perkins Loan is five percent, and repayment starts nine months after you leave school or graduate.

In order to apply for the Perkins Loan, you must complete the Free Application for Federal Student Aid (FAFSA) or the Renewal FAFSA for the appropriate school year. California University must receive the results of your FAFSA by our first-priority deadline of May 1. You will need to submit your FAFSA by April 1 to allow time for processing to meet this deadline. In addition, you must have financial need in order to qualify for a Perkins Loan. In general, California University makes Perkins Loans that range from $1500 to $2500 per school year to be disbursed in equal semester payments, i.e., $750 and $1250 per semester, for two semesters, respectfully.

If you are awarded and do not decline your Perkins Loan, you will be sent a Perkins Loan packet which contains a Promissory Note, Statement of Rights & Responsibilities, and Repayment Chart to complete. You must complete and return these forms to the Bursar's Office in order to finalize receipt of your Perkins Loan.

When you graduate (or leave school for other reasons), you must complete a Perkins Loan Exit Interview. This Exit Interview will give you more information about your repayment options, deferments, cancellation provisions, etc. You will be mailed a Perkins Loan Exit Interview Packet the quarter you apply for graduation. You must complete and return the forms in the packet in order to meet your Exit Interview requirement. Failure to do so will result in a "HOLD" being placed on your grades, diploma, etc. If you are leaving school for other reasons, such as transferring to a different school, you should contact the Bursar's Office at 724-938-4431 to make arrangements to complete your Perkins Loan Exit Interview.

Application Process (Master Promissory Note)

Step1: File the electronic or paper version of the **2001-2002 FAFSA** and check **"Yes"** to **question 35 .**

Step 2: The pre-certification step is the most important step in the loan process. During this step the Financial Aid Office will notify you of your maximum Federal Stafford Loan eligibility and type of Stafford Loan (subsidized and/or unsubsidized) based on your financial need and grade level. You will have an opportunity to either decline or reduce your Stafford Loan estimate by completing a **"Federal Stafford Loan Adjustment Form"** which is available in the Financial Aid Office (FAO).

Step 3: The FAO will transmit your Federal Stafford Loan information to PHEAA. If you have never completed a Federal Stafford Promissory Note, you will receive a pre-printed Federal Stafford Loan Master Promissory Note (MPN) Packet from PHEAA. If you completed a MPN last year at either California or another four-year college in Pennsylvania, you will only receive an approval notice (see step 5) from PHEAA. **Please Note: The MPN only needs to be completed once every ten years!**

Step 4: You will complete the borrower section of the MPN (if applicable). Please be sure that all answers are complete and that you sign and date the MPN. Submit the completed MPN to PHEAA. Please Note: If you are a non-resident student selecting a lender for the first time, our office strongly encourages you to select one of our preferred lenders listed on the pre-printed Stafford Loan material which will be mailed to you by PHEAA.

Step 5: PHEAA will mail an "Approval Notice" which confirms the amount of your loan that was approved and processed. ***Please Note: You will have an additional opportunity at this point to cancel or reduce your Stafford Loan(s) by contacting PHEAA.***

Step 6: PHEAA will authorize the disbursement of loan proceeds (Electronic Funds Transfer [EFT] or check) at the appropriate time to California University. Finally, **all first-time Stafford Loan borrowers must** complete a loan counseling session before Stafford Loan proceeds can be disbursed to the student. This loan counseling session can be completed via the internet by going to our homepage at: **www.cup.edu** and clicking on **"Admissions/ Financial Aid."** Proceed by clicking on the **"Financial Aid Homepage"** and select **"Links and Resources"** and finally select **"On-line Student Loan Entrance Counseling."**

Disbursement of Financial Aid

Crediting Financial Aid to a Student's Account

In general, once a student's financial aid award(s) has been finalized (all requested forms received, verification completed, enrollment verified, and default status reviewed), the student's semester award amount(s) (except Federal Stafford Loans and Federal College Work-Study) will be credited to his/her account beginning with the second week of the semester. Federal Stafford Loans will also be credited to a student's account once loan proceeds have been received and appropriate authorization (endorsement of loan check or a signed EFT authorization form) has been secured and all other eligibility criteria have been satisfied. Federal College Work-Study funds are disbursed bi-weekly to the student in the form of a payroll check based on the number of hours worked during the pay period. **Please Note:** Federal regulations prevent the delivery of the first disbursement of Federal Stafford Loan proceeds to first-year, first-time borrowers until thirty days after the first day of classes.

How Registration Affects Financial Aid Eligibility

Federal regulations and institutional guidelines require students to be registered before any financial aid monies can be disbursed. In addition, all federal and state financial aid programs specify minimum enrollment requirements in order for a student to receive any (maximum or partial) assistance from these programs. These minimum enrollment requirements are broken into four enrollment classifications: full-time, three-quarter-time, half-time, and less-than-half-time. The chart below defines the credit hour requirements for each of the five federal aid and PHEAA Grant programs, as well as the percentage of the maximum award a student may qualify for under all four enrollment classifications.

Financial Aid Program	Enrollment Status	Eligible For Award	% of Maximum Award
Pell Grant	Full-time	Yes	100%
	3/4-time	Yes	75%
	1/2-time	Yes	50%
	< 1/2 time	Yes	Varies
Pheaa Grant	Full-time	Yes	100%
	1/2-or-3/4 time	Yes	varies
	< 1/2 time	No	No Award
Stafford Loans	Full-time to 1/2 time	Yes	100%
	< 1/2-time	No	No Award
FSEOG & Perkins Loan	Full-time	Yes	100%
	3/4 time to 1/2-time	Yes	50%
	< 1/2 time	No	No Award
Work-Study	Full-time to 1/2 time	Yes	100%
	< 1/2 time	No	No Award

Determining Award Eligibility Based On Enrollment Status

Please Note: Federal and state financial aid awards may be adjusted according to this chart for any student whose enrollment status (as defined above) changes before 60% of the enrollment period, e.g., fall or spring semester, or a special summer session, has elapsed. This would occur when a student drops a class(es) or withdrawals from the university.

Financial Aid Refunds

Financial aid which exceeds the amount the student owes to the University for direct costs will be disbursed to the student in the form of a refund check to cover non-institutional educational costs such as books & supplies, off-campus housing and transportation. These refunds will be available starting the second week of the semester if you have satisfied the eligibility requirements for each award.

Please Note: Even though refund checks will be available starting the second week of the semester, your student financial aid refund check could be delayed if you meet one or more of the following: your federal and/or state aid has not been finalized, your Master Promissory Note (MPN) was filed late, and/or your MPN or "Free Application for Federal Student Aid" (FAFSA) is delayed at PHEAA and/or federal processor due to missing or incorrect information.

Financial Planning

Students planning to attend California University of Pennsylvania should be aware that the cash from many of the financial aid programs is not available until the second week of the semester for which the funds are intended. Students should plan to come to the university with enough personal money for early term purchases (books, materials, art supplies, etc.) without depending upon financial aid funds.

Maintaining Financial Aid Eligibility

Satisfactory Academic Progress Policy

Federal regulations require all institutions that administer Title IV student assistance programs to monitor the academic progress toward a degree or certificate of those students applying for or receiving assistance from those programs. All California University students applying for Title IV federal assistance must meet the standards stated in this policy, regardless of whether or not they previously received aid. The financial aid programs governed by these regulations are as follows:

Federal Pell Grant
Federal Supplemental Educational Opportunity Grant (SEOG)
Federal Perkins Loan
Federal Stafford Loan (Subsidized/Unsubsidized)
Federal Plus Loan
Federal Work-Study

Satisfactory Academic Progress (SAP) standards include three elements:
1) maximum time frame within which a degree or certificate must be granted,
2) minimum credit hours earned per academic year, and
3) minimum cumulative grade point average (g.p.a.).

Review Period

The review of a student's "Satisfactory Academic Progress" (SAP) standing occurs annually at the end of the spring semester. A student's SAP standing will be based on his/her academic performance during the academic year [fall and/or spring semester(s)]. Students who are not making satisfactory academic progress are typically notified in early summer.

Maximum Time Frame

Maximum time frame is defined as the required length of time it will take a student to complete a degree program based on the appropriate enrollment status (full-time, three-quarter time, or half-time). For a student to remain eligible for federal aid, the student must conform to the following time frame for completion of a degree:

Associate Degree

Enrollment Status	Number of Eligible Semesters
Full-time (12 or more credits)	6 semesters
Three-quarter time (9 to 11 credits)	9 semesters
Half-time (6 to 8 credits)	12 semesters

Bachelor Degree

Enrollment Status	Number of Eligible Semesters
Full-time (12 or more credits)	11 semesters
Three-quarter time (9 to 11 credits)	16 semesters
Half-time (6 to 8 credits)	22 semesters

Minimum Earned Credit Hours

In order to monitor a student's progress toward completing a degree in a prescribed amount of time, a measure of annual progress has been established. The minimum earned credit hours component requires student aid applicants and recipients to successfully earn a minimum number of credit hours per year based on a student's enrollment status. A student must meet the following earned credit hour standards based on his/her enrollment status:

Enrollment Status*	Total Earned Credits per Year
Full-time (12 or more credits)	24 credits
Three-quarter time (9 to 11 credits)	18 credits
Half-time (6 to 8 credits)	12 credits

** Assumes a student's enrollment status (full-time, three-quarter time, or half-time) remained constant throughout the academic year. The minimum earned credit hours standard listed above will differ if the student's enrollment status varies throughout the academic year.*

Minimum Cumulative Grade Point Average

Each semester the university reviews the "grade point average" (g.p.a.) of each student in order to determine whether the student is maintaining "good academic standing." The university has established minimum grade point averages that students must maintain in order to achieve "good academic standing." Listed below are the minimum grade point averages for each class level:

Freshman 1.75 Junior 1.95
Sophomore 1.85* Senior 2.00

**Students pursuing an Associate Degree must have a 2.0 g.p.a. in order to graduate..*

A student who fails to meet minimum academic standards (required g.p.a), as defined by the university, will be placed on academic probation status for one semester. Students are eligible to receive financial aid during the probation semester(s). At the end of the probation semester(s), a student **must:**

(1) achieve the required minimum grade point average (student is removed from academic probation); or
(2) achieve at least a 2.0 grade point average during the probationary semester (if this requirement is met, the student will continue on academic probation).
A student who is unsuccessful in attaining either one of these levels of academic performance will be academically dismissed from the university. Students who are academically dismissed are considered ineligible for Title IV federal aid. However, a student who is academically dismissed and is approved for re-admission (through the university's PASS Program only) will be placed on "financial aid probation." During financial aid probation a student is eligible to receive Title IV federal aid (see "Financial Aid Probation" section for additional information).

Special Grades

I (Incomplete): An incomplete grade does not earn credit or influence the grade point average in the semester in which the course work was taken. If an incomplete has been resolved and the student has earned a passing grade, the credit and grade will be counted toward satisfying the minimum credit hour standards and grade point average requirements.

W (Withdrawal): All withdrawal categories do not earn credit(s) toward graduation or toward satisfying the credit requirements of the SAP Policy.

P (Pass): If this grade is awarded, the credits apply toward graduation and toward satisfying the minimum earned credit hour standards, but will not impact a student's grade point average.

Repeated Courses: For a course that has been repeated, only the last grade earned is used in calculating the grade point average and the credits are awarded only for the semester in which it was repeated. However, each time a student enrolls in a course, the course is counted as part of the maximum time frame.

Military Transfer Credits

In most cases, military training and/or service school experience credits can be counted in the total credit hours earned by a student for satisfying the minimum credit hour progression requirement. However, the military training and/or service school experience will only be used in satisfying the minimum earned credit hour requirement during the student's first year of attendance at California University.

PHEAA Grant Progress Standard

Even though the PHEAA Grant is a non-Title IV aid program, the satisfactory academic progress requirements for this program are similar to the federal policy. For a student to remain eligible for a PHEAA Grant, he/she must meet the following minimum earned credit hour standard after every two semesters of state grant assistance:

Enrollment Status*	**Total Earned Credits per Year**
Full-time (12 or more credits)	24 credits
Part-time (6 to 11 credits)	12 credits

For PHEAA Grant purposes, the repeated course(s) can be counted only once in meeting the 12 or 24 credit hour test. **Please Note:** A student can only receive a maximum of 8 full-time or 16 part-time semesters of PHEAA Grant assistance.

Financial Aid Probation

If a student fails to achieve the Satisfactory Academic Progress Standards during the review period as outlined in this policy, the student will be placed on financial aid probation. Students who fail to meet progress standards should refer to the "Financial Aid Suspension" section listed below. Students will remain on financial aid probation for the next award year and will be eligible to receive federal Title IV financial aid assistance during this probationary period.

Please Note: Students will not be granted financial aid probation for two consecutive academic years.

Financial Aid Suspension

If a student fails to achieve the minimum earned credit hour standard and/or the minimum grade point average upon the conclusion of a student's financial aid probationary period, the student will be placed on financial aid suspension. Students placed on financial aid suspension (progress) will become ineligible for future Title IV assistance until the student's SAP deficiency is resolved.

Eligibility for Reinstatement

In order to be reinstated, the student must successfully achieve the required grade point average as mandated by the SAP Policy and/or successfully make up his/her credit hour(s) deficiency at his/her own expense. The student may use the summer or any semester of the academic year to eliminate his/her deficiency. Students may take course work at another college or university to resolve the minimum credit-hour deficiency, provided that the credits earned at that institution are transferable to California University and the student's college dean or appointed designee has authorized the transient course work. Students who make up their credit-hour deficiency at an institution other than California University must have a Financial Aid Transcript sent to the Financial Aid Office.

Students who make up their deficiency must complete and return the Satisfactory Academic Progress Form, along with all required documents, to the Financial Aid Office before their deficiency status can be cleared.

Please Note: Only successfully earned credits, not grades, are transferable back to California from another approved institution. Students can only improve their grade point average by taking and successfully completing course work at California University.

Appeal Procedures

All Title IV recipients have a right to appeal a financial aid suspension decision by submitting a "SAP Appeal Form" to the Financial Aid Office with a written explanation of the reason(s) the student failed to meet the Satisfactory Academic Policy Standards. Appeal forms are available in the Financial Aid Office. The deadline date for filing an appeal is the third week of classes in any semester that the student is applying for financial aid. Students will be officially notified within 7 to 10 days after filing the appeal form. If the appeal is denied, final appeal must be made to the Director of Financial Aid within 10 working days of the date of the denial letter.

Refund/Repayment Policies

Refund Policy

Students who officially withdraw from the University or from specific classes during the semester may be eligible for a refund of a portion of the tuition, fees, room and board paid to California University for that semester. Refunds are based on the official date of withdrawal as recorded by the Academic Records Office (for additional information see "Withdrawal from the University" listed in the Academic Policies section of the catalog). Students who do not follow the official withdrawal procedure but who stop attending classes for all of their courses will be considered to have withdrawn at the 50% point of the semester unless attendance is documented after that time.

Return of Title IV Funds Formula

Two formulas exist for determining the amount of the refund: California University's Refund Policy (for additional information see "University Refund Policy" in Billing Section) and the federal "Return of Title IV Aid" formula. The federal formula is applicable to any student receiving federal aid and withdraws from the University during the first 60% of a semester. These students will have their federal financial aid (Pell Grants, Supplemental Education Opportunity Grants, Perkins Loans, Federal Stafford and Plus Loans) adjusted based on the percent of the semester completed before the withdrawal. In essence, students will be entitled to retain the same percent of the federal financial aid received as the percent of the semester completed. This percent is calculated by dividing the number of days in the semester (excluding breaks of five days or longer) into the number of days completed prior to the withdrawal (excluding breaks of five days or longer). There will be no adjustment to federal financial aid after the completion of at least 60% of the semester. If any refund remains after the required return of Title IV aid, the refund will be used to repay California University funds, state grant funds, and other private sources and the student in proportion to the amount paid by each non-federal source, as long as there was no unpaid balance due at the time of withdrawal. If there is an unpaid balance, then all aid sources will be repaid before any refund is paid to the student.

Distribution Policy

Once the amount of the federal funds to be returned has been calculated, the funds will be returned to the appropriate program(s) in the following priority order:

Unsubsidized Stafford Loans
Subsidized Stafford Loans
PLUS Loans
Perkins Loans
Pell Grant
Supplemental Educational Opportunity Grant

Repayment of Unearned Financial Aid Assistance

Students who receive a refund of financial aid before withdrawing from the University may owe a repayment of federal financial aid funds received. Students will be notified by the Bursar's Office and will be given 30 days to repay the funds to the University. Students who fail to return the unearned portion of federal financial aid funds given to them will have a "hold" placed on their University records, thereby preventing them from registering for future semesters until repayment is made in full.

Financial Aid Glossary

1040 Form, 1040A Form, 1040E Form: The Federal Income Tax Return that is required to be filed by each person who received income during the previous year.

Academic Year: The period of time school is in session, consisting of 30 weeks of instruction.

Appeal: An appeal is a formal request made by the student to have a financial aid administrator review a student's unusual circumstances which may affect the student's aid eligibility (i.e., death of a parent, unemployment, etc.)

Award Letter: An official letter issued by the Financial Aid Office that lists the financial aid awarded to the student. Students are required to check the award(s) they wish to receive, sign the award letter, and return it to the Financial Aid Office.

Bursar's Office: The Bursar's Office is the university office responsible for the billing and collection of university charges, receiving loan proceeds and issuing refund checks.

Campus-Based Aid Programs: There are three financial aid programs funded by the Federal Government but administered by the school, using Federal Guidelines. These programs are the Federal Supplemental Educational Opportunity Grant (FSEOG), Federal Perkins Loan Program, and the Federal Work-Study Program.

College Work-Study: College Work-Study is a part-time job for undergraduate students. This is often referred to as the Federal Work-Study Program.

Commuter Student: A student who resides at home and commutes to school daily.

Cost of Attendance: The Cost of Attendance (COA), also known as the cost of education or "budget", is the total amount used to calculate a student's aid eligibility. This amount includes tuition and fees, room and board, allowances for books and supplies, transportation, and personal and incidental expenses.

Custodial Parent: In the event a student's parents are separated or divorced, the custodial parent is the one who is providing more than 1/2 of the student's support. If both parents provide equal support, then the Custodial Parent is designated by the one with whom the student lived the most during the past 12 months.

Dependent Student: A student who is 23 years old or younger and is supported by his/her parents. A parent refusing to provide support for his/her child's education is not sufficient for the child to be declared independent.

Disbursement: Disbursement is the release of loan proceeds to the school for delivery to the borrower.

Disclosure Statement: The disclosure statement is a statement from the lending institution that provides the borrower with information regarding the approved amount of the loan, interest rate, origination and insurance fees, and any other finance charges incurred.

Electronic Funds Transfer: Used by most lenders to wire funds for Stafford Loan proceeds directly to participating schools without requiring a check for the student to endorse.

Enrollment Status: Indication of total credits scheduled for an enrollment period. For financial aid purposes, you must be enrolled at least half-time to receive aid.

Expected Family Contribution (EFC): The Expected Family Contribution is the amount of money that the family is expected to contribute to the student's education. This is based on the Federal Methodology need analysis formula dictated by Congress.

Financial Aid Transcript: The Financial Aid Transcript is a record of any federal aid received by the student at each post-secondary school attended.

Financial Aid Package: This includes any aid such as grants, scholarships, loans, and work-study offered to the student to assist in the funding of their education.

Free Application for Federal Student Aid (FAFSA): The FAFSA is used to apply for all need-based aid. The information contained within this document is used to calculate all financial aid for the student.
Gift Aid: Gift aid is financial aid which is not repaid, such as scholarships and grants.

Grant: Type of financial aid based on financial need that a student does not repay.

Independent Student: An independent student must meet at least one of the following criterion:
- Age 24 or older.
- Veteran of the U.S. Armed Forces
- Enrolled in a graduate or professional program beyond a bachelor's degree
- Married
- Orphan or ward of the court, or a ward of the court until age 18
- Legal dependents other than spouse for which you are responsible

Loan: Loans are borrowed money that a student must repay with interest.

Need: The difference between the Cost of Attendance and the Expected Family Contribution is known as financial need.

Pell Grant: A Pell Grant is a federal need-based grant.

Scholarship: A scholarship is gift aid which is not repaid.

Stafford Loan: A Stafford Loan comes in two forms, unsubsidized and subsidized. Students are required to pay interest on an unsubsidized loan; whereas, the government pays the interest on a subsidized loan while the student is in school, during the six-month grace period, and during any deferment periods.

Subsidized Loan: A subsidized loan is one on which the government pays the interest while the student is in school, during a six-month grace period, and during any deferment periods. Subsidized loans are based on need, and may not be used to finance the family contribution.

Supplemental Educational Opportunity Grant (SEOG): The SEOG is a Federal grant program.

Unmet Need: Unmet need is the difference between the student's financial need and the total need-based aid.

Unsubsidized Loan: An Unsubsidized Loan is one on which the government does not pay the interest. The borrower is responsible for the interest on an Unsubsidized loan from the date the loan is disbursed, even while the student is still in school.

Untaxed Income: Contribution to IRAs, Keoghs, tax-sheltered annuities, and 401(k) plans, as well as worker's compensation and welfare benefits.

U.S. Department of Education: The US Department of Education administers several Federal student financial aid programs, including the Federal Pell Grant, the Federal SEOG, the Federal Work-Study, the Federal Perkins Loan, the Federal Stafford Loan, and the Federal PLUS Loan.

Verification: Verification is a review process in which the Financial Aid Office determines the accuracy of the information provided by the student and parents on their FAFSA. During this process, the student will be required to submit requested documentation.

Academic Policies

Student Responsibilities

Students are responsible for securing current information about university policies and for meeting all relevant requirements. Students follow the requirements and provisions of the catalog that is in effect at the time of their initial enrollment. Students who have interrupted their education for more than one year are subject to the provisions of the catalog which is current at the time of their readmission to the university. The university reserves the right to change policies, curriculum requirements, and other provisions as needed.

Academic Advising

Faculty advisors 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 advisors, department chairpersons, the deans, and the Provost. All of these university representatives maintain regular office hours for student consultations.

Semester System

California University operates on a semester system with Fall and Spring semesters of approximately 15 weeks. In addition, there is a Summer term that typically includes a 10-week session and two five-week sessions, which run from June to August, and special sessions in May and August.

Course Numbering System

Courses numbered 100 to 499 are undergraduate courses. Courses numbered 500 may be taken for undergraduate or graduate credit, and courses numbered 600, 700 & 800 are graduate level courses. In certain circumstances, undergraduate students are allowed to take graduate level courses for either undergraduate or for graduate credit.
Courses are generally numbered in the following way:
100-199 Freshman level
200-299 Sophomore level
300-399 Junior level
400-499 Senior level
Generally, courses whose numbers end in 9 (such as 209 and 459) consist of independent study or internship and registering for such courses typically requires special permission.

Credits

Credit for course work is recorded in credit hours. For most courses, one credit hour represents one class meeting per week. For laboratory classes, the ratio may differ somewhat from one department to another, but usually two or three hours of laboratory work are worth one credit hour.

A full-time student is one who is taking twelve or more credits. A student taking fewer than twelve credits is considered a part-time student. Only registered coursework in a given term is counted toward a student's full- or part-time status for that term. The work that a student might need to do for an Incomplete from a previous term will not count toward a student's full- or part-time status for the current term.

Students expecting to progress from one class to the next on an annual basis and graduate in four years should complete an average of 32 credits per year, or 16 credits per semester.

Grading System

California University uses the following grading system for all courses:

Grade	Quality Points per Credit	Interpretation
A	4	Superior Attainment
B	3	Above Average
C	2	Average
D	1	Below Average
F	0	Failure
AU	Not calculated	Audit
I	Not calculated	Incomplete
IF	0	Incomplete Failure
P	Not calculated	Passing
W	Not calculated	Official Withdrawal
WP	Not calculated	Withdraw Passing
WF	0	Withdraw Failing
WX	Not calculated	Administrative withdrawal
UW	Not calculated	Unofficial withdrawal

Quality Point or Grade Point Average

To calculate a quality point average (QPA) or grade point average (GPA) divide the total number of quality points earned in regular courses at this university by the total number of credit hours attempted. For example, if a student has attempted a total of 60 credits, with 12 credits worth of A (=48 quality points), 24 of B (=72 quality points), 15 of C (=30 quality points), 6 of D (=6 quality points), and 3 of F (=0 quality points), this student would have a total of 156 quality points, or a QPA of 2.60.

In computing the QPA, the following courses and credits are not included: courses and credits transferred from other institutions, advanced placement courses, courses passed by examination, courses in which a P grade was assigned, CLEP credits, or credits granted for military service.

If a student repeats a course, only the repeat grade is counted. Although developmental courses do not count towards graduation, the credits earned in them are used in determining a student's QPA.

Appealing a Grade or Other Academic Decisions

University decisions are based upon applicable policies, rational procedures, and sound decision-making principles. Concerning a student's grade, it must be understood that it is not the policy of the administration to change a properly assigned grade – i.e., one based upon recorded grades for quizzes, exams, assignments, projects, and other grade criteria as indicated on the course syllabus or outline.

However, when a student alleges violations of sound academic grading procedures, the University administration and faculty mutually support a student appeal procedure that gives both the student and the faculty member a fair process to substantiate and/or refute those allegations.

In appealing a grade, a student should first contact the faculty member who issued that grade to discuss the reason for the grade. If the student is not satisfied with the faculty member's explanation,

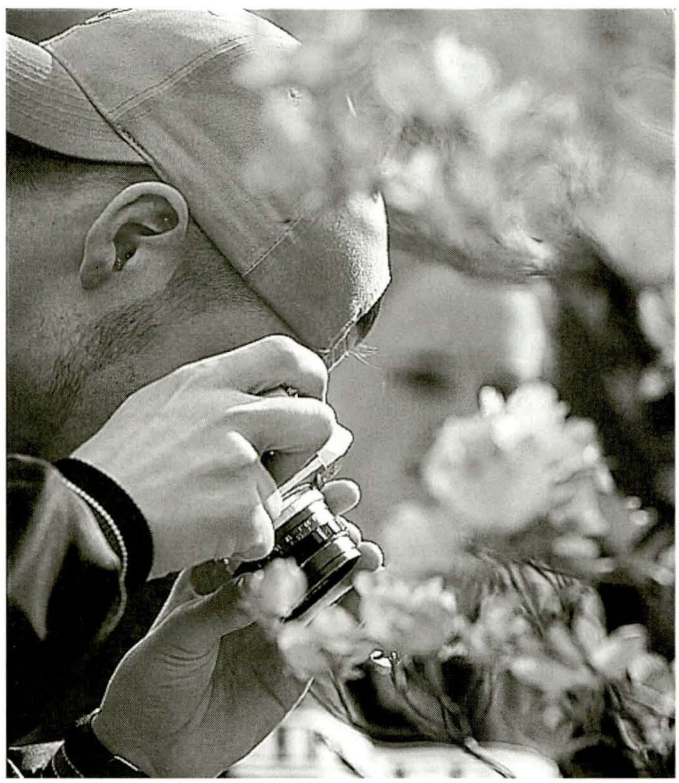
the student should then contact the faculty member's department chairperson. This contact must be in writing and must be filed with the chairperson within thirty working days after the beginning of the fall or spring semester following the term in which the grade in question was given. The chairperson shall notify in writing the student and faculty member of his/her findings and decision within 15 working days of his/her receipt of the appeal from the student.

If accord is not reached through the chairperson, the student may then appeal to the college dean. Such appeal must be in writing and must be filed with the dean within 15 working days from the date of the final written determination of the chairperson. The dean shall notify in writing the student and faculty member of his/her findings and decision within 15 working days of his/her receipt of the appeal from the student. The final source of appeal is the Provost. This final step should be taken only if there is no possibility for resolution at an earlier stage, and only if the student is convinced that arbitrary and/or capricious standards were applied. The appeal to the Provost must be in writing and must be filed with the Provost within 15 working days from the date of the final written determination of the dean. The Provost shall review the matter and take action as necessary to provide equity in the situation.

In the case of other academic decisions, the student should follow the same appeal procedure insofar as possible. In matters relating to student conduct and discipline, the Vice President for Student Development has authority to review student appeals. In matters relating to financial aid, see the section on Financial Aid in this catalog; in matters relating to teacher certification, see the relevant section in this catalog; in matters relating to transfer credits, contact the articulation and transfer office as the first point of contact, and follow the same appeal procedure as listed above.

Cheating and Plagiarism

Truth and honesty are necessary prerequisites for all education, and students who attempt to improve their grades or class standing through any form of academic dishonesty may be penalized by disciplinary action ranging from a verbal reprimand to a failing grade in the course or dismissal from the university. If the situation appears to merit a severe penalty, the professor will refer the matter to the appropriate dean or to the Provost.



Class Attendance

Regular class attendance is a prerequisite to successful class performance. University policy permits class absence for cause but places an obligation for successful completion of course work on the student. There is no single, university-wide policy on class attendance or on cuts; but professors may establish their particular policies on absences, assess reasonable penalties if students do not observe these policies, and treat unexplained absences as unexcused absences. The student must, in all cases, arrange to make up examinations or other work missed because of absence, according to terms and a schedule agreeable to the professors.

It is the student's responsibility to inform professors of the cause of any absence, if possible, in advance. Students should notify their college Dean of lengthy absences due to illness or other causes, and appropriate documentation may be required in such cases. The Dean will in turn notify the professors concerned. Requests for absence due to official university activities, such as field trips or athletic contests, must be made to the appropriate university official.

The Health Center does not issue medical excuses. Under certain circumstances the Health Center will notify professors about students' absences (or other failure to fulfill academic obligations) due to medical conditions; on the basis of this notification, individual professors in turn will determine whether or not to excuse the absences.

The temporary grade of Incomplete is not automatically awarded even if excused or explained absences have prevented completion of required work by the end of the semester.

Good Academic Standing

Students who achieve the minimum Quality Point Average (QPA) or Grade Point Average (QPA) for their class rank are in good academic standing.

Class Rank (Total Credits Earned)	Minimum QPA
Freshman (1-31)	1.75
Sophomore (32-63)	1.85
Junior (64-95)	1.95
Senior (96 or more)	2.00

All earned credits including transfer credits and other advanced standing credits that have been officially accepted are counted in determining a student's class rank. All attempted credits at California University are used in determining a student's QPA.

Students who do not achieve the minimum QPA for their class rank will be subject to Academic Probation or Academic Dismissal. Satisfactory Academic Progress is also required for continued eligibility for financial aid.

Academic Probation

A student whose total number of credits attempted has reached or exceeded twelve and whose overall QPA is below the specified minimum for his or her class rank will be placed on Academic Probation.

Before registering for a new term, students on Academic Probation must have their schedules approved by the Associate Provost for Student Retention and must agree to satisfy additional requirements during the probationary semester.

A student on Academic Probation who:

attains the minimum overall QPA for his or her class rank and satisfies other requirements will be removed from Academic Probation.

attains a 2.00 QPA during the probationary semester and satisfies other requirements, but fails to attain the minimum overall QPA for his or her class rank will be permitted to return to the university on Continuing Academic Probation.

does not attain the overall QPA for his or her class rank and does not achieve a 2.00 QPA for the probationary semester, or fails to satisfy other requirements will be dismissed from the university.

Academic Dismissal

The university reserves the right to refuse the privilege of further attendance to students who have failed to meet minimum academic requirements.

If a student's cumulative grade point average remains below the required minimum after a probationary semester, the term grade point average during a probationary semester is below 2.00, and the student fails to meet other requirements, he or she will be dismissed from the university.

Incomplete Grades

An Incomplete (I) is assigned when a professor is convinced the student can complete or make up work. Faculty members may submit a final grade based on work completed and not accept late work. However, when appropriate explanation and documentation of an illness are given, professors will not penalize students if makeups are possible or if grading on work completed is reasonable.

After the required work has been completed, the professor will submit a Change of Grade form to the Academic Records Office. The student, however, is responsible for contacting the professor regarding arrangements that should be made to complete the work for the course. (Students are not required to register for the course again)

If the required work is not completed within one calendar year, the Incomplete grade will be converted to I-F. This conversion will occur even if the student has not been enrolled at the university during this calendar year. The I-F grade is considered in the computation of the student's grade point average as an F grade. Students who wish to have an extension of the time allowed to complete the work must obtain approval from the dean of their college.

Graduating seniors must resolve their Incomplete grades by the last day of classes of the term in which they intend to graduate. Otherwise, these Incompletes immediately become I-F's, and graduation may be correspondingly affected.

The work that student might need to do during one term for an Incomplete from a previous term will not count toward a student's full- or part-time status for the current term.

Grade Reports

At the end of each semester and summer session, grade reports are mailed to students at their permanent home address. For this reason, all students should be certain the Academic Records Office has their correct permanent address. In compliance with the Family Education Rights and Privacy Act of 1974, such grade reports are sent to students and not to their parents or guardian. A grade report will not be sent if a student's academic records have been sealed.

Midterm grades are also reported for some students. These reports are available from each student's academic advisor or in the Office of Student Retention.

Transcripts

Transcripts are issued by the Academic Records Office, Dixon Hall. Each transcript costs $3, and payment must be received before the transcript is issued. Checks and money orders should be made payable to California University of Pennsylvania. All transcripts are issued according to the provisions of the Family Education Rights and Privacy Act of 1974 as amended: see also the section on Confidentiality of Records in this catalog.

A request for a transcript must be made in writing, to ensure that academic information is not improperly disclosed. Telephone requests for transcripts cannot be honored. The request may be made by completing a form in the Academic Records Office or by writing a letter to that office indicating (a) the number of transcripts required, (b) the type of transcripts required (i.e., undergraduate, graduate, or both), and (c) the name and address of the person or institution where the transcript should be sent. Transcripts will not be issued to a third party without the written consent of the student.

If a transcript is issued to a student, a notation to that effect appears on the transcript. Transcripts marked in this manner are sometimes not considered official when presented to a third party by the student.

Transcripts are issued as quickly as possible, but in busy periods of the academic year there may be some delay. Requests should therefore be made well before the transcript is due elsewhere.

No transcript will be issued to a student whose financial obligations to the university have not been met in full.

Registration

Eligibility to Register

All students who have been admitted to the university and who are in good academic, financial, and disciplinary standing are eligible to register. Students who are not in good standing with the university may, under special circumstances, be given clearance to register for classes.

Enrollment and Matriculation

A student seeking a degree or credit certificate from California University is considered a matriculated student and must meet the graduation or completion requirements for his or her declared major or program. An individual who enrolls for classes but is not seeking a degree or credit certificate from California University is considered a non-degree student. A non-degree student wishing to matriculate into a degree or credit certificate program must satisfy admission requirements for that program.

Registration Procedures

Registration for an upcoming semester may be completed during the registration periods identified in the Schedule of Classes published each semester. This publication contains specific information and instructions regarding these registration periods.

Registration includes academic advising, scheduling courses, and payment of tuition and fees. Prior to scheduling classes, each student should meet with his or her academic advisor to discuss his or her progress and develop a schedule for the upcoming semester. Entering a student's schedule into the university's registration system creates a financial obligation by the student to the university, and students who do not make payment arrangements by the announced due date will have their semester schedules canceled.

Credit Overload

During the Fall and Spring semesters, full-time students may register for 18 credits without special permission. Students wishing to register for 19 or more credits must obtain written permission from their advisor and the Dean of their college. Only in exceptional circumstances will a student be allowed to register for more than 21 credits. Additional tuition and fees are charged for all credits in excess of 18.

During the Summer terms, students may register for 6 credits in any one session or 18 credits for the summer without special permission. Degree-seeking students wishing to register for additional credits during the Summer terms must obtain written permission from the Dean of their college, and non-degree students wishing to register for additional credits must obtain permission from the Director of the Summer School Program. Students are charged tuition and fees on a per credit basis for all courses during the summer.

Admission to a Closed Section

A student seeking admission to a closed section should obtain a schedule adjustment form and consult with the instructor or chairperson of the department that offers the course. Admission to a closed section requires the signature of the instructor or department chair and the dean of the college that offers the course.

Repeating a Course

A student may repeat a course previously taken at California University. In such cases, only the later grade will be counted in the student's QPA. The original grade, however, will remain on the student's transcript. Some courses may be repeated for credit and are exempt from this policy.

Auditing A Course

A student may audit a course with the understanding that he or she will receive neither a grade nor credit for the course. The course will be listed on the student's transcript without affecting the QPA. Once a course is registered for audit, it cannot be converted back to a credit course.

Students may register to audit a course according to the following schedule:
15 week session - within the first 6 weeks
5 week session - within the first 2 weeks
10 week session - within the first 4 weeks
Audit courses are billed at the same rate as courses taken for credit. Audit forms are available in the Academic Records Office, Dixon Hall.

Credit by Examination/Course Challenges

Students may earn credit for a course by passing an examination rather than taking the course. In order to do so, the student must obtain permission from the chairperson of the department that offers the course and the Provost. The student must register for the course and pay tuition and fees for the course. Once a student registers to challenge a course, it cannot be converted back to a regular course.

Students may register to challenge a course according to the following schedule:
15 week session - within the first 6 weeks
5 week session - within the first 2 weeks
10 week session - within the first 4 weeks
Only grades of P (Pass) or F (Fail) will be recorded, and the course will be further identified on the student's transcript by the symbol CE. A passing grade does not affect the QPA; however, a failing grade will lower the QPA. Earned credits will count towards graduation.

Course challenge forms may be obtained in the Academic Records Office, Dixon Hall.

Schedule Adjustments (Add/Drop)

Class schedules may be changed during the add/drop period using the schedule adjustment forms. All schedule adjustments are governed by the following regulations.

1. Prior to making schedule adjustments, a student should consult with his or her academic advisor to discuss how the adjustment will affect his or her academic progress.

2. Courses may be added prior to the second class meeting during the Fall and Spring semesters and during the first day of a summer term. Adding a course may require the signature of the instructor, department chair, and/or college dean.

3. Students may drop courses without having a grade assigned during the first six weeks of a semester; before the end of the second week of a five-week summer term; or before the end of the fourth week of a ten-week summer term.

4. After the deadline for dropping a course without grade assignment, students who drop a course or courses will receive WP or WF grades. Each professor will assign the appropriate grade and the College Dean will translate A, B, and C grades to WP, and D and F grades to WF.

5. No student is permitted to drop a course: during the last three weeks of a semester; during the last two weeks of a five-week summer term; or during the last three weeks of a ten-week summer term.

6. **Ceasing to attend class does not constitute official withdrawal!** Students must officially drop from a course. Leaving a course without officially dropping it may result in the assignment of an F grade by the professor. If the professor does not assign a grade, the designation of UW (unauthorized withdrawal) will be assigned by the Registrar.

7. Students who drop below full-time (less than 12 credits) or to less than half-time (less than six credits) should contact the Financial Aid Office prior to completing the drop.

Withdrawal from the University

A student who decides to withdraw from the university during any academic term, regardless of the reason, must contact the Academic Records Office immediately. All withdrawals are governed by the following regulations:

1. An honorable dismissal is granted to a student who withdraws from the university in the official manner, has met all financial obligations to the university, and has been properly cleared by the Registrar.

2. If the student withdraws officially during the first six weeks of a semester, a W grade is recorded for each course scheduled. A W grade carries no academic penalty and is not counted in the student's QPA. For an official withdrawal from a five-week session, W grades will be recorded during the first two weeks only.

3. After the sixth week of the semester, a student who makes an official withdrawal receives WP or WF grades in all courses scheduled. Professors assign A, B, C, D, or F grades, and the Dean assigns WP grades to A, B, and C, and WF to D or F grades. For five-week courses the WP-WF grades are assigned after the end of the second week.

4. No student is permitted to withdraw officially from the university during the last three weeks of a semester or summer term.

5. Leaving the university without notifying the Academic Records Office and making an official withdrawal may result in automatic failure for all courses scheduled. It also makes the student ineligible for refund of tuition and fees, and may affect academic status and financial aid. Improper withdrawals will be classified as unauthorized withdrawal and the designation UW used for all registered courses if another grade has not already been assigned by the professor.

6. Students planning on withdrawing from the University should consult with the Financial Aid Office prior to completing the withdrawal process.

Administrative Withdrawals

The university administration has the authority to withdraw a student from the university and to revoke that student's registration at any time for the following reasons:

1. Registration in violation of university regulations (e.g., academic ineligibility to register).

2. Failure to comply with academic requirements (e.g., unsatisfactory class attendance, violation of the learning contract for students on academic probation, etc.).

3. Failure to pay university tuition and fees by the due date.

4. Disciplinary suspension or dismissal for the remainder of an academic term or longer.

5. Severe psychological or health problems such that the student cannot be permitted to continue in attendance.

6. Other reasons deemed appropriate by the proper administrative officer.

Grades of WP, WF, WX are recorded for Administrative Withdrawals. The grade of WX is not computed in the student's grade point average and therefore involves no academic penalty. The Registrar must authorize the recording of this grade.

If a student registers in violation of the academic eligibility rule, the registration is declared invalid, the tuition and fees paid by the student are refunded in full, and no grades are recorded.

In other cases of Administrative Withdrawal, the date of the withdrawal and the reason for the withdrawal are used to determine the grade to be recorded and the amount of tuition and fees to be assessed or cancelled. In most cases, the regular tuition and fee assessment and refund policies of the university prevail.

For Administrative Withdrawals during the first six weeks of a semester or two weeks in a five-week summer session, the grade of WX is recorded for all courses on a student's schedule. No other grades, such as Incomplete, are assigned. After this period, the date of the Administrative Withdrawal and the reason for the withdrawal are considered.

1. For failure to comply with academic requirements, only WP or WF grades are assigned.

2. For failure to pay tuition and fees, only WX is assigned.

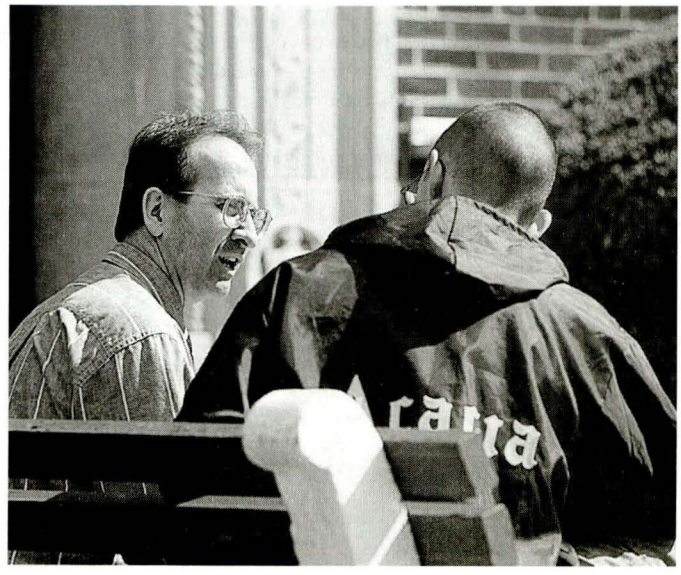
3. For Disciplinary Suspension or Dismissal, only WP or WF grades are assigned.

4. For health or psychological reasons, WX or - only with the approval of the affected instructor - an Incomplete may be assigned.

5. For other reasons not covered in 1-4, grade assignments will be at the discretion of the Provost or his or her designee.

The Registrar has the authority to antedate an administrative withdrawal if circumstances warrant such action.

Disciplinary suspensions or dismissals are initiated by the appropriate authority in the Office of Student Development and written notification is sent to the Academic Records Office, who cancels the student's registration and notifies other administrative offices



and faculty members as necessary.

If faculty members have reason to inquire about a specific case of Administrative Withdrawal, they should consult the Registrar or the Office of the Provost. In certain cases, the student's right to confidentiality may not permit full disclosure of the circumstances.

Readmission to the University

Students who wish to return to the university after an absence of three consecutive terms and are in good standing with the university must apply for readmission to the dean of the undergraduate college in which they will be enrolled following their readmission.

In cases of Academic Dismissal, readmission to the university is not automatic. Students who have been dismissed for unsatisfactory academic performance will be considered for readmission only if they have satisfied the conditions for readmission that were stipulated at the time of their dismissal. Students who have been academically dismissed must apply for readmission through the Office of Student Retention.

Any student who has been academically dismissed will be denied Title IV financial assistance (federal grants, loans, and student employment). Therefore, if readmitted, the student must attend without the benefit of Title IV financial aid until the required minimum QPA for his or her class rank and/or the completion of the minimum credit hour standard have been achieved. Exceptions may be considered for students on Financial Aid probation or who have filed a Satisfactory Academic Progress (SAP) appeal (please refer to the Satisfactory Academic Progress policy statement issued by the Office of Financial Aid).

In the case of Disciplinary Suspensions or Dismissals, students must satisfy the conditions for readmission that were stipulated at the time of their dismissal and receive permission from the Vice President for Student Development to return to the university.

Applications for readmission should be submitted at least one week before the registration date for the term in which the student desires to enroll.

Former students will not be readmitted to the university until all past indebtedness has been paid.

Academic forgiveness policy

Academic Forgiveness is intended for the student who is returning to the University with a grade point deficiency and who has not been enrolled at California University of Pennsylvania for four consecutive academic years immediately preceding the readmission semester. Only students applying after the effective date of this policy will be eligible for forgiveness under this policy. This policy supersedes all previous Academic Forgiveness Policies at California University of Pennsylvania.

When forgiveness is granted, all California University grades earned prior to the four consecutive academic year period as well as grades transferred from classes completed at other institutions before or during the four-year period, are excluded from the computation of the grade point average; however, no grades will normally be removed from the permanent record. Academic forgiveness will be granted only once for any student and forgiveness extended by California University might not be recognized by other academic institutions to which the student may transfer.

The Registrar will give consideration for academic forgiveness when a signed written request is received. If the student attended any institution of higher education, during the specified four-year period, he/she must identify the institution(s) and arrange to have official transcripts sent to the Registrar. All students requesting academic forgiveness must earn at least a 2.0 GPA during the first twelve credit hours of coursework attempted at California University after readmission. The student's request for forgiveness may be submitted during the semester of readmission or thereafter and must identify the four-year non-enrollment period. If all prerequisite conditions have been met, academic forgiveness will be granted. Other decisions regarding academic forgiveness are subject to approval by the Provost of the University.

College Level Examination Program (CLEP)

The university offers the opportunity to earn undergraduate credit through the College Level Examination Program (CLEP), which has two testing categories, the General Examination and the Subject Examination.

The General Examination is a series of tests in five separate areas: English Composition, Natural Sciences, Mathematics, Humanities, and Social Science/History. A student may earn up to thirty credits by passing the appropriate tests in these areas.

The Subject Examination comprehensively tests a single subject, such as General Psychology, Statistics, etc. A student who passes one of these examinations is awarded credit for a comparable course at the university.
The CLEP program is administered by the Advising & Placement Testing Center and the Southpointe Center. There is a one-time fee of $25.00 for evaluation of the CLEP results and recording the results on the student's transcripts.

Undergraduate Credit for Graduate Course

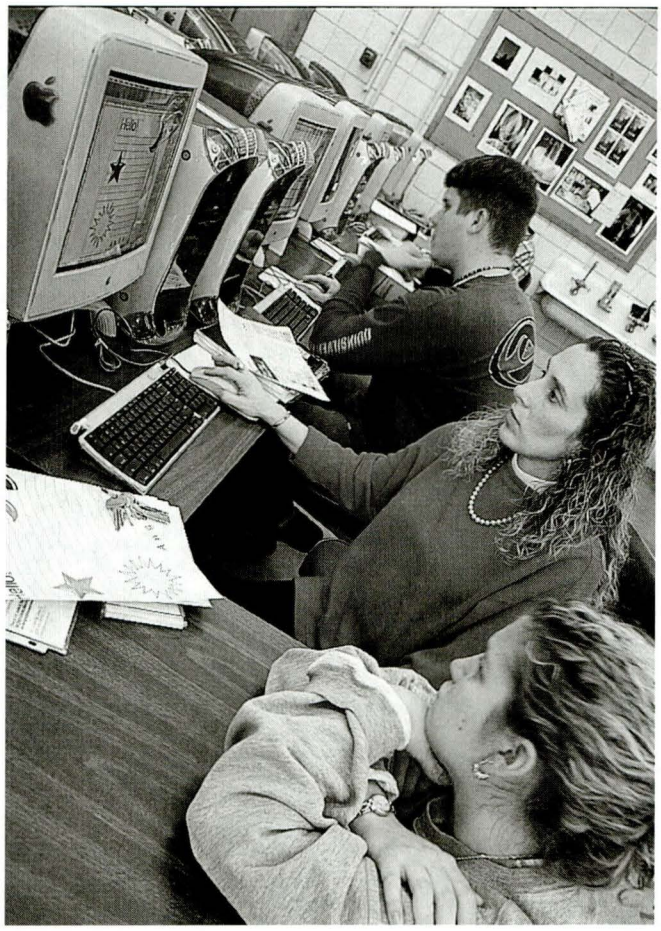
Undergraduate students may enroll in graduate courses for undergraduate credit if they meet the necessary requirements for those courses. Individual departments determine the prerequisites for each course. Graduate status may be a prerequisite for admission to some courses. Graduate credits used to fulfill undergraduate requirements may not also be used to fulfill requirements in a graduate program.

Graduate Credit Load for Seniors

Undergraduates who are in their last term on campus and who are completing or have completed all the requirements for their undergraduate degree may enroll in graduate classes for graduate credit. They must fulfill all requirements for entrance into Graduate School (other than the undergraduate degree or teaching certification).

Transfer Credits

Current California University students who wish to take courses at some other college or university to transfer back to California University, should get approval to do so from their advisor and from the dean of their college at California University before registering for and taking such courses. Students seeking to transfer credits to California University should note the following guide-



lines and should refer transfer credit questions to the Articulation and Transfer Evaluation Office:

1. Transfer credits are usually determined by their equivalency to California University courses.
2. Only courses in which a grade of C or better is earned will transfer unless a student qualifies under the Academic Passport Policy (See Academic Passport Policy in the admissions section of this catalog.)
3. Credits transfer, but grades and quality points do not. Transfer credits cannot raise a student's QPA; therefore, do not take repeat courses at another institution.
4. Courses taken at a community college, the equivalents of which are designated as upper-level courses at California, may transfer only as electives rather than equivalents to courses offered at California University.

Dual Majors, Second Majors And Second Degrees

California University grants the following undergraduate degrees: B.A.; B.S.; B.S. in Education; B.S.N; and A.S., A.A.S., (All except the last two are four-year, baccalaureate degrees.) These are referred to below as degree areas.

A distinction is drawn between the following objectives and opportunities and between the means to achieve them: (1) a Dual Major; (2) a Second Major; (3) a Second Degree and (4) a Dual Degree. These opportunities, as explained below, are the only ones offered. The university will, for example, award only one degree from any degree area. None of these opportunities should be confused with any certification programs, such as those in Teacher Education.

1. More than One Major:

(a) Dual Major is the pursuit of two separate baccalaureate majors in the same degree area simultaneously. These majors may be in a single department or two departments, and each must be recorded in the appropriate dean's office. Courses from one major area may be used to satisfy requirements in the other major. Both majors are recorded on the transcript, but all requirements for each major must be satisfied before the degree is conferred, and only one degree is conferred.

(b) A Second Major may be pursued (a) after the completion of a baccalaureate degree and (b) in the same degree area as a first major. It does not lead to a second degree. The prospective student must apply through the Office of Admissions, register the intention of pursuing a Second Major, and fulfill any of the requirements of that Second Major that have not yet been satisfied.

2. More than one Baccalaureate Degree

(a) A Dual Degree is the simultaneous pursuit of two degrees in different degree areas. Courses from one major area may be used to satisfy requirements in the other major; however, a minimum of 158 credits must be accumulated in order for both degrees to be awarded. All departmental, college and university requirements for the two degree areas must be satisfied. There will be one transcript with both degree areas recorded.

(b) Any student who has previously earned a degree from a regionally accredited institution (including California University of Pennsylvania) may pursue a Second Degree. This degree must be in a different degree area than the first. Transfer credits from other institutions and prior credits from California University of Pennsylvania may be used to satisfy requirements for the second degree; however, a minimum of 30 resident credits must be accumulated beyond the number of credits completed at the time the first degree was awarded. Free elective courses must be taken, if necessary, to fulfill this 30 credit requirement. All departmental, college and university requirements for this degree must be satisfied. All courses completed will be recorded on a separate transcript. Students seeking a second degree must apply for admission in the Office of Admissions.

(The university will not award an associate degree to a student who holds a baccalaureate degree in the same area.)

Graduation Requirements

Students should become acquainted with the graduation requirements for their program of study. Students are responsible for meeting all graduation requirements and for submitting the required forms on time.

Compliance with the following general policies and procedures will help students prepare for graduation:

1. The period during which application for graduation must be made is posted throughout campus and printed in the Schedule of Classes and the *California Times*. Students must apply for graduation in the appropriate dean's office by the deadline. All credentials for graduation, including an application for a teaching certificate where appropriate and transcripts of credits from other institutions, must be submitted on time. Graduation may be delayed if a student's record is incomplete.
2. A minimum of 128 semester credits, including the satisfactory completion of all required courses, is necessary for graduation. Developmental courses, ENG 100, DMA 092, DMA 094, and EDE 100, do not count towards graduation, though the credits earned in them are used to determine class standing and grade point average.

3. Students in all curricula must complete a minimum of thirty credits of the last sixty credits at California University of Pennsylvania.
4. An overall grade point average of 2.5 is required in the Teacher Education curricula. An overall grade point average of 2.0 is required in most programs of study. Certain other programs may require minimum grades in courses within the major.
5. In the College of Education and Human Services, candidates in teacher education programs must complete Student Teaching.
6. All financial obligations to the university must be paid in full before graduation can be approved.

Conferring of Degrees

Degrees are conferred in May (at the end of the spring semester), in August (at the end of the summer session), and in December (at the end of the fall semester); but Commencement is held only once a year, in May. Students who graduate in August or December may participate in the Commencement exercises of the following May, but their diplomas and official university transcripts record their date of graduation as of the month and year in which their degree was conferred.

Attendance at the Commencement exercises is appropriate, unless unusual circumstances warrant graduation in *absentia*. Permission to graduate in *absentia* is granted by the President of the university, or his designee. Candidates for graduation should contact the President's Office, or his designee's office, and request permission to be excused from the Commencement ceremony.

A graduate of California University of Pennsylvania is a member of the class of that calendar year in which the degree was conferred. That is, if one graduated in May, August, or December of 2001, one is a member of the class of 2001 regardless of the year one may have attended Commencement.

Honors at Graduation

Commencement Honors are awarded to students in the graduating class who have earned 64 credits at California University in a baccalaureate degree program and achieved the required QPA.

Highest Honors (*Summa Cum Laude*)	3.75 to 4.0
High Honors (*Magna Cum Laude*)	3.50 to 3.74
Honors (*Cum Laude*)	3.25 to 3.49

Credits, grades, and quality points earned as part of a previously completed associate or first degree are not used to calculate commencement honors designations.

Dean's List/Semester Honors

Highest Honors	3.75 to 4.0
High Honors	3.50 to 3.74
Honors	3.25 to 3.49

Honors Convocation

The university recognizes, encourages and rewards academic excellence on the part of Master's, baccalaureate, and associate degree-seeking students by naming Presidential Scholars at the annual Honors Convocation in the spring semester. This award is a unique distinction, separate and apart from Commencement Honors.

A baccalaureate degree-seeking student designated as a Presidential Scholar must have a cumulative QPA of 3.25 in a baccalaureate

program and have completed 64 credits (if a junior) and 96 credits (if a senior), of which at least 30 must have been taken at this university (calculated beyond an earned associate degree or other first degree, if applicable, and in the present baccalaureate degree program).

An associate degree-seeking student designated as a Presidential Scholar must have a cumulative QPA of 3.25 at California and have completed 45 credits; all of which must have been taken at this university.

Both full-time and part-time students may, if qualified, be named Presidential Scholars.

Confidentiality Of Records

The university's policies on the confidentiality and disclosure of student records are based on the Family Education Rights and Privacy Act of 1974 (Public Law 93-380), as amended.

I. Introduction

Official student records are established and maintained in a number of administrative offices for a variety of legitimate educational purposes. In assuming responsibility for the reasonable protection of these student records, the university recognizes its obligation to comply with the Family Education Rights and Privacy Act of 1974. Important sections of this federal law are summarized below.

II. Ownership of Records

All records kept concerning students, including those records originating at other colleges or universities and required for admission, are the property of California University of Pennsylvania.

III. Definition of a Student

A student is defined as any person currently or previously matriculated on an official basis in any academic program of the University.

IV. Public Information Regarding Students

1. The following information is classified as public and may be released without the prior consent of a student: a student's name, address (both local and permanent), telephone number, e-mail address, place and date of birth, academic curriculum, dates of attendance, date of graduation, degrees and awards received, most recent educational institution attended, participation in student activities (including athletics), and height and weight (for athletic teams).

2. Students may request that any or all of this information not be made public. Such requests must be submitted in writing to the Academic Records Office or (in the case of graduate students) to the Dean of the School of Graduate Studies before the beginning of any academic term.

V. Disclosure of Student Records

1. Upon proper identification, students may inspect their own official records in the presence of the administrator in charge of records.
2. After a request to inspect a record has been received, the request must be honored within a reasonable period of time: according to federal law, not to exceed 45 days.
3. Limitations on the Right of Access by Students
   The following are not subject to inspection by students:
   a. Confidential letters and statements of recommendation which were placed in the educational records before January 1, 1975.
   b. Financial records of the parents of the student, or any information contained therein.
   c. Medical, psychiatric or similar records that are used solely in connection with treatment. Such records can be reviewed by a physician or other appropriate professional of the student's choice.
4. Disclosure of Information to Third Parties
   In most circumstances students have the right to withhold their records from external third parties requesting to inspect these records. Exceptions to this general principle are as follows:
   a. Disclosure of student information will be made to a third party if written consent is given by the student in question.
   b. Information concerning a student will be released if properly subpoenaed pursuant to a judicial proceeding.
   c. All necessary academic and/or financial records of students may be disclosed to the appropriate persons or agencies without a student's prior consent in connection with a student's application for, or receipt of, financial aid.
   d. Further limited disclosure of certain kinds of information may be required in special circumstances in compliance with the federal law previously cited.

VI. Student Challenge to Record Entries

1. Students have the right to submit written or typed rebuttals to negative information contained in their files. A rebuttal statement shall become part of the file, and in cases where the negative information is reviewed by or transmitted to a third party, it must be accompanied by the student's statement of rebuttal.
2. Students may challenge the accuracy and/or appropriateness of material combined in their files. Once such a challenge has been made in writing, it will be the responsibility of the university official in charge of the file to determine the validity of the challenge, if possible. The university official shall make a written response to the challenge of the student, specifying the action taken. Should a factual error be found in any materials, the university official is authorized to make the appropriate corrections.
3. If options 1 and 2 of this section are unsatisfactory, students may request a formal hearing to challenge inaccurate, misleading, or inappropriate information in their records. The University Record Hearing Committee shall conduct a hearing in accordance with the procedures outlined in Public Law 93-380, as amended.
4. The substantive judgment of a faculty member or administrator about a student's work, as expressed in grades and/or written evaluations, is not within the purview of this policy statement. Such challenges by students may be made through the regular administrative channels already in existence for such purposes.

VII. Responsibility of University Officials

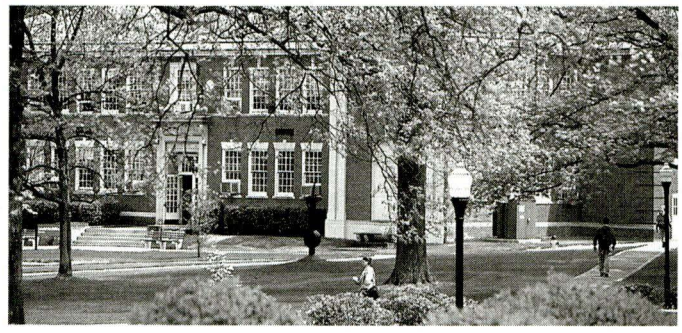
1. University officials in charge of student files are responsible for the reasonable care and protection of such files in accordance with University policy. This includes the responsibility for the release of confidential information only to authorized persons.
2. A log sheet, indicating the inspection or release of a student's file, must be kept in the student's file.
3. University officials may classify student materials and records under their supervision as active or inactive as circumstances warrant. At the discretion of the official in charge, inactive records may remain in the file but need not be circulated. Inactive records may be reviewed by a student upon request.
4. A University official may take the initiative in an attempt to purge unfavorable evaluations, or opinion records of a prejudicial nature, in a student's file. This may be done by returning the material to the person who submitted it or by requesting from the author that the material be destroyed.

VIII. University Officials Responsible for Student Records

The following university officials are responsible for student records within their respective administrative areas:

1. Provost and Vice-President for Academic Affairs
2. Vice-President for Student Development and Services
3. Vice-President for Administration and Finance
4. Vice-President for University Advancement

These officers are responsible for the maintenance of all official student records under their jurisdiction in accordance with the policies of this statement and the relevant state and federal laws. If further information is required, a student should contact the appropriate university official.



Academic Organization

Under the direction of the Provost, three undergraduate colleges and the Graduate School administer the academic affairs of the university. Each of these divisions is administered by a dean who is responsible for the operation of the college or school. In addition, University College, Lifelong Learning and the Evening-Weekend College, and the Southpointe Center provide specialized programs and services to distinct student populations.

The College of Education and Human Services

The College of Education and Human Services is composed of the departments of Academic Development, Communication Disorders, Counselor Education & Services, Educational Studies, Elementary Education & Early Childhood Education, Health Science and Sport Studies, Social Work & Gerontology, and Special Education.

Teacher education programs are offered through the departments of Educational Studies, Elementary & Early Childhood, and Special Education and through the department of Applied Engineering and Technology in the Eberly College of Science and Technology. The departments of Academic Development Services, Communication Disorders, Health Science & Sports Studies, and Social Work & Gerontology form the human services component of the College. Counselor Education & Services offers programs leading to graduate degrees and to elementary and secondary counselor certification.

Teacher Education Program

California University has a long and distinguished history of preparing teachers for the schools of the Commonwealth with nearly 30,000 teacher education alumni. The College of Education and Human Services has developed and maintained a reputation of excellence in the preparation of teachers. Because of its accreditation by NCATE and the Commonwealth of PA, and its requirement of the PRAXIS I
and PRAXIS II teacher certification examinations, California's graduates are able to obtain teacher certification in most states in the U.S.
As California prepares to celebrate is sesquicentennial; it has been given a snapshot of where it stands in comparison to other colleges and universities in the Commonwealth that prepare teachers.
The comparison data is based on the number of students who completed all the requirements of the College of Education's Programs in elementary, secondary, special education from September 1999 to August 2000, or 314 students. The Educational Testing Service (ETS) released information to all teacher preparation institutions regarding the HEA Title II report.
While the data uses a state-wide cohort for comparisons, ETS plainly noted, "Within the same state, comparisons made between institutions are equally unsubstantiated because each institution prepares student for different licenses utilizing different testing requirements."
There are other factors that impact on percentages including the number of students taking specific tests, so that the size of the tested population is very important. California had 307 students who completed the basic skills portion of the PRAXIS I exam which includes four or five tests, depending area of study. This exam tests general knowledge and communication skills. All 307 students passed this portion, for an institutional pass rate of 100 percent. The statewide rate was 96 percent. It should be noted that the College requires all students who wish to continue in teacher education must pass the PRAXIS I exams before they can complete the program, and prior to student teaching. The PRAXIS II exam tests specialty areas such as professional knowledge. 258 out of 293 students passed, for an institutional pass rate of 88 percent. The statewide pass rate was 92 percent.
In the academic content areas such as math, English, biology, elementary, etc. 190 CUP students passed the assessment out of 229 who took the tests, for a pass rate of 83 percent. The statewide rate was 89 percent.

In other content area such as education, career/technical education, etc., 39 out of 41 students passed the exam for a 95 percent pass rate. The statewide rate was 98 percent.
In the teaching of special populations, special education, ELS, etc., 74 out of 87 students passed the exam for an 85 percent pass rate. The statewide rate was 89 percent.

The university was awarded a summary totals and pass rate of 83 percent, based on the number of students who successfully completed one or more tests across all categories used by the state for licensure and the total pass rate. This was based on 314 taking the assessment, and 260 passing. The statewide rate was 86 percent. California University will use the data collected by ETS to focus discussions on teacher preparation concentrating on continuous improvement and outcome assessment.

Admission to Teacher Education

Admission to the university is not a guarantee that a student majoring in education will be admitted to Teacher Education, Complete the program, which includes student teaching, and receive a teacher certification. The College of Education and Human Services has established standards that all education majors must meet in order to complete the Teacher Education Program. Some of these standards are embodied in the Admission to Teacher Education Program, which must be initiated by the candidate during the semester following the completion of 48 credits.

Program Admission Requirements:

Student must:

1. Possess a grade point average of 2.6 or better in his or her major and overall. In 2002-2003 the student must have a grade point average of 2.8; and in 2003-2004 the student must have a grade point average of 3.0.
2. Have completed 48 credit hours or the full time equivalent of college level study.
3. Successfully complete a speech and hearing test.
4. Successfully complete the PPST (or the General Knowledge and Communication Skills tests) and the Elementary Education; Content Knowledge test where applicable.
5. Submit Act 34 and 151 clearances prior to field experience/student teaching.
6. Complete 30 hours of field experience/observation at approved sites and file reports in the departmental office.
7. Complete six-semester hour credits in college level mathematics and six-semester hour credits, or transfer

credits, in English composition and English literature. Applicants entering an initial preparation program in September 2001 through August 2002 that do not have the required six credits in mathematics or the six credits in English composition and literature must complete these credits prior to completion of the program. Students entering in September 2002 and later must have these credits as part of the 48 credits for admission.

Student Teaching Admission Requirements:

Student must:

1. Complete all requirements for admission to teacher education.
2. Complete a cumulative total of 45-hours of field experience/ observation at approved sites and file reports in the departmental office.
3. Maintain the required grade point average.
4. Complete required program courses for student teaching.

Graduation Requirements:

1. Student must complete all required course work in his or her major.
2. Student must hold a grade point average of 2.6* or better overall and in his or her major.
3. Students must submit an application for graduation and have completed a university department clearance form.

*Graduation requirements are based on the Commonwealth's mandated GPA for teacher certification. Beginning Fall 2001, the GPA will be 2.6. In 2002-2003 the mandatory GPA will be 2.8; and in 2003-2004 the state mandated GPA will be 3.0.

Program Completion Requirements:

1. Student must complete all course work for his/her major.
2. Student must achieve the qualifying grade point average overall and in his or her major.
3. Student must successfully complete one semester of student teaching.
4. Student must successfully complete all state required PRAXIS tests including PRAXIS I, specialty area test(s) and the Principles of Learning and Teaching.

Note: To be considered a program completer the student must complete all of the required test(s). However, a student is permitted to graduate without taking and/or successfully completing his or her specialty area test(s) and the Principles of Learning and Teaching.

Advanced Preparation Program:

Candidates for certification, who were admitted to an initial professional educator preparation program at the graduate level prior to January 1, 2001, may complete an advanced preparation program in accordance with the completion standards at the time of your entry into the program.

Applicants holding a valid Pennsylvania certificate may be admitted to an advanced program to earn an advanced certificate or to add an additional area to their existing certificate but must meet the exit GPA requirements in force at the time of your admission to the advanced program.

Beginning September 1, 2001, an applicant for an advanced preparation program must have an entry GPA of 3.0. Candidates who were admitted to an advanced preparation program prior to September 1, 2001, and who will complete this program after September 1, 2001, may complete the advanced preparation program in accordance with requirements when they were admitted to the program.

Professional Field Experiences

Educators have observed that those who enter the teaching profession with a wide variety of contacts with young children, adolescents, and adults usually become superior teachers. To provide such contacts, each department has devised a program of professional field experiences.

Student Teaching

Student teaching is conducted under the supervision of the Director of Student Teaching. Students who are candidates for certification are required to earn twelve semester hours of credit in student teaching. However, student teaching is a competency-based program and may continue beyond one semester.

Candidates are certified to teach only if they demonstrate ability to teach effectively. Teaching competency is determined by the Director of Student Teaching, the university supervisor, and the cooperating teacher or teachers. The student teacher is also required to take a practicum while student teaching. Student teachers are not generally permitted to enroll in other courses during the student teaching experience.

Student teaching is normally conducted in selected public schools located in the service area of the university. Alternative programs are also available. Interested students should discuss this possibility with the Director of Student Teaching.

The institutional philosophy regarding student teaching is to prepare students adequately to assume their responsibilities in the teaching profession with the knowledge and skill essential to their areas of specialization. Student teaching is designed to provide a climate wherein the student may exhibit creativity and the ability to make critical judgments based upon knowledge and reason.

Applications for student teaching may be secured at the Office of the Dean of Education & Human Services, Room 200 of the Keystone Education Center. Applications must be submitted in September for Spring semester student teaching and in January for Fall semester student teaching.

Before students may be assigned to student teaching, they must:

1. Be admitted to Teacher Education
2. Obtain departmental approval as having satisfactorily completed the required preparatory work
3. Maintain a quality point average of 2.50 in the specialization and overall QPA
4. Submit speech and hearing tests and TB test results, updated ACT 34 and ACT 151 clearances, and evidence of $1,000,000 liability insurance coverage.

Transfer students are not assigned to student teaching until they have completed at least 24 credits of work at this university. Graduates of other colleges and universities must meet the requirements of admission to Teacher Education before being assigned to student teaching.

Student Teaching for Experienced Teachers

Teachers who have had one or more years of teaching experience may be permitted to complete the student teaching requirement by special arrangement after consultation with the Director of Student Teaching.

Appeal Procedure for Certification Students

Students wishing to appeal a decision regarding teaching certification should contact the Dean of Education and Human Services to discuss their concern. If accord is not reached at this level, the student may appeal to the Vice President for Academic Affairs.

The final source of appeal is with the Certification Appeals Committee, Department of Education, Harrisburg, Pennsylvania. This step should be taken only if there is no possibility for a resolution at an earlier stage, and only if the student is convinced that arbitrary and/or capricious standards were applied.

U.S. Citizenship—A Requirement for Teacher Certification in Pennsylvania

Permanent certificate will not be granted to any person who is not a citizen of the United States, and no provisional certificate may be granted to any person who is not a citizen or who has not declared in writing to the Department of Education the intention of becoming a citizen.

Graduation in General Education

Students who have been working toward teacher certification but are unable to complete the requirements of the teacher education program or who change their career plans may, with special permission, graduate in General Education without teacher certification. This Concentration requires that, with the approval of the Dean of the College of Education and Human Services and the Director of Student Teaching, the student may complete 12 credits in lieu of student teaching. To initiate the process, the student must make a request, in writing and in person, to the Director of Student Teaching.

The College of Liberal Arts

The College of Liberal Arts is comprised of the departments of Art, Communication Studies, Earth Science, English, Foreign Languages and Cultures, History, Music, Philosophy, Psychology, Social Sciences, and Theatre. Those departments offer a diverse array of major and minor programs of study. The Liberal Arts philosophy informs all programs of study within the College. A broad general education course of study encourages students to explore a variety of course offerings and to become aware of the ways many different disciplines understand and view the world.

The Liberal Arts are concerned with human values and social issues. They depend on the ability to think analytically, to understand other cultures and their history, as well as our own, and to appreciate artistic responses to our world. Liberal Arts disciplines enrich life by giving it greater meaning and by enabling people to adapt to changing employment, personal, and social demands. In essence, a liberal arts education stresses the transferability of knowledge and skills from one circumstance to another, ensuring that the individual can meaningfully adapt to new personal and professional situations. Many programs offer internships opportunities that allow students to gain professional experience and apply classroom knowledge to the world of work.

Students should select a major by 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 want a major limited to a single discipline have program options in Liberal Studies, Humanities, and Social Sciences. The curriculum in each is flexible and permits interdisciplinary study.

The Eberly College of Science and Technology

The Eberly College of Science and Technology includes the departments of Applied Engineering and Technology, Biological & Environmental Sciences, Business & Economics, Chemistry & Physics, Mathematics & Computer Science, and Nursing. The College offers Associate and Bachelor's degree programs designed to prepare students to meet present and future requirements of specific professions.

The objective of the degree programs of the Eberly College of Science and Technology is to prepare graduates for responsible positions in business, government, industry, health care, and other complex organizations. As well, several of the College programs prepare students to undertake further study in graduate and professional schools.

Each curriculum includes both general education and a technical education component. The curricula are divided this way so that students will receive a well-rounded education and so that breadth of knowledge will increase their usefulness as professional employees and as citizens in the community. Each major within the Eberly College Science and Technology includes the necessary technical, scientific, and support courses to provide the basis for advanced study in a professional area. Classroom theory is frequently supplemented by laboratory and workshop experiences where the interrelationship between general principles and application is emphasized. Advanced study in each discipline is emphasized during the junior and senior years. Additionally, several programs provide students with opportunities to participate in either an internship in business or industry or a clinical year of study in a hospital setting where the students' educational experiences are utilized in the workplace.

The School of Graduate Studies and Research

The School of Graduate Studies and Research offers programs of study leading to the Master of Arts, Master of Arts in Teaching, Master of Education, Master of Social Work, and the Master of Science degrees, as well as state-accredited supervision certificates. Students completing their graduate education at California University have enjoyed success in pursuing doctoral and professional degrees at distinguished graduate schools throughout the U.S.

The academic programs and courses offered by the School of Graduate Studies and Research are listed in the graduate catalog. Information or course schedules may be obtained by calling the Graduate School at 724-938-4187, or checking www.cup.edu.

University College

University College is a means to aid students in achieving educational, career, and personal goals through the utilization of a full range of institutional and community resources. It helps to both stimulate and support students in their quest for an enriched quality of life. University College empowers students to identify and accomplish life goals consistent with their abilities and interests, as well as to acquire skills and attitudes that promote life-long learning pursuant to intellectual and personal growth. In summary, University College promotes California University of Pennsylvania's mission of total student development.

University College provides:

1. A guided transition from high school or the world of work into the University environment by developing personal advisor-advisee relationships (using faculty and peer/student mentors); assessing basic skills and knowledge; assessing career interests and related activities; helping to develop an academic plan based on student skills and interests.

2. An introduction to a liberal education and its importance in life-long learning by developing proficiency in basic academic skills necessary for academic success at the University (reading, writing and mathematical skills); developing proficiency in personal skills which support learning (study skills, time management and interpersonal skills); introducing students to the breadth of human knowledge, including historical consciousness, issues of cultural ethnicity and nationality, global interdependence, and values and ethics in personal, professional, and community life.

3. Opportunities to explore various areas of interest, major areas of study and career options by introducing students to the concepts, strategies and resources associated with career planning; on-the-job experiences (co-ops, internships and field experiences); the ability to evaluate career options, to set realistic personal and academic goals, and to measure progress toward the attainment of those goals.

Advising and Placement Testing Center

The Advising and Placement Testing Center serves to coordinate placement-testing, coordinate schedule development for entering students, pre-register students in developmental courses, monitor successful completion of developmental course work, and provide retesting opportunities for students. The Center does not replace faculty advising but helps to coordinate and supplement it.

First-Year Seminar

UNI 100 First-Year Seminar is designed to help students make a smooth transition into the University environment. It is a one-credit course required of most first-time students. Topics covered in the course include: time management, campus life issues, library, writing/studying skills, math/reading skills, financial aid, academic and career planning, health issues and individual assistance. The FYS is taught by some of our best faculty.

Probationary Assistance (PASS) Program

The PASS Program provides the additional structure and support that may be necessary for student academic success. Participation in the PASS Program is required of students who are on First Academic Probation and students who have been dismissed for academic reasons and are subsequently readmitted. Students meet weekly with faculty, staff or graduate assistants to reinforce life/academic goals, time-management, study skills, campus resources (resource/referral), academic advisee responsibilities and the appeal process. Data indicate that students who participate actively in PASS have a greater probability of succeeding academically than those who do not.

Early Warning Notices (EWN)

The Early Warning Notices are voluntary responses from faculty and staff about students who may be experiencing academic difficulty. The Office of Student Retention contacts students who have been identified in order to offer assistance.

Ombudsperson

The Office of Student Retention is contacted by students who need information and/or general assistance, or who encounter difficulties with processes, procedures or personalities on campus. Established means of dealing with such concerns are used (i.e., students are informed of the appropriate processes or procedures to follow and are expected to use these). The Office of Student Retention monitors the concern(s) and becomes involved directly only if established means do not resolve the issue(s).

Developmental Courses

At California University student success is the priority. Ensuring that students are scheduled in classes of sufficient, but not excessive, challenge is a key to academic success. All new freshmen (students attending a post-secondary institution for the first time) and some transfer students take placement tests before their first registration at California University to determine their levels of ability in mathematics and writing. Students who do not submit SAT scores or have a score of less than 450 on the Verbal SAT (Recentered) also take the placement test in reading.

Students who do not achieve predetermined scores on these tests must enroll in appropriate developmental courses. These courses, ENG 100 English Language Skills, DMA 092 Introductory Algebra, DMA 094 Intermediate Algebra, and EDE 100 Reading, Studying, and Listening Skills, are described in the course listings in this catalog. Because these developmental courses are preparatory to a university academic experience, the credits awarded in them 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, experience shows that students who do well in preparatory courses also do well in college-level classes. Remember, student success is our priority.

Office of Lifelong Learning

The Office of Lifelong Learning serves learners interested in both credit and noncredit learning opportunities. Our programs of study are flexible and can be customized to meet your desire to further your education. The classes are offered in the evenings and on Saturdays at times intended to accommodate the busy schedules of most adults. Our goal is to provide "one-stop" ease in processing your information, registration and any questions you may have. We can connect you with the right people to accomplish your goals, and with our extended office hours, we are available from 8am to 7pm Monday through Thursday and 8am to 4pm Fridays and Saturdays (except during university recesses).

The Evening Weekend College is designed to provide nontraditional students with the opportunity to enter and complete a degree program, or take advantage of credit courses for personal enrichment or professional development as a non-degree seeking student. The current degree programs offered through the Office of Lifelong Learning include a Bachelor of Arts degree in Humanities, Social Sciences, and General Studies and a Bachelor of Science in Natural Sciences. Areas of concentration within these degrees are designed in consultation with an academic advisor and are subject to the availability of courses in any one term. Courses are offered during the Fall, Spring, and Summer sessions. In addition, students may take courses as a non-degree-seeking student without declaring a major area of study.

An application for Evening Weekend College is available from the Office of Lifelong Learning. This must be completed and submitted with a nonrefundable $25 application fee. All required official transcripts must be received prior to admission to the program. Individuals who begin as non-degree students and who later decide to complete a degree must submit all required admission data and be in good academic standing at the time of application. Individuals must hold a high school diploma or GED to apply as either a degree or non-degree student.

In addition to credit bearing programs of study, the Office of Lifelong provides numerous noncredit opportunities for learning. These include the Community Noncredit Classes Fall and Spring series for personal or professional enrichment, Elderhostel, College Opportunity Program for the Elderly (COPE), JTPA, and Customized Contract Training programs.

The University's Summer College program is also operated through the Office of Lifelong Learning.

For more information on the programs and services offered by the Office of Lifelong Learning please contact us at 724-938-5840. The Office is located on the second floor of the Eberly Science and Technology Center on the university's main campus.

Southpointe Center

California University offers a number of programs and courses at an off-campus center located in the Southpointe Industrial Complex in Canonsburg, PA. Programs are geared to the needs of the population and businesses in the area. Most classes are offered at night and on weekends to accommodate adult student schedules. The facility includes a computer lab, science lab, a library with electronic accessibility, and fiber optic connections for distance learning and video teleconferencing.

Students may earn degrees in several undergraduate programs. Bachelor degree programs are offered in business administration, humanities, social sciences, natural sciences, and nursing. An associate degree program in computer science is currently available, as well as certificate programs in gerontology and computer science. In addition, several graduate degree programs are offered. For additional information on programs and admissions, please contact the California University Southpointe Center at 1-888-333-CALU or 724-873-2760.

Workforce Development Center

In spring 2000, the University opened the Workforce Development Center located in the Regional Enterprise Tower (the former Alcoa Building) in downtown Pittsburgh. A number of programs and courses are offered there. The Workforce Development Center also offers customized training programs designed specifically to meet customer needs. Located on the fourth floor of the RET, the new facilities include state-of-the-art computer labs. For additional information call 412-565-2207.

General Education

California University believes that a liberal education is essential for all students, regardless of the profession for which they may be preparing. The goals, objectives, and courses that comprise our General Education program are designed to provide students with the knowledge, understanding, and skill they will need to pursue their careers and lead productive and rewarding lives.

Goals and Objectives

Building A Sense Of Community (1 Credit)

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.

Objectives

- To establish a personal mentor/mentee relationship
- To design an academic plan of study based upon skills and interests in conjunction with her/his advisor
- To critique, analyze, and utilize time management skills
- To summarize the various elements of campus life
- To use information retrieval systems in the library, the campus network and the Internet
- To locate and explain the services provided by four learning resources available on campus
- To identify the steps necessary to complete an application for financial aid
- To perform a computer based self-directed career search utilizing the facilities and resources provided by Career Services
- To identify ten health/wellness issues and campus resources for dealing with them
- To summarize the history of California University
- To attend and critique three cultural/sports activities

Required Course

UNI 100 FIRST YEAR SEMINAR
OR
HON 100 HONORS & UNIVERSITY ORIENTATION

Critical Thinking Skills (3 Credits)

Students will have the skills necessary to evaluate real life situations and to develop conclusions based on a critical analysis of information gathered through a variety of sources and methods. Critical thinking skills encompass "various forms of inquiry, abstract logical thinking, inductive reasoning, critical analysis, and ability to find and use information" using appropriate methods and techniques. (Board of Governors' Policy 1993-01; hereafter, BOG)

Objectives

- To describe and apply methods of inquiry, abstract logical thinking, inductive and deductive reasoning
- To demonstrate critical analysis
- To identify and use problem solving techniques
- To demonstrate techniques used to locate, use and evaluate information in relation to the above objectives.

Menu Courses 2000-2001

ART 296 PAINTING STUDIO (added 2000-2001)
ART 297 PRINTMAKING STUDIO (added 2000-2001)
ART 396 PAINTING STUDIO (added 2000-2001)
ART 397 PRINTMAKING STUDIO (added 2000-2001)
ART 496 PAINTING STUDIO (added 2000-2001)
ART 497 PRINTMAKING STUDIO (added 2000-2001)
CHE 281 ENVIRONMENTAL CHEMISTRY (added 2000-2001)
CSC 120 PROBLEM SOLVING & PROGRAMMING CONSTRUCTS
EAS 361 WEATHER ANALYSIS (added 2000-2001)
EAS 425 STRUCTURAL GEOLOGY (added 2000-2001)
EDE 350 INTEGRATING COMPUTER-BASED TECHNOLOGY INTO THE ELEMENTARY SCHOOL CURRICULUM (added 2001-2002)
ENG 308 RESEARCH FOR WRITERS
GEO 474 DEVELOPING THE MASTER PLAN (added 2000-2001)
HIS 240 HISTORY OF THE COLD WAR (added 2000-2001)
ITE 471 PROJECT MANAGEMENT (added 2001-2002)
MAT 110 APPLICATIONS OF MATHEMATICS (added 2001-2002)
MAT 120 ELEMENTARY TOPICS IN MATHEMATICS I (added 2001-02)
MAT 130 ELEMENTARY TOPICS IN MATHEMATICS II (added 2001-02)
MAT 303 GEOMETRY (added 2000-2001)
PHI 201 HISTORY OF ANCIENT PHILOSOPHY (added 2000-2001)
PHI 211 FORMAL LOGIC I (added 2000-2001)
PHI 307 MEDICAL ETHICS
PHI 320 ETHICAL THEORY
PHI 325 PHILOSOPHY OF SCIENCE (added 2000-2001)
PHI 405 EPISTEMOLOGY (added 2000-2001)
PHY 121 GENERAL PHYSICS I (added 2000-2001)
PHY 122 GENERAL PHYSICS II (added 2000-2001)
POS 228 DEVELOPMENT OF POLITICAL THOUGHT: CLASSICAL AND MEDIEVAL (added 2001-2002)
POS 229 DEVELOPMENT OF POLITICAL THOUGHT: MODERN (added 2001-2002)
TED 325 MANUFACTURING SYSTEMS (added 2001-2002)

Communication Skills (9 Credits)

Students will have the ability to develop and present ideas. Communication skills include "those required for effective reading, writing, speaking, and listening" and "awareness of the challenges of cross-cultural communication" (BOG).

Objectives

- 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

Menu Courses

COM 101 ORAL COMMUNICATION
COM 201 FORENSIC ACTIVITIES
COM 230 ARGUMENTATION & DEBATE
COM 250 ORAL COMMUNICATION: MANAGEMENT

Composition

Knowledge and Comprehension

- To demonstrate a capacity to carry out the planning, drafting, revising, and editing stages of the writing process
- To acquire the ability to construct, explain, and illustrate interpretations of readings
- 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

- To apply rhetorical strategies in writing expository and argumentative essays
- To produce prose that is clear, coherent, convincing, and correct

Synthesis and Evaluation
- To write essays that formulate original positions on a problem or issue in the context of a synthesis of multiple published sources
- To assess the usefulness and reliability of potential print and electronic resources for a proposed research project
- To plan, develop, and write an appropriately documented and formatted research paper

Required Courses
ENG 101 ENGLISH COMPOSITION I and
ENG 102 ENGLISH COMPOSITION II
OR
HON 150 HONORS COMPOSITION I and
HON 250 HONORS COMPOSITION II

Mathematics (3 Credits)

Students will have the "ability to understand numerical data and use mathematical methods for analysis and problem-solving" (BOG). 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.

Objectives
- To identify the components of a mathematics system (i.e., elements, operations, relations, and rules)
- To demonstrate rigor, exactness, precision, and accuracy in mathematical problem solving
- To illustrate the use of inductive and deductive reasoning to prove basic mathematical theorems
- To demonstrate the use of theoretical mathematical concepts in solving real-world problems
- To employ mathematics as a tool to manipulate numbers and data
- To analyze the role mathematics plays in the study of nature, particularly in cooperation with science

Menu Courses
EAS 538 COMPUTER APPLICATION WATER RESOURCES
HON 201 QUANTITATIVE PROBLEM SOLVING (added 2000-2001)
MAT 100 FUNDAMENTALS OF MATH
MAT 110 APPLICATIONS OF MATHEMATICS (added 2001-2002)
MAT 120 ELEMENTARY TOPICS IN MATHEMATICS I (added 2001-02)
MAT 130 ELEMENTARY TOPICS IN MATHEMATICS II (added 2001-02)
MAT 171 MATHEMATICS OF FINANCE I
MAT 181 COLLEGE ALGEBRA
MAT 182 TECHNICAL MATHEMATICS I
MAT 191 TRIGONOMETRY
MAT 199 PRECALCULUS
MAT 215 STATISTICS
MAT 225 BUSINESS STATISTICS
MAT 271 MATHEMATICS OF FINANCE II
MAT 272 DISCRETE MATHEMATICS
MAT 273 BASIC CALCULUS
MAT 281 CALCULUS I
MAT 282 CALCULUS II
MAT 303 GEOMETRY
PSY 225 PSYCHOLOGICAL STATISTICS

Natural Sciences (6-8 Credits)

Students will have a basic understanding of the natural sciences, which are concerned with our relationship with the physical world. The various branches of natural science seek to understand the processes and components of the natural world and encompass 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 disciplines.

Objectives
- To identify major concepts in natural science disciplines, which provide insights into the breadth of those disciplines and their relationship to other disciplines
- To illustrate the relationship between models, experiments, theories, and laws
- To illustrate the generation and testing of data
- To apply concepts and knowledge to the solution of problems
- To analyze and evaluate the limitations of collected data and design possible alternative interpretations

Menu Courses
BIO 103 CONTEMPORARY ISSUES IN BIOLOGY
BIO 112 BIOLOGY OF SEXUALLY TRANSMITTED DISEASES (added 2000-2001)
BIO 115 PRINCIPLES OF BIOLOGY
BIO 120 GENERAL ZOOLOGY
BIO 125 GENERAL BOTANY
BIO 206 CONSERVATION OF BIOLOGICAL RESOURCES
CHE 100 INTRO TO CHEMISTRY
CHE 101 GENERAL CHEMISTRY I
CHE 102 GENERAL CHEMISTRY II
CHE 281 ENVIRONMENTAL CHEMISTRY (added 2000-2001)
CMD 204 ANATOMY & PHYSIOLOGY (added 2000-2001)
EAS 100 INTRO TO EARTH SCIENCE
EAS 131 INTRO TO ENVIRONMENTAL GEOLOGY
EAS 150 INTRO TO GEOLOGY
EAS 163 INTRO TO OCEANOGRAPHY
ENS 101 INTRO TO ENVIRONMENTAL SCIENCE
HSC 110 HUMAN ANATOMY AND PHYSIOLOGY I (added 2001-02)
HSC 120 HUMAN ANATOMY AND PHYSIOLOGY II (added 2001-02)
ITE 311 INDUSTRIAL ERGONOMICS & HUMAN FACTORS
PHS 117 BASIC PHYSICAL SCIENCE
PHS 136 INTRO TO ENVIRONMENTAL CHEMISTRY
PHS 145 ASTRONOMY (added 2001-2002)
PHY 101 COLLEGE PHYSICS I
PHY 121 GENERAL PHYSICS I
PHY 122 GENERAL PHYSICS II
PHY 202 COLLEGE PHYSICS II

Social Sciences (6 Credits)

Students will have a "basic understanding of ... the social sciences and their significance in contemporary society" (BOG) and will have an "awareness of the social, economic, political, and environmental interdependence of countries and regions of the world" (BOG). The social sciences focus on human behavior, on how we interact with each other both in the past and in the present; how we interact with the environment; and how we organize, govern and trade among ourselves.

Objectives
- To identify major concepts in the social sciences, which provide insight into the breadth of these disciplines and their relationship to other disciplines.
- To understand how the various social sciences describe, analyze and explain human behavior.
- To understand about our cultural heritage, about where we have come from, where we are and where we may be going
- To identify, explain, apply and evaluate the moral and ethical codes of a social science discipline

Menu Courses
ANT 200 OLD WORLD PREHISTORY
BUS 100 INTRO TO BUSINESS
ECO 100 ELEMENTS OF ECONOMICS
ENG 347 INTRO TO LINGUISTICS
GEO 100 INTRO TO GEOGRAPHY
GEO 105 HUMAN GEOGRAPHY
GEO 150 SURVEY OF TRAVEL & TOURISM
GEO 175 INTRO TO PLANNING (added 2000-2001)
GEO 205 WORLD CITIES/GEOGRAPHY OF TOURISM
GEO 220 GEOGRAPHY OF UNITED STATES & PENNSYLVANIA
GER 247 GERMAN CULTURE UNDER THE NATIONAL SOCIALISTS
HIS 101 US HISTORY TO 1877
HIS 102 US HISTORY SINCE 1877
HIS 104 HISTORY OF WESTERN SOCIETY TO 1740
HIS 106 HISTORY OF WESTERN SOCIETY SINCE 1740
HIS 111 DEVELOPMENT OF MAJOR WORLD CIVILIZATIONS
HIS 112 MAJOR WORLD CIVILIZATIONS IN TRANSITION
HIS 188 LOCAL HISTORY (added 2001-2002)
HIS 200 HISTORY OF PENNSYLVANIA (added 2001-2002)
HIS 211 INTRODUCTION TO PUBLIC HISTORY (added 2001-2002)
HIS 217 AFRICAN AMERICANS IN U.S. HISTORY (added 2000-2001)
HIS 236 HISTORY OF URBAN AMERICA (added 2000-2001)
HIS 238 HISTORY OF AMERICAN LABOR (added 2001-2002)
HIS 240 HISTORY OF THE COLD WAR (added 2000-2001)
HIS 275 PITTSBURGH HISTORY (added 2001-2002)
HIS 304 GREAT DEPRESSION & WORLD WAR II (added 2000-2001)
HIS 345 SOCIAL HISTORY OF THE U. S. (added 2001-2002)
HIS 348 HISTORY OF AMERICAN SPORT (added 2000-2001)
HIS 495 SEMINAR IN U. S. HISTORY (added 2000-2001)
MGT 311 ORGANIZATION THEORY & DESIGN
NUR 105 PARENTING INSIGHTS & ISSUES
POS 100 INTRO TO POLITICAL SCIENCE
POS 105 AMERICAN GOVERNMENT
POS 205 MUNICIPAL GOVERNMENT
POS 218 POLITICAL PARTIES, CAMPAIGNS, & ELECTIONS
POS 220 INTRO TO PUBLIC ADMINISTRATION
POS 237 INTERNATIONAL ORGANIZATIONS
POS 300 INTRO TO PUBLIC POLICY
POS 301 METHODS OF POLITICAL ANALYSIS
POS 306 CONGRESS
POS 310 THE PRESIDENCY
POS 315 CONSTITUTIONAL LAW: CIVIL LIBERTIES
POS 322 POLITICS OF THE MIDDLE EAST
POS 326 POLITICS OF AFRICA
POS 335 ADMINISTRATIVE LAW
PSY 100 GENERAL PSYCHOLOGY
PSY 211 SOCIAL PSYCHOLOGY
PSY 345 HISTORY & SYSTEMS OF PSYCH
SOC 100 PRINCIPLES OF SOCIOLOGY
SOC 205 CONTEMPORARY SOCIAL PROBLEMS
SOC 240 SOCIAL INSTITUTIONS
SOC 410 SOCIAL THEORY & SOCIETY
SOW 150 INTRO TO SOCIAL WORK (added 2000-2001)
SOW 265 JUVENILE DELINQUENCY (added 2000-2001)
SOW 270 CHILD WELFARE (added 2000-2001)
SOW 295 HISTORY & PHILOSOPHY OF SOCIAL WELFARE (added 2000-2001)
SOW 296 POVERTY & RELATED SOCIAL PROBLEMS (added 2000-01)
XGE 101 INTRO TO GERONTOLOGY (added 2000-2001)
XGE 102 AGING IN AMERICAN SOCIETY (added 2000-2001)
WST 200 INTRO TO WOMEN'S STUDIES

Humanities And Fine Arts (9 Credits)

Students will have an "appreciation of and experience with literature and the arts" (BOG), 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. The humanities are typically subdivided into two areas, humanities and fine arts. Humanities courses present organized values, beliefs, or emotions using language and ideas as the creative vehicle, and include literature, philosophy, and foreign language study. Fine arts courses are those which present organized values, beliefs, or emotions using the senses and physical expression as the creative vehicle, and include courses in art, music, and theatre.

Objectives
- To attend and react to a performance or exhibit related to the discipline studied, in at least one course

Humanities
- To present, critique or analyze human values, beliefs and emotions as they are conceptualized, formulated, and expressed through language and ideas

Menu Courses
ART 122: ART HISTORY: ANCIENT - MEDIEVAL (added 2000-2001)
ART 123: ART HISTORY: RENAISSANCE - CONTEMPORARY(added 2000-2001)
COM 224 INTRO TO ORAL INTERPRETATION
ENG 106 INTRO TO POETRY
ENG 107 INTRO TO FICTION
ENG 108 INTRO TO DRAMA
ENG 203 GREAT BOOKS
ENG 205 WORLD LITERATURE TO 1600
ENG 206 WORLD LITERATURE FROM 1600
ENG 301 SURVEY OF ENGLISH LITERATURE I
ENG 302 SURVEY OF ENGLISH LITERATURE II
ENG 315 SURVEY OF AMERICAN WOMEN WRITERS
ENG 337 SURVEY OF AMERICAN LITERATURE I
ENG 338 SURVEY OF AMERICAN LITERATURE II
ENG 355 SURVEY OF THE ENGLISH NOVEL I
ENG 356 SURVEY OF THE ENGLISH NOVEL II
ENG 357 TWENTIETH CENTURY LITERATURE TO WWII
ENG 371 CRITICAL THEORY & TEACHING OF LIT
ENG 425 SHAKESPEARE
ENG 487 SEMINAR IN AMERICAN LITERARY GENRES
FRE 101 ELEMENTARY FRENCH I
FRE 102 ELEMENTARY FRENCH II
FRE 203 INTERMEDIATE FRENCH I
FRE 204 INTERMEDIATE FRENCH II
FRE 240 MIDDLE AGES & RENAISSANCE (800-1600)
FRE 241 THE SEVENTEENTH CENTURY & CLASSICAL AGE
FRE 242 THE EIGHTEENTH CENTURY & ENLIGHTENMENT
FRE 243 THE AGE OF FRENCH ROMANTICISM
FRE 244 THE AGE OF FRENCH REALISM
FRE 245 THE BIRTH OF MODERN FRENCH CULTURE
FRE 246 CONTEMPORARY FRENCH CULTURE IN THE ARTS
FRE 311 FRENCH CONVERSATION, COMP., & PHONETICS I
FRE 312 FRENCH CONVERSATION, COMP., & PHONETICS II
FRE 401 ADVANCED COMPOSITION, GRAMMAR, & STYLE
FRE 421 SURVEY OF FRENCH LITERATURE I
FRE 422 SURVEY OF FRENCH LITERATURE II
FRE 450 FRENCH LANGUAGE COLLIOQUIUM IN FRENCH
GER 240 FROM TACITUS TO LUTHER
GER 244 RICHARD WAGNER & HIS TIMES
GER 247 GERMAN CULTURE UNDER THE NATIONAL SOCIALISTS
MUS 100 INTRO TO MUSIC
MUS 202 NORTH AMERICAN MUSIC
MUS 204 SURVEY OF THE AMERICAN MUSICAL
MUS 301 20TH CENTURY MUSIC: HISTORY, FORM, ANALYSIS
MUS 306 THE OPERA: HISTORY, FORM, ANALYSIS
MUS 308 THE SYMPHONY: HISTORY FORM, ANALYSIS
PHI 100 PERSPECTIVES IN PHILOSOPHY
PHI 200 WORLD RELIGIONS
PHI 206 16TH-18TH CENTURY PHILOSOPHY
PHI 220 ETHICS
PHI 225 SOCIAL & POLITICAL PHILOSOPHY
PHI 231 PHILOSOPHY OF RELIGION
PHI 307 MEDICAL ETHICS
PHI 320 ETHICAL THEORY
PHI 325 PHILOSOPHY OF SCIENCE
PHI 370 PHILOSOPHY OF LAW

PHI 426 PHENOMENOLOGY & EXISTENTIALISM
SPN 101 ELEMENTARY SPANISH I
SPN 102 ELEMENTARY SPANISH II
SPN 203 INTERMEDIATE SPANISH I
SPN 204 INTERMEDIATE SPANISH II
SPN 242 GOLDEN AGE & BAROQUE
SPN 245 TWENTIETH CENTURY SPAIN 1900-1939
SPN 246 CONTEMPORARY SPAIN 1939-PRESENT
SPN 248 ROMANTICISM IN LATIN AMERICA
SPN 249 MEXICO TWENTIETH CENTURY
SPN 250 CONTEMPORARY ARGENTINA
SPN 311 SPANISH CONVERSATION, COMP., & PHONETICS I
SPN 312 SPANISH CONVERSATION, COMP., & PHONETICS II
SPN 401 ADVANCED COMPOSITION, GRAMMAR, & STYLE
SPN 421 SURVEY OF SPANISH LITERATURE
SPN 422 SURVEY OF SPANISH-AMERICAN LITERATURE

Fine Arts

- To present, critique or analyze human values, beliefs, and emotions as they are conceptualized, formulated, and expressed through verbal and physical action and artifacts and perceived through the senses

Menu Courses

ART 106 ART APPRECIATION (added 2000-2001)
ART 113 CERAMICS I (added 2001-2002)
ART 118 SCULPTURE I (added 2001-2002)
ART 119 DESIGN 2-D (added 2000-2001)
ART 120 DESIGN 3-D (added 2000-2001)
ART 122 ART HISTORY ANCIENT - MEDIEVAL (added 2000-2001)
ART 123 ART HISTORY RENAISSANCE - CONTEMPORARY (added 2000-2001)
ART 293 CERAMICS STUDIO (added 2000-2001)
ART 296 PAINTING STUDIO (added 2000-2001)
ART 297 PRINTMAKING STUDIO (added 2000-2001)
ART 298 SCULPTURE STUDIO (added 2000-2001)
ART 310 ADVANCED DRAWING (added 2000-2001)
ART 393 CERAMICS STUDIO (added 2000-2001)
ART 396 PAINTING STUDIO (added 2000-2001)
ART 397 PRINTMAKING STUDIO (added 2000-2001)
ART 398 SCULPTURE STUDIO (added 2000-2001)
ART 493 CERAMICS STUDIO (added 2000-2001)
ART 496 PAINTING STUDIO (added 2000-2001)
ART 497 PRINTMAKING STUDIO (added 2000-2001)
ART 498 SCULPTURE STUDIO (added 2000-2001)
FRE 245 THE BIRTH OF MODERN FRENCH CULTURE
FRE 246 CONTEMPORARY FRENCH CULTURE IN THE ARTS
GER 244 RICHARD WAGNER & HIS TIMES
MUS 100 INTRO TO MUSIC
MUS 104 VOICE CLASS I
MUS 115 FUNDAMENTALS OF MUSIC
MUS 191 UNIVERSITY CHOIR
MUS 192 CALIFORNIA SINGERS
MUS 196 JAZZ ENSEMBLE
MUS 197 CHORAL UNION (CALIFORNIA CHORALE)
MUS 198 UNIVERSITY MARCHING BAND
MUS 199 UNIVERSITY CONCERT BAND
MUS 200 SIGHT SINGING & EAR TRAINING
MUS 202 NORTH AMERICAN MUSIC
MUS 210 VOICE CLASS II
MUS 211 KEYBOARD I
MUS 300 JAZZ HISTORY, FORM, ANALYSIS
MUS 301 20TH CENTURY MUSIC HISTORY, FORM, ANALYSIS
MUS 303 MUSIC MATERIALS & METHODS FOR TEACHERS
MUS 306 THE OPERA HISTORY, FORM, ANALYSIS
MUS 308 THE SYMPHONY HISTORY FORM, ANALYSIS
MUS 312 KEYBOARD II
THE 100 INTRO TO THEATRE
THE 132 BALLET TECHNIQUE I
THE 133 JAZZ TECHNIQUE I
THE 201 VOICE & INTERPRETATION
THE 231 INTERMEDIATE ACTING (added 2000-2001)
THE 240 CREATIVE DRAMATICS
THE 245 CHILDRENS THEATRE
THE 309 READER'S THEATRE (added 2000-2001)
THE 350 THEATRE PRACTICUM ACTING
THE 351 THEATRE PRACTICUM DANCE
THE 354 THEATRE PRACTICUM MANAGEMENT
THE 356 THEATRE PRACTICUM TECH PRODUCTION

Multicultural Awareness (3 Credits)

Students will have 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 experience that transcend time, space, race and circumstances" (BOG). Multicultural awareness assists individuals, regardless of ethnicity, gender, disabilities, social class or race, to understand and appreciate events and people from various points of view. Courses could focus on one or more of the following: gender, ethnicity, racial diversity, world religious belief systems, non-western cultures.

Objectives

- To outline diversity, either historically or cross-culturally for the population(s) under study
- To explain how cultural groups define social constructs (for example- 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
- To compare and contrast different cultural groups under study
- To explain why tensions exist between cultural groups and how such tensions are expressed, such as attribution and ideology

Menu Courses

ANT 100 INTRO TO ANTHROPOLOGY
ANT 280 INDIANS OF NORTH AMERICA
ANT 300 CULTURAL VIEWS OF WOMEN
ANT 355 PREHISTORIC AMERICAN INDIANS
ENG 155 BLACK LITERATURE
ENG 371 CRITICAL THEORY & TEACHING OF LIT
FRE 101 ELEMENTARY FRENCH I
FRE 102 ELEMENTARY FRENCH II
FRE 203 INTERMEDIATE FRENCH I
FRE 204 INTERMEDIATE FRENCH II
FRE 240 MIDDLE AGES & RENAISSANCE
FRE 241 THE SEVENTEENTH CENTURY & CLASSICAL AGE
FRE 242 THE EIGHTEENTH CENTURY & ENLIGHTENMENT
FRE 243 THE AGE OF FRENCH ROMANTICISM
FRE 244 THE AGE OF FRENCH REALISM
FRE 245 THE BIRTH OF MODERN FRENCH CULTURE
FRE 246 CONTEMPORARY FRENCH CULTURE IN THE ARTS
FRE 450 FOREIGN LANGUAGE COLLOQUIUM IN FRENCH
GEO 105 HUMAN GEOGRAPHY
GEO 205 WORLD CITIES/GEOGRAPHY OF TOURISM
GER 240 FROM TACITUS TO LUTHER
GER 247 GERMAN CULTURE UNDER THE NATIONAL SOCIALISTS
HIS 106 HISTORY OF WESTERN SOCIETY SINCE 1740 (added 2000-01)
HIS 247 HISTORY OF ETHNIC AMERICA (added 2001-2002)
HIS 265 HISTORY OF LATIN AMERICA (added 2000-2001)
HIS 312 WOMEN IN ANCIENT & MEDIEVAL EUROPE (added 2000-01)
HIS 325 HISTORY OF AMERICAN WOMEN (added 2000-2001)
HIS 345 SOCIAL HISTORY OF THE U. S. (added 2001-2002)
LIT 127 WOMAN AS HERO
MUS 202 NORTH AMERICAN MUSIC
NUR 101 WOMEN'S HEALTH ISSUES
PHI 200 WORLD RELIGIONS
POS 210 POLITICS OF WESTERN EUROPE (added 2001-2002)
POS 281 POLITICS OF RUSSIA (added 2001-2002)
POS 322 POLITICS OF THE MIDDLE EAST
POS 326 POLITICS OF AFRICA
PSY 311 PSYCHOLOGY OF GENDER ROLES
SOC 240 SOCIAL INSTITUTIONS

SOW 208 MINORITY GROUP RELATIONS (added 2000-2001)
SPN 101 ELEMENTARY SPANISH I
SPN 102 ELEMENTARY SPANISH II
SPN 203 INTERMEDIATE SPANISH I
SPN 204 INTERMEDIATE SPANISH II
SPN 242 GOLDEN AGE & BAROQUE
SPN 246 CONTEMPORARY SPAIN 1939-PRESENT
SPN 248 ROMANTICISM IN LATIN AMERICA
SPN 249 MEXICO TWENTIETH CENTURY
SPN 250 CONTEMPORARY ARGENTINA
SPN 421 SURVEY OF SPANISH LITERATURE
SPN 422 SURVEY OF SPANISH-AMERICAN LITERATURE
WST 200 INTRO TO WOMEN'S STUDIES

Values (3 Credits)

Students will have an "understanding of the role of values in personal, professional, and civic life; experience in recognizing and analyzing ethical issues" (BOG). The study of values includes the acts, customs, and institutions regarded in a particular, usually favorable way by a group of people. Values must be a major theme in the course, not just a topic. Course syllabi must provide the definition(s) of value that will be explored. All courses must examine values as they relate to concrete situations within the realm of experience of most students.

Objectives

- To utilize bodies of knowledge to form the basis for an analysis of values
- To explain how values are developed within diverse human frameworks
- To analyze, synthesize and evaluate how ethical concepts are formed
- To apply an analysis of values to other branches of knowledge or to issues of universal human concern
- To acquire the critical use of sources and evaluation of evidence
- To exercise judgment in the expression of ideas
- To appraise knowledge bases on the basis of informed and independent evaluations

Menu Courses

EAS 131 INTRO TO ENVIRONMENTAL GEOLOGY (added 2000-01)
EDF 121 - SCHOOLS AND VALUES (added 2001-2002)
GEO 165 - INTRODUCTION TO RECREATION AND LEISURE (added 2001-2002)
HIS 312 WOMEN IN ANCIENT & MEDIEVAL EUROPE (added 2000-01)
ITE 101 INDUSTRIAL SAFETY
LIT 127 WOMAN AS HERO
PHI 200 WORLD RELIGIONS
PHI 220 ETHICS
PHI 231 PHILOSOPHY OF RELIGION
PHI 307 MEDICAL ETHICS
PHI 320 ETHICAL THEORY
PHI 370 PHILOSOPHY OF LAW
POS 315 CONSTITUTIONAL LAW: CIVIL LIBERTIES
WST 200 INTRO TO WOMEN'S STUDIES

Technological Literacy (6 Credits)

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)

Objectives

- To explain major concepts in technology, providing insights into its breadth and into its relationship to other areas of study
- To use research skills to understand materials, energy, information, people, time and tools as they apply to technological systems designed to meet human needs and wants
- 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
- To design, produce, test, and analyze possible solutions to technological problems
- To demonstrate computer literacy

Menu Courses

CIS 150 INTRO TO DATABASE APPLICATION SOFTWARE
CSC 101 MICROCOMPUTERS & APPLICATIONS SOFTWARE
CSC 105 BASIC PROGRAMMING LANGUAGE
CSC 120 PROBLEM SOLVING & PROGRAMMING CONSTRUCTS
CSC 123 INTRO TO COMPUTER SCIENCE WITH PASCAL
CSC 201 WINDOWS & INTERNET
CSC 218 COBOL I
CSC 223 C PROGRAMMING
CSC 224 FORTRAN
CSC 377 INFORMATION STRUCTURES
EAS 273 COMPUTER CARTOGRAPHY
EAS 365 REMOTE SENSING: SATELLITE & RADAR INTERP
EDF 301 COMPUTERS FOR TEACHERS
EDF 302 APPLIED INSTRUCTIONAL TECHNOLOGY
ENG 217 SCIENTIFIC & TECHNICAL WRITING
GCT 100 GRAPHIC COMMUNICATION PROCESSES I (added 2000-01)
GCT 110 SCREEN PRINTING TECHNIQUES (added 2000-2001)
GCT 220 BLACK & WHITE PHOTOGRAPHY (added 2000-2001)
GCT 225 PRINCIPLES OF LAYOUT & DESIGN (added 2000-2001)
GCT 240 ELECTRONIC DESKTOP PUBLISHING (added 2000-2001)
GCT 270 LITHOGRAPHIC TECHNIQUES (added 2000-2001)
GET 101 INTRO TO ENGINEERING TECHNOLOGY (added 2000-01)
GET 102 INTRO TO ENGINEERING DESIGN (added 2000-2001)
HON 187 INFORMATION LITERACY
IND 355 WOOD TECHNOLOGY
IND 345 CONSTRUCTION PROCESSES I
MAT 500 TECHNOLOGY FOR MATHEMATICS (added 2000-2001)
MMT 310 DIGITAL PORTFOLIO
TED 315 CONSTRUCTION SYSTEMS
TED 325 MANUFACTURING SYSTEMS
TED 425 MANUFACTURING ENTERPRISE

Health And Wellness (2-3 Credits)

Students will have an understanding of the various means by which they may fulfill their potential as healthy people living in healthy communities. Wellness is the result of individuals making intelligent decisions concerning the various factors that can affect their overall health. Courses must include one or more of the following emphases; eating and exercising toward a healthy lifestyle; building healthy relationships; understanding and preventing disease; explaining drug use and abuse; making healthy choices.

Objectives

- To compare and contrast healthy and unhealthy (lifestyles, relationships, drug use, choices, etc.)
- To explain and predict factors affecting health
- To interpret and apply health principles to their life
- To analyze, design, and assess individual health plans

Menu Courses

ANT 231 MEDICAL ANTHROPOLOGY
ATE 115 FOUNDATIONS STRENGTH TRAINING & CONDITIONING
ATE 120 SUBSTANCE ABUSE EDUCATION
ATE 340 SPORTS NUTRITION
BIO 103 CONTEMPORARY ISSUES IN BIOLOGY (added 2000-2001)

BIO 112 BIOLOGY OF SEXUALLY TRANSMITTED DISEASES (added 2000-2001)
HPE 105 CURRENT HEALTH ISSUES
HPE 202 COED AEROBIC FITNESS & NUTRITION
HPE 314 FIRST AID & PERSONAL SAFETY
NUR 101 WOMEN'S HEALTH ISSUES
NUR 105 PARENTING INSIGHTS & ISSUES
PSY 222 PSYCHOLOGY OF STRESS MANAGEMENT
SOW 215 HUMAN GROWTH & BEHAVIOR I (added 2000-2001)
SOW 303 HUMAN SEXUALITY & SOCIETY (added 2000-2001)

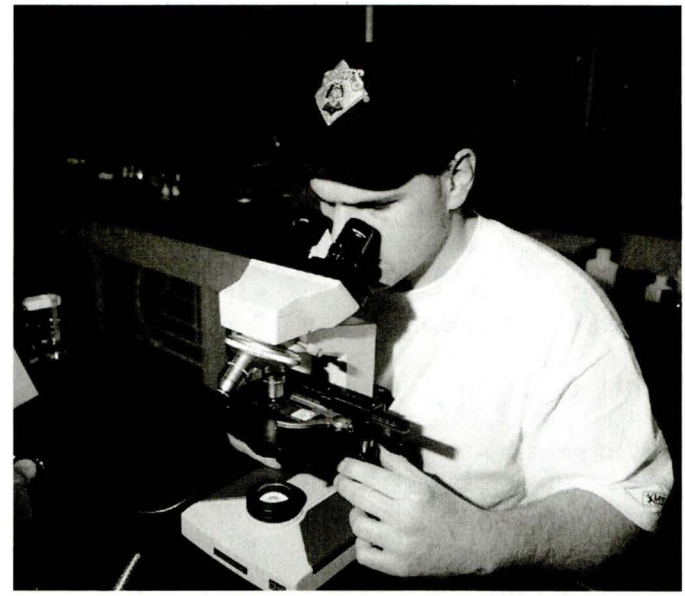
Upper Division Writing Component Courses

ART 305 NINETEENTH CENTURY ART (added 2001-2002)
ART 306 TWENTIETH CENTURY ART(added 2001-2002)
ART 307 WOMEN ARTISTS (added 2001-2002)
ART 397 PRINTMAKING STUDIO (added 2001-2002)
ART 398 Sculpture Studio (added 2001-2002)
BIO 318 GENETICS (added 2001-2002)
COM 363 SPORT COMMUNICATIONS AND MEDIA RELATIONS (added 2001-2002)
COM 461 COMMUNICATION CRITICISM (added 2001-2002)
COM 490 COMMUNICATION THEORY (added 2001-2002)
CHE 451 PHYSICAL CHEMISTRY I (added 2000-2001)
CHE 452 PHYSICAL CHEMISTRY II (added 2000-2001)
CSC 490 SENIOR PROJECT I (added 2001-2002)
CSC 492 SENIOR PROJECT II (added 2001-2002)
EDF 302 APPLIED INSTRUCTIONAL TECHNOLOGY (added 2001-02)
ENG 371 CRITICAL THEORY & THE TEACHING OF LITERATURE(added 2000-2001)
ENG 372 COMPOSITION THEORY & THE TEACHING OF WRITING (added 2000-2001)
ENS 420 PRINCIPLES OF WILDLIFE MANAGEMENT (added 2001-02)
GEO 319 TRANSPORTATION GEOGRAPHY (added 2000-2001)
GEO 325 GEOGRAPHY OF EUROPE (added 2000-2001)
GEO 328 GEOGRAPHY OF LATIN AMERICA (added 2000-2001)
GEO 358 COMPREHENSIVE TRAVEL PLANNING (added 2000-2001)
GEO 412 PROGRAM PLANNING & ADMINISTRATION (added 2000-01)
GEO 474 DEVELOPING THE MASTER PLAN (added 2000-2001)
GEO 485 SEMINAR IN PLANNING (added 2000-2001)
HIS 416 HISTORY OF BRITAIN (added 2001-2002)
HIS 420 RENAISSANCE AND REFORMATION EUROPE(added 2001-02)
HIS 495 SEMINAR IN U. S. HISTORY (added 2000-2001)
MAT 304 HISTORY OF MATHEMATICS (added 2000-2001)
MAT 496 SENIOR RESEARCH PROJECT(added 2001-2002)
POS 307 REVOLUTION (added 2001-2002)
POS 327 CONTEMPORARY POLITICAL THOUGHT (added 2001-02)
SPT 401 ORGANIZATION AND ADMINISTRATION OF SPORT (added 2001-2002)
TED 500 TEACHING TECHNOLOGY IN THE ELEMENTARY SCHOOL (added 2001-2002)
TED 450 TEACHING TECHNOLOGY IN THE SECONDARY SCHOOL (added 2001-2002)
THE 312 HISTORY OF THEATER II (added 2001-2002)
THE 306 MODERN DRAMA (added 2001-2002)

Laboratory Courses

Approved for 2001-2002
BIO 206 CONSERVATION OF BIOLOGICAL RESOURCES
CHE 101 GENERAL CHEMISTRY I
CHE 102 GENERAL CHEMISTRY II
*HIS 211 INTRODUCTION TO PUBLIC HISTORY
PHS 120 BASIC PHYSICAL SCIENCE WITH LABORATORY
PHY 101 COLLEGE PHYSICS I
PHY 202 COLLEGE PHYSICS II
PHY 121 GENERAL PHYSICS I
PHY 122 GENERAL PHYSICS II
*THE 231 INTERMEDIATE ACTING

*conditionally approved for one year only



Notes

California University is implementing its new General Education Program, and the goal menus will be updated throughout the implementation process. Students entering the university under this catalog will be able to satisfy General Education requirements by using courses added to goal menus in subsequent years without being required to change to a new catalog.

General education courses may include any courses in a student's career, including major courses. Major courses included on a goal menu may be used to satisfy that goal.

Although a course may appear on more than one menu, a given course may be used to satisfy only one general education goal.

When external accreditation agencies require specific competencies, departments may advise students to take specific courses included on a goal menu to complete the goal. Students should contact their advisors or department chairs for information on such requirements.

Any required course within a general education goal (e.g., UNI 100, ENG 101, ENG 102) that is failed must be retaken by the student and a passing grade earned for the course. Students should retake such courses as soon as possible.

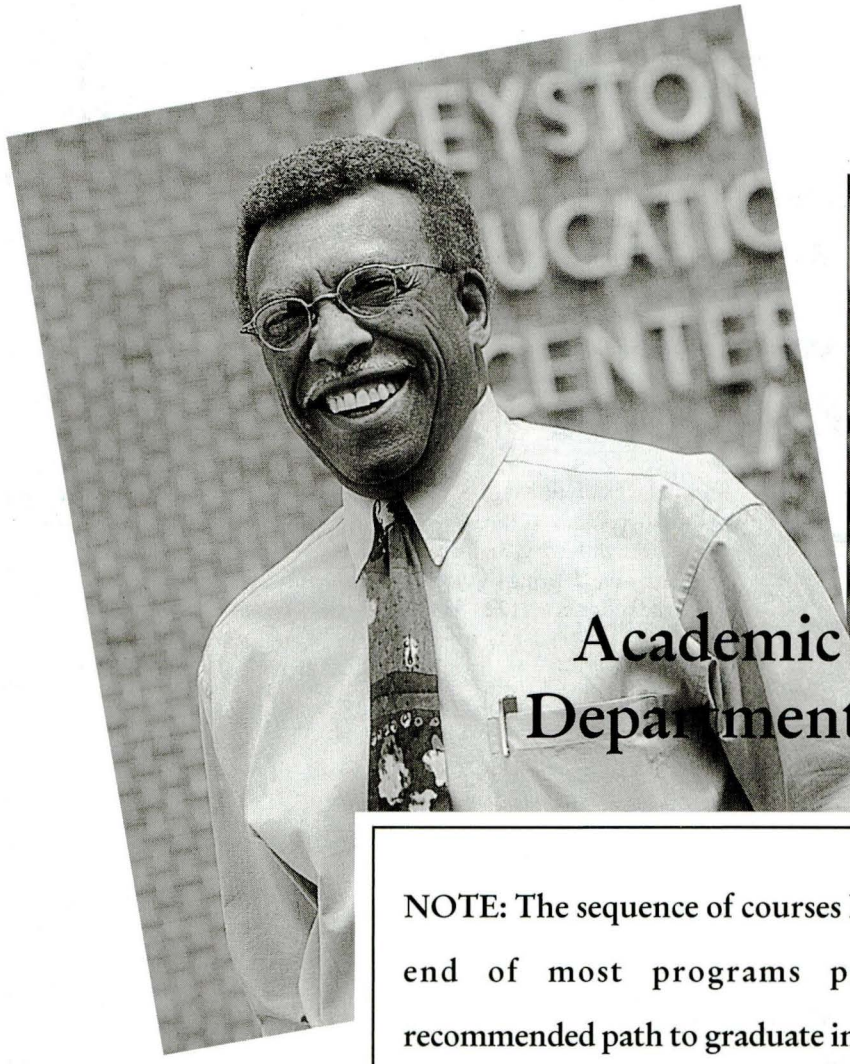
Students must complete appropriate developmental courses or satisfy other prerequisites prior to completing a course listed on a general education goal menu.

Students must complete a lab course.

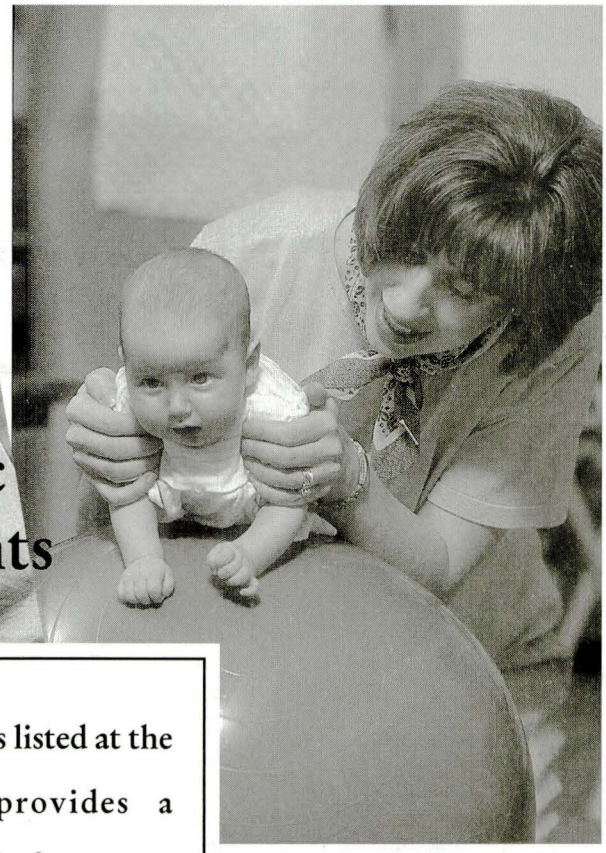
Definition: a lab course uses the scientific method in observation, collection and manipulation of data, interpretation of data, and drawing conclusions.

Students must complete two upper-level "writing intensive" courses in the major.

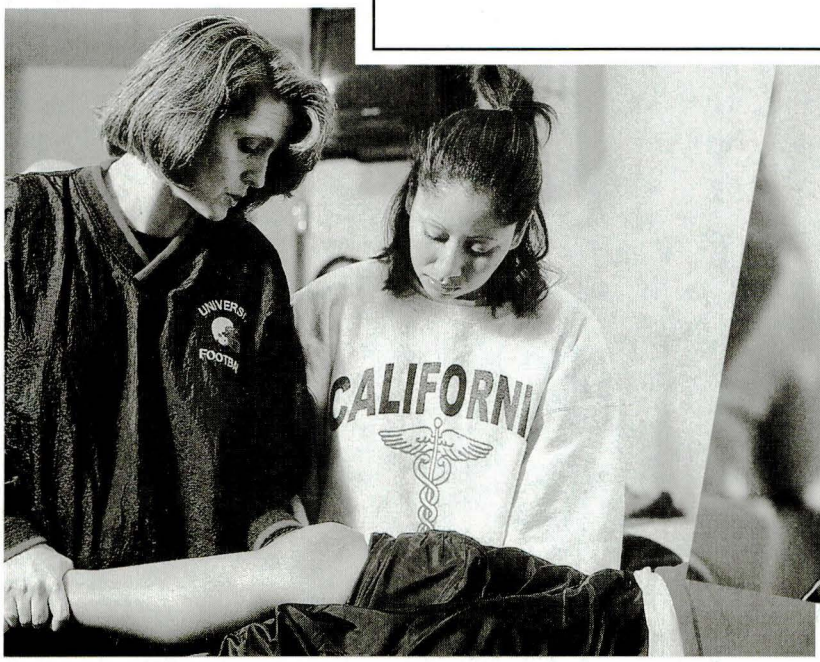
Criteria: Major departments must affirm that the writing intensive courses they propose require writing experiences that are relevant to that major; writing component courses must offer students opportunities for significant revision of their writing, revision typically initiated by instructors' written comments on drafts; students in writing intensive courses must be assigned a minimum of 30 pages of writing, distributed throughout the semester.

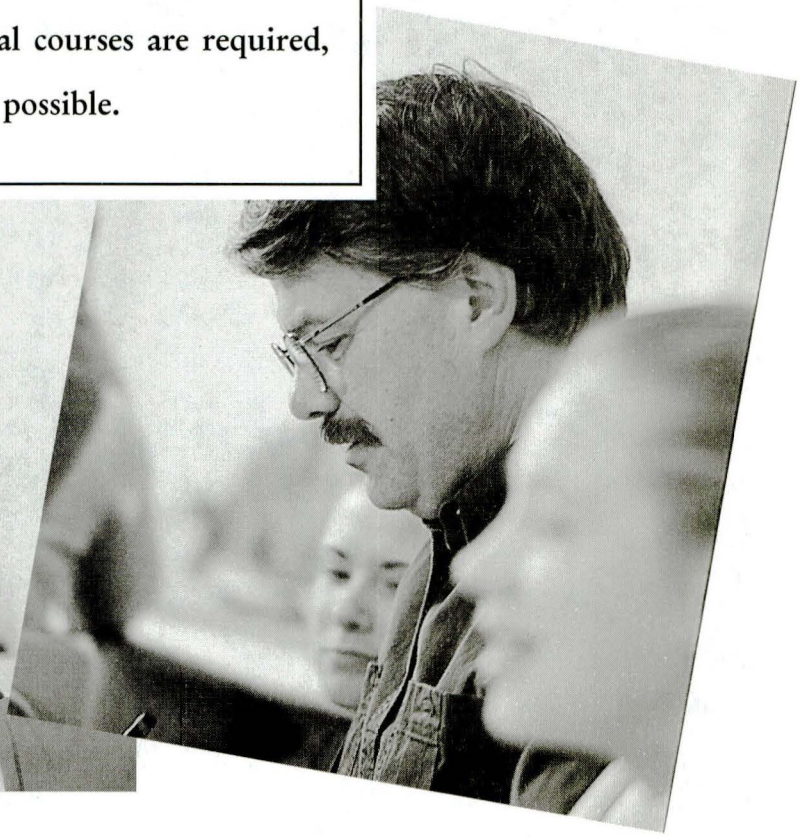


Academic Departments



NOTE: The sequence of courses listed at the end of most programs provides a recommended path to graduate in four years. While the individual courses are required, other sequences are possible.





Academic Development Services

Purpose

The Department of Academic Development Services operates three grant-funded programs: Act 101, Student Support Services and Upward Bound. These programs help students adjust to and cope effectively with academic and related non-academic challenges.

Services

Departmental faculty provide services to students in the following areas:

1. Instruction

A three-credit course, EDE 100 Reading, Study And Listening Skills, is offered to first-year program students, and a one credit course, XCP 194 Career Planning, is offered to students with 48 credits or less.

2. Counseling

Counselors provide educational and career guidance and academic advisement. New program students are interviewed and receive both an orientation and academic plan. Counselors help students schedule and register for courses; monitor each student's academic performance; and provide students with information concerning academic policy, procedures, and practices. Program students may also be eligible for a non-punitive grading option.

3. Tutoring

Tutoring is provided for most entry level courses. Tutors review lecture notes, textbook and other course materials; teach course related vocabulary words; prepare students for completion of course assignments; and demonstrate the use of course related technologies.

The Department of Academic Development Services is located in Noss Annex. Office hours are from 8:00 a.m. to 4:00 p.m., Monday through Friday, and weekends and evenings by appointment. Anyone desiring services or information is encouraged to stop at the office or call 724-938-4230.

Applied Engineering and Technology

Faculty
Professor Stanley A. Komacek, Chair. Professors Mark E. Bronakowski, Ronald G. Dreucci, Larry D. Horath, John R. Kallis, Rene' L. Kruse, Mark L. Nowak, Joseph A. Sanfilippo, Darrell Lee Smith, John M. Thompson, Jaroslav V. Vaverka. Associate Professors Glenn R. Hider, David V. Kolick, John W. Loney, James R. Means, Jr., Peter H. Wright. Assistant Professors Joseph G. Schickel, Jeffrey S. Sumey, Susan E. Urbine.

Department Mission
Curricula in the Department of Applied Engineering and Technology integrate a comprehensive program in the management of technology with a broad general education to prepare the graduate to function in a technology-related field of industry or education. Students develop a strong background in the fundamentals of science, mathematics and technology so they may integrate and apply their knowledge and skills to management situations in industry or laboratory teaching situations in education. In addition, students become aware of the impact of technology on the global community and the quality of life, both for the individual and for society.

Programs
Applied Engineering and Technology offers technology-related programs in four bachelor and four associate degrees. The Department has earned a national reputation of excellence for its many technology programs.

Bachelor Degree Programs:
- Electrical Engineering Technology
- Graphic Communications Technology
- Industrial Technology
- Technology Education

Associate Degree Programs:
- Automation Technology: Computer Numerical Control
- Drafting and Design Technology
- Electrical Engineering Technology
- Screen Printing Technology

Lab Facilities
Applied Engineering and Technology courses are taught in twenty-two labs in three buildings on campus. The new *Eberly Science and Technology Center* includes two labs on the third floor; EET Analog Lab and Digital/Embedded Systems Lab. The first floor of the *Eberly Center* is devoted to the California Manufacturing Assistance Center, which includes labs for CADD (Computer-Aided Drafting and Design), Materials Testing, Metrology and an Automated Manufacturing Center. *Coover Hall* houses these labs: CADD/ Mechanical Drafting, Computer Numerical Control Machining, Digital Prepress, Electronics, Foundry, Graphics, Machine Tools, Manufacturing Technology, Multimedia Technology, Photography and Printing Pressroom. The *Old Industrial Arts Building* has labs for Drawing and Design, Elementary School Technology, Graphics/Screen Printing, Metal Fabrication and Transportation Technology.

Computer Technology - The Department has more than 150 computers in its laboratories. Both Windows©-based and Macintosh© computers are available. Windows©-based machines are used mostly in CADD, automation/robotics, electronics, machine control operations, multimedia and materials testing. The Macintosh© computers are primarily used in graphics, design, multimedia and desktop publishing. Students have 24-hour access to most of the computer facilities in the department.

CADD/Drafting Labs - The department has two CADD/Drafting Labs. The Dr. Jay D. Helsel CADD/Drafting Lab in Coover Hall features 25 Windows NT© networked PCs with 233 MHz Pentium© processors. Instruction is provided in AutoCAD2000©, Mechanical Desktop©, Architectural Desktop©, CADKEY 97© and ANSYS© finite element analysis software. The lab also includes 25 large format mechanical drafting machines. The CADD Lab in the Eberly Science and Technology Center also features 25 Windows NT© networked PCs with 233MHz Pentium© processors. Instruction is provided in AutoCAD2000©, Mechanical Desktop©, Architectural Desktop©, SolidWorks©, CATIA© for engineering design and solid modeling and the ANSYS© finite elements computer programs for engineering analysis. An HP LaserJet© printer is used for A- and B-size drawings while an HP Draftmaster© pen plotter can create drawings up to D-size.

Multimedia Technology Lab - In Coover Hall 204, this lab features 12 Windows©-based Dell Pentium© PCs and 12 Apple© G3 PowerPC Macintosh© computers. Instruction is provided on a variety of scripting, authoring, digital editing, animation, video and productivity software packages; including Macromedia© Authorware©, Director©, Dreamweaver©, Flash© and Freehand©, QuarkXPress©, Adobe Photoshop©, Premiere©, Acrobat©, Netscape Navigator©, Internet Explorer©, Microsoft Office©, Newtek Lightwave©, NicoMak©, WinZip©, QuickTimePro© and Adaptec Toast Pro©. Other multimedia equipment available in the lab includes color flatbed scanners, digital still and video cameras, audio/video mixing units, videocassette playback units, CD burners, inkjet printers and laser printers.

Digital Prepress Lab - In Coover Hall 133A, this lab features 21 Macintosh© G4 computers with 400MHz Motorola chips, 27GB hard drives, DVD ROMs, Internal Zip Drives and 17-inch Color Sync monitors running Mac OS version 9.04. The primary software packages used for graphic design, digital image editing, page layout and desktop publishing are Quark XPress© and Adobe Photoshop©. Also available are flatbed and negative scanners, CD burners, three color inkjet printers and two laser printers.

Automated Manufacturing Center - The Eberly Science and Technology Center houses this new lab, which includes a HAAS© VF-O CNC (computer-numerical control) vertical machining center and a DAEWOO LYNX 200© turning center. MasterCAM© computer-aided manufacturing software is used to convert CAD drawings into CNC machine code. A HAAS CNC simulator is available so students can test their programs before beginning production. The Center also includes the following automation/robotics equipment: tabletop Scorbot© robots with offline simulation software, Amatrol© servo-control robots, PLCs, automated materials handling conveyors, vision systems, voice recognition control systems, bar code generation and scanning systems and a Denford© CNC milling machine.

Elementary Technology Education Learning Lab - The Historic Industrial Building 201 is home to this new lab, which is designed to support the Teaching Technology in the Elementary School course. The lab is equipped with a comprehensive assortment of elementary-compatible manipulative technology learning systems from K'NEX©, Legos© and Community Playthings©. Also included are several networked computers, interactive software packages, animation software, programmable musical keyboards, GPS systems (global positioning systems) and electronic motion measuring systems.

EET Analog Lab - This lab, located in the Eberly Center, supports 12 Windows NT©-networked computers with Internet access. Each workstation is equipped with a Tektronix© function generator, a Tektronix© Digital Phosphorous Oscilloscope, a Wavetek© digital multimeter and a Tenma© triple output power supply. Also available are four electric power workstations with a DC motor and generator, single-phase and three-phase AC motors and alternators, transformers and a dynamometer. An HP© 2100 laser printer is available for printing laboratory reports, computer program assignments and electronic schematics.

EET Digital/Embedded Systems Lab - The Eberly Center is the home to this lab, which inlcudes 12 Windows NT©-networked computers with Internet access, a digital trainer, an oscilloscope, a function generator, a power supply and a microprocessor emulator. Four workstations feature an HP© eighteen-channel mixed signal oscilloscope available for advanced microcontroller system troubleshooting. The lab is also equipped with C cross compilers for embedded microcontroller software development. An HP© 2100 laser printer is available for printing laboratory reports, computer program assignments and electronic schematics.

Special Features of the Department

Internships
Bachelor degree students in Electrical Engineering Technology, Graphic Communications Technology and Industrial Technology are encouraged to complete an internship as part of their degree requirements. Students work in an organization related to their employment goals where they receive practical experience in applying what they have learned at the University. Internship credits apply toward graduation. The following internships are available:

EET 495 Electrical Engineering Technology Internship
GCT 495 Graphic Communications Technology Internship
ITE 495 Manufacturing Technology Internship

Scholarships
There are several scholarship opportunities for Graphic Communications Technology, Industrial Technology and Technology Education students in the Department. For more information on the scholarships, see the sections below for each program or contact the Department.

Graphic Communications Technology Scholarships:
Foundation of Flexographic Technical Association Scholarship
International Publishing Management Association Scholarship
Kenny Hager Memorial Scholarship
Kurt Nordstrom Memorial Scholarship
National Scholarship Trust Fund
Pittsburgh Club of Printing House Craftsmen Scholarship

Industrial Technology Scholarship:
Society of Manufacturing Engineers Scholarship

Technology Education Scholarships:
Donald Maley Technology Education Scholarship
Technology Education Association of Pennsylvania William J. Wilkinson Scholarship

Student Awards
Each year, the Department honors several graduating seniors who have excelled academically. Selection is based upon grade point average, academic achievements and faculty vote.
The Applied Engineering and Technology Award are:
Applied Engineering and Technology Faculty Award for the Bachelor of Science Degree
Electrical Engineering Technology Faculty Award
Graphic Communications Technology Faculty Award
Industrial Technology Faculty Award
Technology Education Faculty Award

Student Achievements
The Department has many outstanding students. During this past year, over 100 students in the Department were on the Deans List, with nearly 40 of those receiving highest honors. Also, a number of Applied Engineering and Technology students participate in the Honors Program at the University. Current students and alumni have excelled in many areas. Examples are provided in the descriptions of programs below.

Annual Spring Technology Conference
Prospective students are encouraged to attend the Department's Annual Spring Technology Conference. The conference provides excellent opportunities to tour facilities, observe dynamic laboratory activities and interact with faculty and students.

Parents, teachers, administrators, guidance counselors and friends are cordially invited to attend this very special conference, which is typically held in March or April.

For additional information concerning the Annual Spring Technology Conference, please call 724-938-4085, email the Department Chair: *komacek@cup.edu*, or check the Department home page at *www. aet.cup.edu/springconf.*

Student Clubs & Organizations
The Department offers several student clubs. Student clubs and their members have attended conferences across the country, conducted industrial field trips, completed service projects for the University and community and offered social events for students. Students are encouraged to participate in the clubs to develop the cooperation, management and leadership skills that employers seek today for the team approach used in industry and education.

Student clubs in the Department include:

Electrical Engineering Technology Club
National Association of Industrial Technology
Screen Printing Student Association
Student Chapter of the Pittsburgh Club of Printing House Craftsmen
Technology Education Association of California

Details of club activities are included in the descriptions of each program below.

Espilon Pi Tau Honorary - Students in the department who meet academic eligibility requirements will be invited to join Epsilon Pi Tau, the International Honorary Association for Professionals in Technology. Epsilon Pi Tau serves members in more than 84 countries of the world who practice technology as executives in business and industry, as technicians and engineers, as teachers serving in elementary through high school, and as students, instructors and professors in two- and four-year colleges and universities.

Distance Learning & Video Conferencing Capabilities
Coover Hall houses a Distance Learning classroom, which includes a VTel© video teleconferencing unit, an Elmo© projection system, an InFocus© computer/video projector and an electronic whiteboard. The video teleconferencing capabilities are being used to deliver distance education courses. The Multimedia Technology graduate program offered by the Department is delivered to the Cal U Southpointe Center and Regional Enterprise Tower in downtown Pittsburgh.

The equipment is also used for virtual tours, video teleconferences, Student Teaching demonstrations and Early Field Experience observations. During the 2000 Spring Technology Conference, a group of students from Seaholm High School in Michigan gave a demonstration of their automation/robotics class project to conference attendees at Cal U.

Tech Prep Program
The Department is involved in the Cal U Tech Prep Program, an outreach initiative focused on helping high school students prepare for and achieve associate and baccalaureate degrees in fields related to technology, business and computer science.

The Cal U Tech Prep Program helps local school districts develop curriculum materials, provides cross-curricular inservice for teachers and helps promote articulation agreements between high schools and the University.

Applied Engineering and Technology Bachelor Degrees
The Department offers four Bachelor degrees: Electrical Engineering Technology, Graphic Communications Technology, Industrial Technology and Technology Education.

Bachelor degrees in Applied Engineering and Technology combine a general education program that emphasizes quantitative and communication skills with technical and managerial courses, which enables graduates to enter the workforce in a variety of technical, supervisory and professional positions. Most courses offered in the department are laboratory-based and employ a hands-on/minds-on approach where students learn through practical, problem-solving applications.

Graphic Communications Technology, Industrial Technology and Technology Education require the completion of 128 credits. Electrical Engineering Technology requires 133 credits.

Electrical Engineering Technology
Bachelor of Science Degree in Electrical Engineering Technology (133 credits)

Electrical Engineering Technology is a blend of hands-on and minds-on learning activities focused on solving problems using concepts from science, mathematics, computer science, engineering and technology. Emphasis is placed on applications of current technology to meet the needs of industrial and commercial enterprises employing electrical and electronic systems. The Electrical Engineering Technology program provides students with the knowledge required to design, develop, modify, maintain and repair sophisticated electrical and electronic systems.

The program provides students with a comprehensive understanding of the current engineering technology available to solve many of the technical problems confronting business, industry and government. The necessary background in math, physics and computer science is provided so that meaningful mathematical modeling can be applied.

Computer/microprocessor interfacing and programming are used extensively to demonstrate flexibility and simplicity in instrumentation design, communication, digital signal processing and controls.

Classical linear systems are presented to provide the student with an understanding of linear active filters, transient analysis, transducer interfacing, linearization, instrumentation, communications and systems control.

Students are required to independently design microprocessor/microcontroller systems that can be interfaced to the analog world.

Career Objectives & Outlook
Employment opportunities for Electrical Engineering Technology graduates are diverse and plentiful. Graduates find challenging positions as engineers, electronic designers, software developers and programmers, network technicians, instrumentation designers, systems technicians, administrators, field representatives and sales representatives. Other graduates pursue advanced degrees in Master's and Doctoral programs.

Graduates of the program have been experiencing an excellent job market in recent years. During the past three years, the program has experienced a 100% placement rate with graduates receiving engineering and technician positions with starting salaries from $32,500 to over $46,000.

Lab Facilities for Electrical Engineering Technology
The Electrical Engineering Technology labs are in the new Eberly Science and Technology Center. The *Digital Electronics Lab* and *Electrical Engineering Technology Lab* are well-equipped with new Windows NT© network computers with Internet access and an ample supply of oscilloscopes, digital trainers, multimeters, power equipment, electronic test kits, bread boarding kits and computer networking systems.

Admission Information
Admission to the program is open to entering freshmen, transfer students or two-year associate degree graduates of equivalent programs. Associate degree graduates will enter with an upper class standing. Students should have a strong background in electricity/electronics and mathematics and an interest in engineering and technology.

Students with an educational background in a field related to Electrical Engineering Technology who apply for admission to the program will be evaluated on an individual basis.

Articulation Agreements
Cal U has articulation agreements with Associate Degree programs in Electrical Engineering Technology with Butler County Community College, Community College of Allegheny County-South Campus, Harrisburg Area Community College and Westmoreland County Community College.

Electrical Engineering Technology Student Club
The EET Club usually organizes one industrial tour each year. In 1999, the club toured the Sony Pittsburgh Technology Center in New Stanton, PA. The students also participated in the Cal U Discovery Days and the Applied Engineering and Technology Spring Technology Conference by conducting experiments and giving demonstrations. At the 2000 Spring Technology Conference, the students conducted biomedical experiments with EKG amplifiers and digital signal processing equipment.

Electrical Engineering Technology Internships
Students are encouraged to complete an internship as part of their degree requirements. Students work in an organization related to their employment goals where they receive practical experiences in applying what they have learned at the University. Internship credits may be applied to the degree as program electives using course EET 495 Electrical Engineering Technology Internship.

Curriculum
The Electrical Engineering Technology program provides students with a comprehensive understanding of the current engineering

technology available to solve many of the technical problems confronting business, industry and government. The necessary background in mathematics, physics and computer science is provided so that meaningful mathematical modeling can be introduced and applied.

In the required EET courses, students develop fundamental technical knowledge and skills in the areas of DC circuits, AC circuits, digital electronics, electrical power, microprocessors, network analysis and instrumentation design. In the elective EET courses, students have the opportunity to develop advanced competencies in RF communication, computer networking, automatic control systems, digital signal processing and biomedical engineering. As part of their EET electives, students are encouraged to complete an internship where they can apply in an industrial or commercial setting what they learned in the classroom and labs.

Requirements

Bachelor of Science in Electrical Engineering Technology - 133 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48.

Students in this major should complete:
MAT 181 College Algebra to satisfy the Mathematics Goal.
CHE 101 General Chemistry I AND PHY 101 College Physics I to satisfy the Natural Science Goal.
ECO 100 Elements of Economics to satisfy part of the Social Science Goal.
CSC 120 Problem Solving and Programming Constructs AND ENG 217 Scientific & Technical Writing to satisfy the Technological Literacy Goal.
If these courses are not completed as part of the student's general education, he or she should complete them within the Elective category.

Major (81 credits)

Required Courses

CSC 223 C Programming	3 crs.
EET 110 DC Circuits	4 crs.
EET 160 AC Circuits	4 crs.
EET 170 Digital Electronics Design	3 crs.
EET 210 Linear Electronics I	4 crs.
EET 220 Introduction to Electric Power	4 crs.
EET 260 Linear Electronics II	4 crs.
EET 270 Introduction to Microprocessor Design	3 crs.
EET 310 Methods in Engineering Analysis	4 crs.
EET 320 Network Analysis	4 crs.
EET 335 Microprocessor Interfacing	4 crs.
EET 360 Microprocessor Engineering	4 crs.
EET 370 Instrumentation Design I	4 crs.
GET 101 Introduction to Engineering Technology	3 crs.
MAT 191 College Trigonometry	3 crs.
MAT 281 Calculus I	3 crs.
MAT 282 Calculus II	3 crs.
PHY 202 College Physics II	4 crs.

EET Electives (12 credits)
Select courses from the following list:

EET 400 Senior Project Proposal	1 cr.
EET 410 Automatic Control Systems	4 crs.
EET 420 Instrumentation Design II	4 crs.
EET 430 RF Communications	4 crs.
EET 440 Computer Networking	4 crs.
EET 450 Senior Project	3 crs.
EET 460 Digital Signal Processing	4 crs.
EET 475 Biomedical Engineering Technology	4 crs.
EET 495 Electrical Engineering Technology Internship	Variable crs.

Technical Electives (3 credits)
Select courses from the following list:
Any Electrical Enginnering Technology (EET) at the 400-level
CHE 102 General Chemistry II
Any Computer Science (CSC) course numbered 202 or above
Any Industrial Technology (ITE) course
Any Mathematics (MAT) numbered 272
Any Physics (PHY) course numbered 221 or above

Graphic Communications Technology

Each day, millions of people read newspapers, books, magazines, cereal boxes and the cover of their favorite audio CDs. They also surf the net, view web pages, wear printed T-shirts, read billboards, receive printed advertisements in the mail and purchase products in printed packaging. All of these things have one thing in common—Graphic Communications Technology. Graphic communications technology is one of the largest industries in the U.S. economy, yet it remains relatively unknown to most Americans.

Graphic communications technology is the field that involves all of the people, equipment, materials and processes involved in designing, preparing and reproducing visual images, such as artworks, words, photographs and symbols in printed form on physical media; such as paper, plastic, metal or textiles and in electronic form for the World Wide Web and other multimedia presentations.

Career Objectives

The graphic communications industry is large and diverse and employs over one million people. This large and ever-changing industry is experiencing a wave of technological advances, which has meant new skills, new job opportunities and new challenges for graphic communication professionals.

The program prepares graduates to work in supervision, production and technician positions in printing and publishing industries. Students have the opportunity to develop technical skills in the printing processes of offset lithography, flexography, screenprinting and gravure, while developing management and supervision competencies.

Career Outlook

The future for people involved in graphic communications is bright. The size and tremendous diversity of the industry provides a wide variety of career opportunities for men and women of all interests, talents and educational levels. With annual sales in excess of $124 billion, the United States produces more print and related works than any other country.

Currently, there are more jobs— by one estimate as many as 35,000 to 50,000 at all levels of the printing and publishing industry—than there are people to fill those jobs. Experts predict a continuation of the labor shortage in the industry since many young people are simply unaware of this exciting and job-rich industry. Graphic communications is one of the top 10 major manufacturing industries.

According to the Printing Industries of America, Pennsylvania alone has nearly 2,500 printing establishments employing 60,000 and generating $8 billion in sales. Nationally, there are more than 51,000 printing establishments employing more than one-million people.

Graphic communications careers are available in the areas of design, production, technical and customer service. Bachelor degree graduates of Graphic Communications Technology develop the knowledge and skills required to achieve supervisor and management level positions in these areas.

Designers create visual images. They have an artistic background and, increasingly, use advanced computer software to enhance their image creation and editing skills. Salaries for graphic artists/ designers and digital illustrators average between $35,000 and $45,000. Art directors, who generally have extensive experience in supervising multiple projects, earn $45,000 to $60,000.

Production jobs are available in prepress, press and finishing. Prepress encompasses everything done to get a job ready for printing, including page layout, typography, placing photos and graphic images, assembling finished pages, proofing for color quality, creating multi-page signatures and producing printing plates. Successful prepress professionals are skilled in layout, design, color management, estimating, cost analysis and computer software and desktop publishing. Digital prepress supervisors earn an average of $49,000. Pressroom professionals print quantities of the final product. Pressroom work involves operating offset, screenprinting, flexography or gravure printing presses. Pressroom supervisors earn an average base salary of over $42,000. Finishing (also called binding or bindery) processes include trimming, cutting, folding, collating, assembling, binding, gluing, packaging and wrapping of the final printed products. Finishing workers earn over $25,000 with supervisors typically earn $35,000 to $39,000.

Technicians are skilled professionals who specialize in technologically sophisticated jobs that support design and production. Desktop publishing specialists and scanner operators, who earn $25,000 to $42,000, respectively, are two examples. Other technicians specialize in substrates, inks and technical service.

Prepress and technician-level jobs have experienced significant technological changes in recent years. Professionals in these fields should expect to be re-trained frequently as technological advances will continue to be implemented.

Customer service professionals, such as estimators, schedulers and sales people, must understand customers' needs and convey them effectively to prepress, production and finishing operations. Customer service professionals must have people skills and an understanding of the technical requirements of prepress, production and finishing. Average annual earnings for estimators, schedulers and salespeople are $33,600, $39,317 and $60,000. Customer service managers, particularly in sales, can earn up to $75,000.

Career outlook information presented here was compiled from several sources, including the Graphic Arts Technical Foundation (*www.gatf.org*), the Printing Industries of America (*www.printing.org*) and the Graphic Comm Central web site (*www.teched.vt.edu/gcc*).

Cal U Advantage
Graduates of the Cal U Graphic Communications Technology program have found positions in print production, customer service, graphic design, printing sales, digital prepress, quality control, estimating, scheduling, finishing and binding, print buying, World Wide Web publishing, product design, marketing, equipment sales and technical service. Opportunities are available with advertising agencies, publishers, commercial printers, manufacturers of equipment and graphic communications suppliers, as well as graphic communications electronic equipment and control systems.

Positions in design, digital prepress, pressroom supervision, production management, customer service, technical service, commercial sales and marketing continue to top the list of human resource needs in the printing production market.

Average starting salaries for graduates with a Bachelor of Science Degree in Graphic Communications Technology from Cal U range from $25,000 to $32,000. The program has a 92% placement rate in recent years.

Lab Facilities for Graphic Communications Technology
The Graphic Communications Technology labs are well equipped to simulate real world printing and publishing situations.

Scanning, page layout and image manipulation are performed in the *Digital Prepress Lab*, which features 21 Macintosh© G4 400 MHz computers with DVD ROMs, Internal Zip Drives and 17-inch Color Sync monitors. Quark XPress© and Adobe Photoshop© are the primary software packages used for graphic design, digital image editing, page layout and desktop publishing. Color proofs are generated via ink jet, dye-sublimation or wax thermal devices prior to film output. Also available are flatbed and negative scanners, CD burners and laser printers.

Graphics students also use the new state-of-the-art *Multimedia Technology Lab*, which has Macintosh© and Windows© computers where students can design, create and publish images for print media, video and interactive multimedia presentations, including web pages.

A multi-purpose *Screen Printing and Flexography Lab* provides hands-on experiences in all aspects of those two printing processes from image design and pre-press assembly to printing and finishing. Student projects include posters, decals, textile prints, labels and process color printing on a variety of materials incorporating a variety of ink systems. Specialized equipment includes: six flatbed semi-automatic screen printing presses, textile dryer, three-color flexography press, sheet photopolymer platemaker, vertical process camera, automatic film processor and darkroom.

The *Advanced Graphics Lab* and *Pressroom* support offset lithographic printing from beginning level to advanced and include all aspects of product development from pre-press to finishing and binding. Student projects include 8-page pamphlets, brochures, posters and multi-signature booklets. Equipment available includes three offset duplicators, film contacting and exposing printing plates, two process cameras and a fully automated true two-color 20-inch Eagle offset press.

The *Photography Darkroom* includes 12 enlargers for black and white as well as color photography. An automated processor is available for color prints. Single lens reflex and digital photography techniques are taught. A *Photography Studio* is available for student use.

Calibrations
Students in Graphic Communications Technology have the opportunity to contribute to *Calibrations,* a literary arts magazine published by students and faculty in graphics, art and English.

Graphics students design and layout *Calibrations* as well as contribute photographs, graphic prints and digital images.

Annual Big Print Week
Students are invited to compete in the Annual Big Print Week photographic exhibition and competition each spring. Black and white photographs are printed on 20-inch x 24-inch paper in the *Photography Darkroom* and displayed in the Natali Student Center for judging and cash awards.

Scholarships
Several Graphic Communications Technology students received scholarship awards from national and local associations such as the Print and Graphics Scholarship Foundation, the Foundation of Flexographic Technical Association, the Pittsburgh Club of Printing House Craftsmen, and the International Printing Management Association. Two local scholarships are available for Graphic Communications Technology majors; the Kurt Nordstrom Memorial Scholarship and the Kenny Hager Memorial Scholarship.

The Pittsburgh Club of Printing House Craftsmen provides awards to help club members succeed academically while strengthening membership as graphic communications professionals.
The Kenny Hager Memorial Scholarship ($1000) is presented annually to a Graphic Communications Technology major at Cal U. The Hager Family established the scholarship as a memorial.
The Kurt Nordstrom Memorial Scholarship ($1000) is presented annually to a Graphic Communications Technology major at California University. The scholarship was established as a memorial by the Nordstrom Family.

Graphic Communications Technology Student Clubs
Students in Graphic Communications Technology are encouraged to join two clubs; the Student Club of Printing House Craftsmen and the Screen Printing Student Association. Both clubs are dedicated to the technical and educational enhancement of its members. Club members participate in tours of commercial printing facilities, attend conferences and develop technical skills. Most tours are conducted in the greater Pittsburgh region, but trips have been made to Eastern Pennsylvania, Maryland and Virginia. Students attend international conventions, such as the Graph EXPO in Chicago, where they can make connections with representatives of the printing and publishing industry. Students in both clubs enhance their technical skills and perform service to the University and local community by printing T-shirts, newsletters, invitations and graphics products.

The Craftsmen Club is affiliated with the Pittsburgh Club of Printing House Craftsmen and student members attend their monthly meetings where they are treated to dinner and a guest speaker or tour of a local printing facility.

Curriculum
The Graphic Communications Technology program provides students with an understanding of graphic communications concepts applicable to a variety of positions in the industry. In addition, it provides students with a broad understanding of business management principles, analytical/verbal skills, computer applications and a firm general education background.

A unique opportunity in this program is the Graphic Communications Internship whereby students may spend a junior or senior semester or a summer working in an industrial or commercial setting. Students experience how various jobs are produced and how problems are solved in a work situation. In addition, the employer has an opportunity to observe students as prospective employees.

Bachelor of Science Degree: Graphic Communications Technology—128 crs.

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).
Students in this major should complete:
MAT 181 College Algebra to satisfy the Mathematics Goal.
CHE 101 General Chemistry I to satisfy part of the Natural Science Goal.
CSC 101 Microcomputer and Application Software to satisfy part of the Technological Literacy Goal.
If these courses are not completed as part of the student's general education, he or she should complete them within the Elective category.

Major (63 credits)

Required Courses

GCT 100 Graphic Communication Processes I	3 crs.
GCT 110 Screen Printing Techniques	3 crs.
GCT 200 Graphic Communications Processes II	3 crs.
GCT 220 Black and White Photography	3 crs.
GCT 225 Principles of Layout and Design	3 crs.
GCT 240 Desktop Publishing	3 crs.
GCT 270 Lithographic Techniques	3 crs.
GCT 300 Digital Photography (course approval pending)	3 crs.
GCT 330 Flexography & Package Printing	3 crs.
GCT 342 Estimating and Cost Analysis	3 crs.
GCT 365 Color Imaging	3 crs.
GCT 445 Printing Production Planning and Control	3 crs.
GCT 485 Graphics Seminar	3 crs.
GCT 495 Graphic Communications Technology Internship	3 crs.
MGT 201 Principles of Management	3 crs.
MKT 222 Principles of Selling	3 crs.

GCT Electives (9 credits)
Select courses from the following list:

GCT 210 Advanced Screen Printing Techniques	3 crs.
GCT 230 Color Photography	3 crs.
GCT 370 Advanced Lithographic Techniques	3 crs.
GCT 380 Advanced Flexographic Techniques	3 crs.
GCT 390 Gravure Printing	3 crs.
GCT 460 Substrates and Inks	3 crs.
MMT 310 Digital Portfolio	3 crs.

Management Electives (6 credits)
Select courses from the following list:

ACC 201 Accounting I	3 crs.
ECO 201 Introduction to Microeconomics	3 crs.
ITE 375 Principles of Production	3 crs.
ITE 445 Quality Control	3 crs.
MGT 352 Human Resource Management	3 crs.
MGT 362 Labor Relations	3 crs.
MKT 301 Principles of Marketing	3 crs.

Electives (11-14 credits)

Bachelor of Science Degree in Industrial Technology

Industrial Technology is a field of study designed to prepare technical and technical management professionals for employment in business, industry and government. The career focus for graduates of the Industrial Technology program is on industrial supervision. The National Association of Industrial Technology has determined that certification as an Industrial Technologist requires an educational background in production/operations management, quality control, safety management and production and inventory control. The Industrial Technology program at Cal U includes experiences in these areas plust cost analysis, manufacturing operations, project management and computer integrated manufacturing. Additionally, students have the opportunity to specialize in one of several areas: computer numerical control, automation, electronics, and drafting and design. Additionally, students develop advanced technical skills in computer numerical control, automation/robotics, electronics, drafting and design, CAD, solid modeling, microprocessors and industrial management.

Career Outlook
Opportunities for employment in the field of Industrial Technology are diverse. Graduates find challenging job placements in all geographical areas of the United State as CAD operators, drafters, designers, engineering technicians, production supervisors, purchasing agents, industrial researchers, safety managers, manufacturing technicians, systems analysts, quality control engineers, CNC machine programmers, robotic technicians, industrial trainers and sales representatives. The program has a 94% placement rate with average starting salaries of over $30,000.

The average annual wage rates for industrial technology positions in Southwestern Pennsylvania are over $58,000 per year. The Southwestern Pennsylvania Industrial Resource Center estimates that there are more than 4,100 industrial firms in the region that account for more than 196,000 manufacturing jobs. Pittsburgh was rated the top location in the country for two years in a row for factory automation equipment and service jobs. A recent national study of manufacturing executives found that management level positions are expected to increase by 19 to 36 percent.

Lab Facilities for Industrial Technology
The facilities generally available to majors in Industrial Technology include: Materials Testing Laboratory, Machine Laboratory with a Foundry, Automated Manufacturing Center, Metrology Lab, Digital Electronics Lab, CAD/Drafting Labs.

Two *CAD/Drafting Labs* feature networked PCs with Internet access, AutoCAD2000©, Mechanical Desktop©, Architectural Desktop©, CADKEY 97© SolidWorks©, CATIA© for engineering design and solid modeling and ANSYS© finite element analysis software. Large format mechanical drafting machines are also available. Drawings are produced with HP LaserJet© printers and Draftmaster© pen plotters.

The *Automated Manufacturing Center* in the Eberly Center has a new HAAS© VF-O CNC vertical machining center, a DAEWOO LYNX 200© turning center, a Denford© CNC milling machine, a HAAS CNC simulator and MasterCAM© computer-aided manufacturing software. The Center also includes tabletop Scorbot© robots, Amatrol© servo-control robots, PLCs, automated materials handling conveyors, vision systems, voice recognition control systems and a.

Computer Labs in the Eberly Center contain several software packages that support various Industrial Technology courses in production analysis, quality control, cost estimating and project management.

National Association of Industrial Technology Student Club
Industrial Technology students are encouraged to join the National Association of Industrial Technology Student Club. The club provides opportunities for students to enhance their technical skills and professional knowledge. Club members participate in tours of industrial facilities, attend conferences and develop technical skills through service projects.

Curriculum
The Industrial Technology Program provides students with experiences in industrial and manufacturing processes that will help them understand problems they may face in an industrial environment. Basic concepts are studied in technical foundation courses such as technical drawing, electronics, automation/ robotics, machining, statics and strength of materials and industrial safety.

Advanced technology in CADD, automation/robotics, programmable logic controllers (PLCs), computer numerical control (CNC) and computer-integrated manufacturing provide a capstone of computer-assisted techniques used by modern industry to increase quality and productivity.

The foundational and advanced technological background is coupled with industrial managerial courses in project management, production analysis, cost estimating and inventory control to prepare Industrial Technology students for many attractive professional job opportunities in a variety of industrial enterprises.

An important opportunity in this program is the internship. Students may spend a semester or a summer working in an industrial setting. An internship broadens the student's education, offering experience in day-to-day operations of a manufacturing facility. Students observe how products are produced and how problems are solved. In addition, the employer has an opportunity to observe students as prospective employees.

Bachelor of Science in Industrial Technology—128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).
Students in this major should complete:
MAT 191 College Trigonometry to satisfy the Mathematics Goal.
CHE 101 General Chemistry I AND PHY 121 General Physics I to satisfy the Natural Science Goal.
Any Computer Science (CSC) course from the menu to satisfy part of the Technological Literacy Goal.
If these courses are not completed as part of the student's general education, he or she should complete them within the Elective category.

Major (63 credits)

Required Courses

IND 110 Technical Drawing I	3 crs.
IND 130 Introductory Circuit Analysis	3 crs.
IND 135 Digital Electronics	3 crs.

IND 165 Machine Processing I	3 crs.
IND 215 CAD I	3 crs.
ITE 101 Industrial Safety	3 crs.
ITE 181 Materials Technology I	3 crs.
ITE 325 Statics and Strength of Materials	3 crs.
ITE 375 Principles of Production	3 crs.
ITE 385 Industrial Cost Estimating	3 crs.
ITE 420 Production Analysis	3 crs.
ITE 445 Quality Control	3 crs.
ITE 460 Principles of Manufacturing	3 crs.
ITE 461 Manufacturing Production and Inventory Control	3 crs.
ITE 471 Project Management	3 crs.
ITE 475 Computer Integrated Manufacturing	3 crs.
ITE 481 Concepts and Issues in Industrial Technology	3 crs.
MTE 236 Numerical Control Programming I	3 crs.
MTE 250 Introduction to Automation	3 crs.

ITE Technical Electives (6 credits)
Select courses from the following list:

ACC 201 Accounting I	3 crs.
ACC 202 Accounting II	3 crs.
ACC 331 Cost Accounting I	3 crs.
ACC 332 Cost Accounting II	3 crs.
ECO 202 Introductory Macroeconomics	3 crs.
ECO 301 Intermediate Microeconomics	3 crs.
ECO 302 Intermediate Macroeconomics	3 crs.
EET 160 AC Circuits	4 crs.
EET 170 Digital Electronics Design	4 crs.
EET 220 Introduction to Electric Power	4 crs.
EET 270 Introduction to Microprocessor Design	3 crs.
EET 335 Microprocessor Interfacing	4 crs.
EET 360 Microprocessor Engineering	4 crs.
FIN 301 Financial Management	3 crs.
IND 210 Technical Drawing II	3 crs.
IND 230 Introduction to Linear Electronics	3 crs.
IND 235 Introduction to Microprocessors	3 crs.
IND 265 Machine Processes II	3 crs.
IND 278 Plastics Technology	3 crs.
IND 310 Technical Drawing III	3 crs.
IND 315 CAD II	3 crs.
IND 320 Architectural Drafting & Design	3 crs.
IND 335 Advanced Microprocessors	3 crs.
IND 355 Wood Technology	3 crs.
IND 270 Hydraulic/Pneumatic Fluid Power	3 crs.
IND 415 CAD III	3 crs.
IND 416 Introduction to Solid Modeling & Finite Elements	3 crs.
ITE 301 Industrial Safety Evaluation & Government Agencies	3 crs.
ITE 311 Industrial Ergonomics	3 crs.
ITE 460 Principles of Manufacturing	3 crs.
MAT 225 Business Statistics	3 crs.
MAT 273 Basic Calculus	3 crs.
MTE 265 Programmable Control Systems	3 crs.
MTE 268 Automated Support Systems	3 crs.
MTE 336 Numerical Control Programming II	3 crs.
MTE 337 COMPACT II	3 crs.
MTE 338 APT	3 crs.
MTE 350 Robotic Systems	3 crs.
MTE 437 Advanced COMPACT II	3 crs.
MTE 438 Advanced APT	3 crs.
MTE 450 Applications of Industrial Automation	3 crs.

MTE 495 Manufacturing Technology Internship (1-6 credits)

Electives (12 credits)

General Education Course (3 credits)
Elective (3 credits)

Technology Education

Internationally Recognized Program Excellence
The Technology Education program at Cal U has an established international reputation for excellence. In 1998, the program was one of the first four programs to ever receive the *Outstanding Technology Teacher Education Program Award* from the International Technology Education Association's Council on Technology Teacher Education. The award is presented annually to programs demonstrating outstanding standards for technology teacher education.

The U.S. Department of Education designated the program as one of seven *National Technology Education Demonstration Centers*. Cal U's demonstration center was conducted as part of the Appalachian Technology Education Consortium Project, which involved more than three dozen school districts in southwestern Pennsylvania and northern West Virginia.

In 2000, the program was selected by the Pennsylvania Department of Education to conduct the first-ever *Governor's Institute for Technology Education*. The Technology Education faculty will conduct the Institute, which is designed to enhance the technological and pedagocial skills of technology educators from across the state.

Accreditation
The Technology Education program was one of the first in the nation to be accredited by the National Council for the Accreditation of Teacher Education (NCATE), and the International Technology Education Association's (ITEA) Council on Technology Teacher Education (CTTE). Also, the program is accredited by the Pennsylvania Department of Education (PDE)

Graduates of the program have a high success rate in passing the Praxis Series Examinations (the National Teachers Exam), which are required for a teaching certificate in Pennsylvania and many other states.

Cal U has one of the largest Technology Education programs in the country, with over 290 current majors. Still, classes are small with maximum class sizes of 20 to 24 students, which means students receive individual attention from professors.

Over the 60 years that the University has been preparing teachers of technology, nearly 3,000 people have received their degrees. During that period, the program has produced many outstanding graduates who have established leadership positions within education and the corporate world. The program is challenging, yet rewarding.

Career Outlook
Currently, there is a *significant shortage* of Technology Education teachers within Pennsylvania and throughout the nation, which has resulted in the program having excellent placement rates. Cal U Career Services reports more than six openings per graduate during the past year. Since 1992, every Cal U Technology Education graduate who sought a teaching position was employed. Most graduates report receiving multiple offers. The shortage of teachers is projected to continue for the next six to ten years.

Teacher's salaries have increased dramatically during recent years. The average annual teacher salary in Pennsylvania is over $46,000 and top salaries are over $80,000. The average starting salary of the 1999 Technology Education graduates from Cal U was over $35,800 with a top starting salary of $42,000.

The practical, hands-on nature of Technology Education creates opportunities for Technology Education teachers to qualify for summer employment within business and industry. Such occasions provide teachers an excellent opportunity for continued professional development and additional income.

A degree in Technology Education provides students with several career options. Most graduates teach on the elementary, middle or secondary school levels, but many attend graduate school and eventually teach at the college or university level. The current directory of the *National Association of Industrial Technology & Council on Technology Teacher Education* lists *more than two dozen graduates of the program* as college professors across the country. Many other graduates distinguish themselves in industrial and government positions. Some graduates own and operate their own successful businesses.

Technology Education Student Club
The Technology Education Association of California (TEAC) student club is an affiliate of the Technology Education Collegiate Association (TECA), an international organization. Annually, the club attends the Eastern Regional TECA Conference in Virginia Beach and the International TECA Conference.

During the past two years, TEAC members have won competition championships at International TECA conferences. In 2001, TEAC members traveled to Atlanta, Georgia where they were the first team ever to place in every TECA competition!

TEAC members also attend the state Technology Education conference, complete community service projects, conduct field trips and produce a float for the Cal U Homecoming Parade.

Technology Education Scholarships
Three scholarships are available, the Donald Maley Technology Education Scholarship, the Technology Education Association of Pennsylvania William J. Wilkinson Scholarship and the TSA (Technology Student Association) Scholarship. All are one-time scholarships for entering students. For a Maley Scholarship application, send email to *komacek@cup.edu.* For the Wilkinson Scholarship, visit *www.teap-online.org*

Curriculum
Technology Education majors are required to complete a series of laboratory classes related to the technological systems of communication, construction, manufacturing and transportation. In these laboratory courses, students develop skills in the safet and appropriate use of tools, materials and processes as they design, produce, use and evaluate technological systems. Technology Education includes the study of selected technological systems that explore the solutions of technological problems and their associated social and environmental impacts.

Computer applications using current software and support devices are emphasized. Students interact extensively with the universal systems model. Once equipped with an extensive understanding of the four technological systems and the universal systems model, students have the opportunity to evaluate the social, cultural, economic and environmental impacts of technology.

The four primary systems that make up the Technology Education Curriculum includes: Communication, Construction, Manufacturing and Transportation.

Communication Systems include the study of the technical methods by which humans communicate. These systems include experiences in such areas as drafting, design, computer-aided drafting and design, digital photography, multimedia, graphic communications, electronic communications, World Wide Web publishing, Internet applications, computer networking, video production and desktop publishing.

Construction Systems include the study of combining resources into structures such as houses, factories, roads, dams and stadiums. To understand construction technology, materials, processes, engineering principles, and impacts related to construction are examined.

Manufacturing Systems include the study of methods by which people design, produce, use and assess goods and products. This system includes courses that provide an understanding of fabricating, forming, combining and testing materials such as composites, wood, metals, plastics and ceramics. Also included is the use of computer-aided manufacturing, automation/robotics and an enterprise approach to manufacturing technology.

Transportation Systems include the study of how people, products and materials are transported from one place to another. Students study various transportation systems within the four natural environments: land, marine, air and space. They also experience activities that reflect an operational knowledge of the subsystems common to most transportation systems including: structures, propulsion, guidance, control, suspension and support.

Bachelor of Science in Education: Certification in Technology Education for Grades K-12—134 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).
Students in this major should complete:
*MAT 181 College Algebra to satisfy the Mathematics Goal.
CHE 101 General Chemistry I AND *PHY 121 General Physics I to complete the Natural Science Goal.
*TED 315 Construction Systems and *TED 325 MANUFACTURING SYSTEMS to satisfy the Technological Literacy Goal.
If these courses are not completed as part of the student's general education, he or she should complete them within the Elective category.

Professional Education (26 credits)

EDF 290 Policy Studies in American Education	3 crs.*
EDS 465 Developmental Reading in the Secondary School	2 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.*
EDU 340 Mainstreaming Exceptional Learners	3 crs.*
PSY 208 Educational Psychology	3 crs.*
TED 461 Student Teaching - Technology Education	12 crs.

Technological Systems (63 credits)

HPE 314 First Aid & Personal Safety	3 crs.
ITE 110 Technical Drawing I	3 crs.*
ITE 130 Introductory Circuit Analysis	3 crs.
ITE 135 Digital Electronics	3 crs.

ITE 215 Computer Aided Drafting I	3 crs.
MAT 191 College Trigonometry	3 crs.
MTE 250 Introduction to Automation	3 crs.
PSY 100 General Psychology	3 crs.
TED 100 Introduction to Technology Education	3 crs.*
TED 111 Communication Systems	3 crs.*
TED 125 Material Processing I	3 crs.*
TED 225 Material Processing II	3 crs.*
TED 325 Manufacturing Systems	3 crs.*
TED 335 Transporation Systems	3 crs.*
TED 425 Manufacturing Enterprise	3 crs.*
TED 435 Transportation Research & Development	3 crs.
TED 450 Teaching Technology in the Secondary School(W)	3 crs.*
TED 500 Teaching Technology in the Elem School(W)	3 crs.*

Technical Electives (Choose 6 credits from the following)

GCT 110 Screen Printing Techniques	3 crs.
GCT 200 Graphic Communication Processes II	3 crs.
GCT 220 Black & White Photography	3 crs.
GCT 225 Principles of Layout and Design	3 crs.
GCT 240 Electronic Desktop Publishing	3 crs.
ITE 104 Drawing and Design	3 crs.
ITE 165 Machine Processesing I	3 crs.
ITE 181 Materials Technology I	3 crs.
ITE 184 Energy and Power Systems	3 crs.
ITE 210 Technical Drawing II	3 crs.
ITE 230 Introduction to Linear Electronics	3 crs.
ITE 235 Introduction to Microprocessors	3 crs.
ITE 236 Numerial Control Programming I	3 crs.
ITE 267 Programmable Control Systems	3 crs.
ITE 268 Automated Support Systems	3 crs.
ITE 270 Hydraulic/Pneumatic Fluid Power	3 crs.
ITE 278 Plastics Technology	3 crs.
ITE 282 Small Gasoline Engines	3 crs.
ITE 315 Computer Aided Drafting II	3 crs.
ITE 320 Architectural Drafting and Design	3 crs.
ITE 345 Construction Processes I	3 crs.
ITE 350 Robotics Systems	3 crs.
ITE 355 Wood Technology	3 crs.
ITE 181 Materials Technology I	3 crs.
TED 310 Studies in Communication	1-3 crs.
TED 330 Studies in Transportation	1-3 crs.
TED 340 Studies in Construction	1-3 crs.
TED 350 Studies in Manufacturing	1-3 crs.
TED 460 Honors Study in Communication	1-3 crs.
TED 465 Honors Study in Construction	1-3 crs.
TED 475 Honors Study in Manufacturing	1-3 crs.
TED 480 Honors Study in Transportation	1-3 crs.

Construction Electives (3 credits)
Select one course from the following list:

ITE 320 Architectural Drafting and Design	3 crs.
ITE 345 Construction Processes I	3 crs.

Notes:
1. * Denotes courses required before student teaching.
2. (W) Denotes upper division writing courses.

Additional Requirements
In addition to the credit requirements of the program, students are required to complete follow College of Education and Human Services requirements in the following in order to maintain good standing in the program, student teach, graduate and secure a teaching certificate. Students should review the College of Education and Human Services section of the undergraduate catalog that relates to these requirements.

Act 34 and Act 151 Clearance Checks
Field Experience
Speech and Hearing Test
Portfolio
Pre-Professional Skills Tests
Grade Point Average
TB Tests

Graduation & Certification - To graduate, a Technology Education major must complete 134 credits, successfully complete student teaching and maintain the appropriate quality point average in the major and overall. Graduates receive a Bachelor of Science in Education degree. Graduates who pass the appropriate certification tests are eligible to apply for Instructional I Certification through the College of Education and Human Services. Technology Education teachers are certified for grades kindergarten through 12 in Pennsylvania.

Applied Engineering and Technology Associate Degrees

The Department offers four associate degrees, Automation Technology: Computer Numerical Control (CNC), Drafting Technology, Electrical Engineering Technology and Screen Printing Technology

The Associate degree requires the completion of 64-66 credits. Associate degree credits can be transferred toward the completion of a Bachelor of Science degree. The Associate degree is designed to provide graduates with the skills essential to enter the work force as skilled technical workers.

Automation Technology: Computer Numerical Control

Computer Numerical Control (CNC) of machine tools provides many productivity advantages for modern manufacturing enterprises. The proper application and management of this technology require specially trained personnel who have adequate working knowledge and skills in the methods, applications, management and programming of CNC machines.

Career Outlook
Career opportunities are excellent. There is a severe shortage of skilled programmers and operators of CNC equipment. People trained in the programming of computer numerical control machines can expect to be employed in a variety of careers, such as CNC technician, CNC operator, CNC programmer, CAD/CAM operator and manufacturing technologist. Personnel with CNC skills are needed in most geographic regions in the United States.

Laboratory Facilities for CNC
Cal U has an outstanding *Automated Manufacturing Center* in the Eberly Science and Technology Center. The lab includes a HAAS© VF-O CNC vertical machining center, a DAEWOO LYNX 200© turning center, a Denford© CNC milling machine and a HAAS CNC simulator. MasterCAM© computer-aided manufacturing software is used to convert CAD drawings into CNC machine code. A HAAS CNC simulator is available so students can test their programs before beginning production.

Curriculum
Students in Computer Numerical Control program will learn to write programs in the format detail of the machine tool, employing linear and circular interpolation addressing three axes. Computer programs prepared by the students are interfaced with the machine tool with post processor software. Students load programs into the

memory of a CNC lathe or mill and manufacture the part. Graduates will be experienced programmers and CNC machine operators.

The principal objective of the Computer Numerical Control Program is to provide students with sufficient skills and expertise in programming and operating computerized numerical control equipment to secure employment in the field. Upon completion of the program, the graduate is expected to be able to program, set up, and operate CNC equipment; prepare supporting documentation for machine setup and operation; and machine parts on a mill and a lathe using CNC programs they prepared.

Requirements

Associate of Science in Automation Technology: Computer Numerical Control—67 credits

General Education (25 credits)

Please consult the description of the General Education program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals.

Students in this major should complete:
Mathematics Goal: MAT 182 Technical Mathematics I
Technological Literacy Goal: CSC 120 Problem Solving and Programming Constructions
If these courses are not completed as part of the student's General Education program, he or she should complete them within the Elective category.

Program Requirements (39 credits)

ITE 165 Machine Processing I	3 crs.
ITE 236 Numerical Control Programming I	3 crs.
ITE 265 Machine Processing II	3 crs.
ITE 336 Numerical Control Programming II	3 crs.
ITE 337 Computer Programming Numerical Control Equipment (COMPACT II)	3 crs.
ITE 338 Computer Programming Numerical Control Equipment (APT)	3 crs.
ITE 437 Advanced Computer Programming Numerical Control Equipment (COMPACT II)	3 crs.
ITE 438 Advanced Computer Programming Numerical Control Equipment (APT)	3 crs.

Electives (3 credits)

Drafting and Design Technology

Drafting and design are generally considered the primary means of communicating technical ideas. They are the graphic language of industry and essential to the processes of designing, manufacturing and servicing products. The program emphasizes both manual and computer-aided drafting and design skills to meet the needs of industry.

Lab Facilities for Drafting and Design Technology
The department has two CADD/Drafting Labs. The *Dr. Jay D. Helsel CADD/Drafting Lab* in Coover Hall has 25 large format mechanical drafting machines where students develop fundamental manual drafting and design skills. The lab also has 25 Windows NT© networked PCs with 233 MHz Pentium© processors and the following software: AutoCAD2000©, Mechanical Desktop©, CADKEY 97© and ANSYS© finite element analysis.

The Eberly Science and Technology Center *CADD Lab* also features 25 Windows NT© networked PCs with 233MHz Pentium© processors. Instruction is provided in AutoCAD2000©, Mechanical Desktop©, SolidWorks©, CATIA© for engineering design and solid modeling and the ANSYS© finite elements computer programs for engineering analysis.

HP LaserJet© printers are used for A- and B-size drawings while HP Draftmaster© pen plotters can create drawings up to D-size.

Career Outlook
The need for personnel in drafting, design and CAD fields will continue to increase as society continues to grow technologically. Increasingly, industry is adding new computer hardware and software technologies to their drafting, design and engineering departments. As companies implement new drafting and CADD technologies their need for highly knowledgeable and skilled employees continues to increase. Graduates of this program will be prepared to meet the increasing employment demands.

Curriculum
The principal objective of the Drafting and Design Technology program is to provide students with sufficient skills and expertise to secure employment in drafting, design, CAD and related fields. In addition, credits earned in this degree program are applicable to the four-year Bachelor of Science Degree program in Industrial Technology.

Upon completion of the program, the graduate is expected to be able to communicate technical ideas through sketching, create technical drawings that fully describe a design idea, solve technical problems using the tools and techniques of drafting/CAD, prepare pictorial presentation drawings, write technical reports that are clear, concise, and accurate; and be highly skilled in the operation of the latest CAD software and hardware systems.

Requirements

Associate of Science in Drafting and Design Technology—67 credits

General Education (34 credits)
Please consult the description of the General Education program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals.
Students in this major should complete:
Mathematics Goal: MAT 181 College Algebra
Technological Literacy Goal: CSC 101 Microcomputers and Application Software and GCT 240 Desktop Publishing

If these courses are not completed as part of the student's General Education program, he or she should complete them within the Elective category.

Program Requirements (30 credits)

ITE 101 Industrial Safety	3 crs.
ITE 110 Technical Drawing I	3 crs.
ITE 210 Technical Drawing II	3 crs.
ITE 215 Computer Aided Drafting I	3 crs.
ITE 218 Descriptive Geometry & Surface Development	3 crs.
ITE 315 Computer Aided Drafting II	3 crs.
ITE 320 Architectural Drafting and Design	3 crs.

Electives (3 credits)

Electrical Engineering Technology Associate Degree

Program Objectives
This program provides the student with fundamental knowledge necessary to enter employment fields related to electrical engineering technology. The hands-on approach used in the laboratory courses is accompanied with a sound theoretical knowledge base. This allows potential employers to tailor the graduate's technical abilities to meet their particular needs.

Upon successful completion of this program, a graduate will have an extensive background in electrical engineering technology, including the knowledge and technical skills needed to install, maintain, calibrate and repair sophisticated electrical and electronic systems; the computer skills to solve complex problems by writing computer programs; and the communication skills to prepare and present clear, concise, accurate technical reports.

Graduates may transfer to the bachelor degree program in Electrical Engineering Technology with no loss of time or credits.

Career Objectives
Employment opportunities are diverse and plentiful. The demand for electrical engineering technicians has been on the increase. Opportunities exist in technical fields related to the installation, operation, maintenance and sale of electrical/electronic components and systems. Graduates find employment as electrical/electronic technicians, process control technicians, computer programmers, microprocessor/microcontroller circuit designers, computer network technicians, service technicians and sales representatives.

Requirements

Associate of Applied Science in Electrical Engineering Technology—69 credits

General Education (20 credits)
Please consult the description of the General Education program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals.
Students in this major should complete:
Mathematics Goal: MAT 181 College Algebra
Natural Science Goal: PHY 101 College Physics I or PHY 121 General Physics I
Technological Literacy Goal: CSC 120 or higher and ENG 217 Scientific & Technical Writing
If these courses are not completed as part of the student's General Education program, he or she should complete them within the Elective category.

Program Requirements (37 credits)

EET 110 DC Circuits	4 crs.
EET 160 AC Circuits	4 crs.
EET 170 Digital Electronics Design	4 crs.
EET 210 Linear Electronics I	4 crs.
EET 220 Introduction to Electric Power	4 crs.
EET 260 Linear Electronics II	4 crs.
EET 270 Introduction to Microprocessor Design	3 crs.
EET 335 Microprocessor Interfacing	4 crs.
MAT 191 College Trigonometry	3 crs.
MAT 281 Calculus I or MAT 273 Basic Calculus	3 crs.

Electives (3 credits)

Screen Printing Technology Associate Degree

Screen printing is a component of the rapidly growing graphic communications industry. Because of the increasing complexity of the communications industry, individuals trained in screen printing are in demand.

Four outstanding graphic laboratories, each with modern equipment, serve this program. Modern color imaging equipment, screening presses, dryers, computer stencil transfer equipment, semi-automated printing presses and other support items are available in the labs.

Career Outlook
Career opportunities are good. People trained in screen printing will find employment opportunities in most segments of the communications industry; small printing companies and large corporations with communications divisions.

Lab Facilities for Screen Printing Technology
A multi-purpose *Screen Printing and Flexography Lab* provides hands-on experiences in all aspects of those two printing processes from image design and pre-press assembly to printing and finishing. Student projects include posters, decals, textile prints, labels and process color printing on a variety of materials incorporating a variety of ink systems. Specialized equipment for screenprinting includes six flatbed semi-automatic screen printing presses, textile dryer, vertical process camera, automatic film processor and darkroom.

Student in the Screen Printing Technology program also have access to the other lab facilities used in the Graphic Communications Technology program, including the *Digital Prepress Lab* and the *Multimedia Technology Lab.* These labs house Macintosh© G4 computers with Internet access, digital image editing and desktop publishing software such as Quark XPress© and Adobe Photoshop©, color scanners, ink jet and laser printers and CD burners. An *Advanced Graphics Lab* supports offset lithographic printing from beginning level to advanced. The *Photography Darkroom* includes 12 enlargers for black and white and color photography. Automated processors are available for films and color prints. Single lens reflex and digital photography techniques are taught. A *Photography Studio* is available for student use.

Curriculum
The principal objective of the Screen Printing Technology program is to provide students with knowledge and expertise in the applications of screen printing, thus enabling them to become productive members of the graphic communications industry.

Students take a core of graphics courses that develop design and technical skills in the areas of graphic design, desktop publishing, digital editing, photography, pre-press assembly, estimating and cost analysis, screenprinting and finishing

After completing the program, the graduate will be able to formulate a plan for the production of screenprinted products consistent with the individual's career objective, produce quality screenprinting plates for given applications, screenprint quality images on various substrates in accordance with detailed specifications and assess the quality and value of screenprinted productions.

Credits earned in this associate degree program are transferable to the Bachelor of Science Degree in Graphic Communications Technology.

Requirements

Associate Degree in Screen Printing Technology—67 credits

General Education (28 credits)

Please consult the description of the General Education program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals.
Students in this major should complete:
Mathematics Goal: MAT 181 College Algebra
Technological Literacy Goal: CSC 120 Problem Solving and Programming Constructions and GCT 240 Desktop Publishing

If these courses are not completed as part of the student's General Education program, he or she should complete them within the Elective category.

Program Requirements (36 credits)

GCT 100 Graphic Communication Processes I	3 crs.
GCT 200 Graphic Communication Processes II	3 crs.
GCT 211 Screen Printing Techniques	3 crs.
GCT 220 Black and White Photography	3 crs.
GCT 225 Principles of Layout & Design	3 crs.
GCT 311 Advanced Screen Printing Techniques	3 crs.
GCT 411 Screen Printing Productions	3 crs.
GCT 342 Estimating & Cost Analysis	3 crs.
ITE 101 Industrial Safety	3 crs.

Technical Electives (9 credits)
Select courses from the following list:

GCT 230 Color Photography	3 crs.
GCT 270 Lithographic Techniques	3 crs.
GCT 330 Flexography and Package Print Processes	3 crs.
GCT 365 Color Imaging	3 crs.
ITE 110 Technical Drawing I	3 crs.
ITE 130 Introductory Circuit Analysis	3 crs.
ITE 375 Principles of Production	3 crs.

Minors

Applied Engineering and Technology offers minors in Automated Control, Computer Numerical Control, Electrical Engineering Technology, Graphic Communications Technology and Manufacturing Technology. Students majoring in business, marketing, management, communication, computer science, public relations, art and other fields may wish to pursue a minor to develop technical competencies and an understanding technological enterprises. Minors require the completion of 21 credits.

Minor In Industrial Technology—21 crs.

Automated Control Concentration—21 credits

Required Courses (12 credits)

ITE 110 Technical Drawing I	3 crs.
ITE 165 Machine Processing I	3 crs.
ITE 236 Numerical Control Programming I	3 crs.
ITE 250 Introduction to Automation	3 crs.

Elective Courses (9 credits)

ITE 460 Principles of Manufacturing	3 crs.
ITE 267 Programmable Control Systems	3 crs.
ITE 336 Numerical Control Programming II	3 crs.
ITE 350 Robotic Systems	3 crs.
ITE 495 Manufacturing Technology Internship	3 crs.

Computer Numerical Control—21 Credits

Required Courses (12 credits)

ITE 110 Technical Drawing I	3 crs.
ITE 165 Machine Processing I	3 crs.
ITE 236 Numerical Control Programming I	3 crs.
ITE 250 Introduction to Automation	3 crs.

Elective Courses (9 credits)

ITE 215 CAD I	3 crs.
ITE 265 Machine Processing II	3 crs.
ITE 460 Principles of Manufacturing	3 crs.
ITE 336 Numerical Control Programming II	3 crs.
ITE 337 CNC Programming-COMPACT	3 crs.
ITE 338 CNC Programming-APT	3 crs.
ITE 437 Advanced CNC-COMPACT	3 crs.
ITE 438 Advanced CNC-APT	3 crs.
ITE 495 Manufacturing Technology Internship	3 crs.

Manufacturing Technology Concentration—21 crs

Required Courses (15 credits)

ITE 110 Technical Drawing I	3 crs.
ITE 215 Computer Aided Drafting I	3 crs.
ITE 181 Materials Technology I	3 crs.
ITE 250 Introduction to Automation	3 crs.
ITE 101 Industrial Safety	3 crs.

Electives Courses (6 credits)

ITE 311 Industrial Ergonomics	3 crs.
ITE 375 Principles of Production	3 crs.
ITE 420 Production Analysis	3 crs.
ITE 445 Quality Control	3 crs.
ITE 495 Manufacturing Technology Internship	3 crs.

Minor in Electrical Engineering Technology - 21 credits

Required Courses (15 credits)

EET 110 DC Circuits	4 crs.
EET 170 Digital Electronic Design	4 crs.
EET 270 Introduction to Microprocessor Design	3 crs.
EET 330 Advanced Microprocessors	4 crs.

Elective Courses (6 credits)

EET 160 AC Circuits	4 crs.
EET 210 Linear Electronics I	4 crs.
EET 220 Introduction to Electric Power	4 crs.
EET 360 Microprocessor Engineering	4 crs.
EET 440 Computer Networking	4 crs.

Minor in Graphic Communications Technology - 21 credits

Required Courses (15 credits)

GCT 100 Graphic Communications Processes I	3 crs.
GCT 200 Graphic Communications Processes II	3 crs.
GCT 220 Black and White Photography	3 crs.
GCT 225 Principles of Layout and Design	3 crs.
GCT 240 Electronic Desktop Publishing	3 crs.

Elective Courses (6 credits)

GCT 110 Screen Printing Techniques	3 crs.
GCT 210 Advanced Screen Printing Techniques	3 crs.
GCT 230 Color Photography	3 crs.
GCT 270 Lithographic Techniques	3 crs.
GCT 330 Flexography and Package Printing Processes	3 crs.
GCT 342 Estimating and Cost Analysis	3 crs.
GCT 365 Color Imaging	3 crs.
GCT 370 Advanced Lithographic Techniques	3 crs.
GCT 390 Gravure Printing	3 crs.
GCT 460 Substrates and Inks	3 crs.

Bachelor of Science in Electrical Engineering Technology

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	17 credits
CSC 120 Problem Solving & Programming Constructs	3 crs.
EET 110 DC Circuits	4 crs.
ENG 101 English Composition I	3 crs.
GET 101 Introduction to Engineering Technology	3 crs.
MAT 181 College Algebra	3 crs.
UNI 100 First Year Seminar	1 cr.

Second Semester	16 credits
CSC 223 C Programming	4 crs.
EET 160 AC Circuits	3 crs.
ENG 102 English Composition II	3 crs.
MAT 191 College Trigonometry	3 crs.
General Education Course	3 crs.

Sophomore Year

Third Semester	17 credits
EET 170 Digital Electronics Design	3 crs.
EET 210 Linear Electronics I	4 crs.
EET 220 Introduction to Electric Power	4 crs.
MAT 281 Calculus I	3 crs.
General Education Course	3 crs.

Fourth Semester	17 credits
EET 260 Linear Electronics II	4 crs.
EET 270 Introduction to Microprocessors	3 crs.
MAT 282 Caluclus II	3 crs.
PHY 101 College Physics I	4 crs.
General Education Course	3 crs.

Junior Year

Fifth Semester	16 credits
EET 310 Methods in Engineering Analysis	4 crs.
EET 320 Network Analysis	4 crs.
EET 335 Microprocessor Interfacing	4 crs.
PHY 202 College Physics II	4 crs.

Sixth Semester	18 credits
EET 360 Microprocessor Engineering	4 crs.
EET 370 Instrumentation Design I	4 crs.
EET Elective	4 crs.
ENG 217 Scientific and Technical Writing	3 crs.
General Education Course	3 crs.

Senior Year

Seventh Semester	17 credits
CHE 101 General Chemistry I	**4 crs.**
EET Elective	4 crs.
General Education Courses	9 crs.

Eighth Semester 16 credits

ECO 100 Elements of Economics	3 crs.
EET Elective	4 crs.
Technical Elective	3 crs.
General Education Courses	6 crs

Bachelor of Science in Graphic Communications Technology

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
CSC 101 Microcomputers and Application Software	3 crs.
ENG 101 English Composition I	3 crs.
GCT 100 Graphic Communication Processes I	3 crs.
GCT 225 Principles of Layout and Design	3 crs.
MAT 181 College Algebra	3 crs.
UNI 100 First Year Seminar	1 cr.

Second Semester	17-18 credits
GCT 200 Graphic Communications Processes II	3 crs.
GCT 240 Desktop Publishing	3 crs.
ENG 102 English Composition II	3 crs.
General Education Courses	8-9 crs.

Sophomore Year

Third Semester	16 credits
CHE 101 General Chemistry I	4 crs.
GCT 211 Screen Printing Techniques	3 crs.
MGT 201 Principles of Management	3 crs.
General Education or Elective Courses	6 crs.

Fourth Semester	18 credits
GCT 220 Black and White Photography	3 crs.
GCT 270 Lithographic Techniques	3 crs.
MKT 222 Principles of Selling	3 crs.
General Education or Elective Courses	9 crs.

Junior Year

Fifth Semester	15 credits
GCT 300 Digital Photography	3 crs.
GCT 330 Flexography & Package Printing	3 crs.
GCT 342 Estimating and Cost Analysis	3 crs.
Graphic Communications Technology Elective	3 crs.
General Education or Elective Course	3 crs.

Sixth Semester	15-16 credits
GCT 365 Color Imaging	3 crs.
Graphic Communications Technology Elective	3 crs.
Management Elective	3 crs.
General Education or Elective Course	7-10 crs.

Senior Year

Seventh Semester	15-18 credits
GCT 445 Printing Production Planning and Control	3 crs.
Graphic Communications Technology Elective	3 crs.
General Education Courses	9-12 crs.

Eighth Semester	15 credits
GCT 485 Graphics Seminar	3 crs.
GCT 495 Graphic Communications Technology Internship	Variable crs.
Management Elective	3 crs.
General Education Course	3 crs.
Elective	3 crs.

Bachelor of Science in Industrial Technology

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ENG 101 English Composition I	**3 crs.**
ITE 110 Technical Drawing I	3 crs.
ITE 101 Industrial Safety	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Course	3 crs.
Elective	3 crs.

Second Semester	18 credits
ENG 102 English Composition II	3 crs.
ITE 215 Computer Aided Drafting I	3 crs.
ITE 181 Materials Technology	3 crs.
MAT 191 College Trigonometry	3 crs.
General Education Course	6 crs.

Sophomore Year

Third Semester	15 credits
CSC 101 Microcomputer and Application Software	3 crs.
ITE 135 Digital Electronics	3 crs.
ITE 165 Machine Processing I	3 crs.
General Education or Elective Courses	6 crs.

Fourth Semester	18 credits
ITE 130 Introductory Circuit Analysis	3 crs.
ITE 236 Numerical Control Programming I	3 crs.
ITE 250 Introduction to Automation	3 crs.
General Education Courses	6 crs.
Elective Course	3 crs.

Junior Year

Fifth Semester	16 credits
ITE 375 Principles of Production	3 crs.
ITE 445 Quality Control	3 crs.
ITE 460 Principles of Manufacturing	3 crs.
PHY 121 General Physics I	4 crs.
General Education Course	3 crs.

Sixth Semester	16 credits
CHE 101 General Chemistry I	4 crs.
ITE 325 Statics and Strength of Materials	3 crs.

ITE 385 Industrial Cost Estimating	3 crs.
ITE 420 Production Analysis	3 crs.
Elective Course	3 crs.

Senior Year

Seventh Semester	15 credits
ITE 461 Manufacturing Production and Inventory Control	**3 crs.**
ITE 471 Project Management	3 crs.
ITE Technical Elective	3 crs.
General Education Course	3 crs.
Elective Course	3 crs.

Eighth Semester	15 credits
ITE 475 Computer Integrated Manufacturing	3 crs.
ITE 481 Concepts and Issues in Industrial Technology	3 crs.
ITE Technical Elective	3 crs.
General Education Course	3 crs.
Elective Course	3 crs.

Bachelor of Science in Education: Certification in Technology Education for K-12

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ENG 101 English Composition I	**3 crs.**
ITE 110 Technical Drawing I	3 crs.
MAT 181 College Algebra	3 crs.
TED 100 Introduction to Technology Education	3 crs.
TED 125 Material Processing I	3 crs.
UNI 100 First Year Seminar	1 cr.

Second Semester	18 credits
ENG 102 English Composition II	3 crs.
ITE 130 Introductory Circuit Analysis	3 crs.
MAT 191 College Trigonometry	3 crs.
PSY 100 General Psychology	3 crs.
TED 111 Communication Systems	3 crs.
TED 225 Material Processing II	3 crs.

Sophomore Year

Third Semester	18 credits
EDU 210 Teaching in a Multicultural Society	3 crs.
ITE 135 Digital Electronics	3 crs.
ITE 215 Computer Aided Drafting	3 crs.
TED 315 Construction Systems	3 crs.
TED 325 Manufacturing Systems	3 crs.
General Education Courses	3 crs.

Fourth Semester	16 credits
EDF 290 Policy Studies in American Education	3 crs.
ITE 250 Introduction to Automation	3 crs.
PHY 121 General Physics I	4 crs.
General Education Course	3 crs.

Junior Year

Fifth Semester	18 credits
EDU 340 Mainstreaming Exceptional Learners	3 crs.
HPE 314 First Aid & Personal Safety	3 crs
MMT 310 Digital Portfolio	3 crs.
TED 335 Transportation Systems	3 crs.
Technical Elective	3 crs.
General Education Course	3 crs.

Sixth Semester	?18 credits
CHE 101 General Chemistry I	4 crs.
EDS 465 Developmental Reading in the Secondary Schools	2 crs.
TED 435 Transportation Research & Development	3 crs.
TED 450 Teaching Technology in the Secondary School	3 crs.
General Education Course	3 crs.

Senior Year

Seventh Semester	18 credits
TED 425 Manufacturing Enterprise	3 crs.
TED 500 Teaching Technology in the Elementary School	3 crs.
Technical Elective	3 crs.
Construction Elective	3 crs.
General Education Courses	6 crs.

Eighth Semester	12 credits
TED 461 Student Teaching - Technology Education	12 crs.

Associate of Science in Automation Technology: Computer Numerical Control - 67 credits

The following four-semester schedule of courses provides a recommended framework for completing this program of study in two years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

First Semester	16 credits
CSC 120 Problem Solving and Programming Constructs	3 crs.
ENG 101 English Composition I	3 crs.
ITE 165 Machine Processing I	3 crs.
ITE 236 Numerical Control Programming I	3 crs.
MAT 182 Technical Math I	3 crs.
UNI 100 First Year Seminar	1 cr.

Second Semester	18 credits
ENG 102 English Composition II	3 crs.
ITE 265 Machine Processing II	3 crs.
ITE 336 Numerical Control Programming II	3 crs.
ITE 337 Computer Programming Numerical Control Equipment (COMPACT II)	3 crs.
Technical Elective	3 crs.
General Education Course	3 crs.

Third Semester	18 credits
ITE 338 Computer Programming Numerical Control Equipment (APT)	3 crs.
ITE 437 Advanced Computer Programming Numerical Control Equipment (COMPACT II)	3 crs.
Technical Electives	6 crs.

General Education Course	3 crs.
Elective Course	3 crs.

Fourth Semester — 18 credits

ITE 438 Advanced Computer Programming Numerical Control Equipment (APT)	3 crs.
Technical Electives	6 crs.
General Education Courses	6 crs.

Associate of Science in Drafting and Design Technology—66 credits

The following four-semester schedule of courses provides a recommended framework for completing this program of study in two years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

First Semester — 16 credits

ENG 101 English Composition I	3 crs.
ITE 110 Technical Drawing I	3 crs.
ITE 101 Industrial Safety	3 crs.
MAT 181 College Algebra	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Course	3 crs.

Second Semester 18 credits

ENG 102 English Composition II	3 crs.
ITE 210 Technical Drawing II	3 crs.
ITE 215 Computer Aided Drafting I	3 crs.
MAT 191 College Trigonometry	3 crs.
General Education CourseS	6 crs.

Third Semester — 15 credits

CSC 101 Microcomputer and Application Software	3 crs.
ITE 218 Descriptive Geometry & Surface Development	3 crs.
ITE 315 Computer Aided Drafting II	3 crs.
General Education Course	3 crs.
Elective Course	3 crs.

Fourth Semester — 18 credits

GCT 240 Desktop Publishing	3 crs.
ITE 320 Architectural Drafting and Design	3 crs.
Technical Electives	6 crs.
General Education Courses	6 crs.

Associate of Applied Science in Electrical Engineering Technology—66 credits

The following four-semester schedule of courses provides a recommended framework for completing this program of study in two years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

First Semester — 17 Credits

CSC 120 or higher	3 crs.
EET 110 DC Circuits	4 crs.
EET 170 Digital Electronics	4 crs.
ENG 101 English Composition I	3 crs.
MAT 181 College Algebra	3 crs.
UNI 100 First Year Seminar	1 cr.

Second Semester — 16 Credits

EET 160 AC Circuits	4 crs.
EET 270 Introduction to Microprocessor Design	3 crs.
ENG 217 Scientific and Technical Writing	3 crs.
MAT 191 College Trigonometry	3 crs.
General Education Course	3 crs.

Third Semester — 18 Credits

EET 210 Linear Electronics I	4 crs.
EET 220 Introduction to Electric Power	4 crs.
EET 335 Microprocessor Interfacing	4 crs.
MAT 281 Calculus I or MAT 273 Basic Calculus	3 crs.
General Education Course	3 crs.

Fourth Semester — 17 Credits

EET 260 Linear Electronics II	4 crs.
PHY 101 College Physics I or PHY 121 General Physics I	4 crs.
General Education Courses	6 crs.
Elective	3 crs.

Associate of Science Degree in Screen Printing Technology—67 credits

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

First Semester — 16 credits

ENG 101 English Composition I	3 crs.
GCT 100 Graphic Communication Processes I	3 crs.
GCT 225 Principles of Layout and Design	3 crs.
MAT 182 Technical Mathematics I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Course	3 crs.

Second Semester — 18 credits

CSC 120 Problem Solving and Programming Constructs	3 crs.
ENG 102 English Composition II	3 crs.
GCT 211 Screen Printing Techniques	3 crs.
GCT 200 Graphic Communication Processes II	3 crs.
GCT 220 Black and White Photography	3 crs.
ITE 101 Industrial Safety	3 crs.

Third Semester — 18 credits

GCT 311 Advanced Screen Printing Techniques	3 crs.
GCT 240 Desktop Publishing	3 crs.
GCT 342 Estimating & Cost Analysis	3 crs.
Technical Elective Courses	6 crs.
General Education Course	3 crs.

Fourth Semester — 15 credits

GCT 411 Screen Printing Productions	3 crs.
Technical Elective	3 crs.
General Education Courses	6 crs.
Elective Course	3 crs.

Art and Design

Purpose

The study of artistic expression is a study of the development of art forms such as sculpture and painting; the study of technique, that is the use of color, design, and perspective to achieve the artist's objectives; and a retrospective on what a culture and society has seen, valued, and understood about its place in the world order.

Art is a product of human creativity, a manifestation of the human spirit and meaning. The study of art is included in a liberal education because it informs students about the universal search for meaning and meaningful expression, about their past, and about how each person learns to move from a literal and concrete level of understanding to a more symbolic one.

Programs

The Art major can pursue one of two tracks: (1) a general Art major (Bachelor of Arts in Art) or (2) an Art Certification program for teaching in either a primary or a secondary school. Students choosing the Art Certification program take the same program of study as the Bachelor of Arts in Art and must take the courses required under the articulation agreement with the cooperating college or university which offers art certification.

The newest departmental program is a Bachelor of Science in Graphic Design. This degree program is vocationally-oriented and is responding to a market demand that remains at a steady increase. In our increasingly information-based society, designers and creative thinkers (graphic designers, art directors, web designers) are in great demand. In combining the strengths of the Art and Design and Applied Engineering and Technology departments, student seeking technology-oriented careers such as web designers are assured of having the strong design skills required to make them competitive in their field. Students seeking employment as art directors will have knowledge of the cutting-edge technology used under their direction.

California University also has an agreement with The Art Institute of Pittsburgh that permits a graduate of the Institute's two-year program to receive sixty credit hours toward a Bachelor of Arts degree from California University. A second agreement between the schools permits California University students to take courses during their junior year in visual communication at the Institute and receive up to thirty credits in transfer if they complete one year of full-time course work there.

The junior year program with the Pittsburgh Art Institute permits students to take courses not available at California University in the areas of visual communication, illustration, interior design, photography, industrial design technology, etc. These courses of study prepare students for positions in commercial art-for example, advertising, publishing and corporate communication. Students acquire knowledge and experience in preparing art and layouts for reproduction.

The department also offers a minor in Art with several concentration opportunities. A minor in art would be helpful if you are interested in building a "specialty" in another curriculum such as a business major with an art minor who wants to work in gallery art sales or as a curator. Perhaps you just love art as a hobby, and having a minor in art would help you improve your skills. A minor in art combined with a degree in education would provide a future classroom teacher with an area of concentration that could enhance employment opportunities. Minors are available in ceramics, crafts, painting, printmaking and sculpture.

Award

The Art Student Travel Award is presented annually to an art major for art travel/study in a foreign country. For consideration, an applicant must have completed 45 credits at California University, achieved a minimum of 3.00 QPA, completed two art history courses, and submitted a statement of purpose, itinerary of travel and official transcript.

Careers

The Art program is flexible. It directs students into various areas of art, including art history, basic technique courses, and a series of advanced studio courses in one or more of the following: drawing, painting, sculpture, crafts, ceramics, and printmaking. The program of study prepares students to enter graduate school as well as to pursue careers in professions utilizing art.

Students can become professional artists in their area of specialization, although most will need to undertake graduate education if they are to be successful professionals. Commercial art in advertising and in broadcast media continues to be a major employer of art students. The Bachelor of Science in Graphic Design will provide a student with the opportunity to move into the field of commercial art. Graphic designers are employed in almost every area of the advertising industry. The BA in Art Education will provide a student with K-12 certification for teaching art in the public schools in the elementary and secondary levels.

Graduates with studio art training have opportunities to work in various museum settings, in art galleries and in interior decorating establishments. They also can seek positions in design departments and as art directors in large corporations. Artists can use their talents in conjunction with other areas of specialty, such as Biology, History, and Archaeology. Artists can be illustrators in these areas.

Finally, artists may link the study of art with another discipline. Examples include medical art; the utilization of art in therapy, for persons interested in the areas of psychology and art; and the linkage of art, archaeology, and history in the recording of artifacts and in reconstructive work.

Bachelor of Arts in Art—128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (42 credits)

Required Art Courses (27 credits)

ART 110 Drawing I	3 crs.
ART 119 Design 2-D	3 crs.
ART 120 Design 3-D	3 crs.
ART 113 Ceramics I	3 crs.
ART 116 Painting I	3 crs.
ART 117 Printmaking I	3 crs.
ART 118 Sculpture I	3 crs.
ART 122 Art History: Ancient to Medieval	3 crs.
ART 123 Art History: Renaissance to Contemporary	3 crs.

Art History Elective (3 credits) Select 1
ART 305 Nineteenth Century Art 3 crs.
ART 306 Twentieth Century Art 3 crs.
ART 307 Women Artists 3 crs.

Art Electives (12 credits) Select 4
ART 493 Ceramics Studio 3 crs.
ART 496 Painting Studio 3 crs.
ART 497 Printmaking Studio 3 crs.
ART 498 Sculpture Studio 3 crs.

Electives and/or Minor (32-35 credits)

Bachelor of Science in Graphic Design—128 crdits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).
Note: It is highly recommended that CSC 120 (Problem Solving and Program Constructs) be taken as Technological Literacy Elective prior to or concurrently with MMT 180.

Major (63 credits)

ART 110 Drawing I 3 crs.
ART 116 Painting I 3 crs.
ART 117 Printmaking I 3 crs.
ART 119 Design 2-D 3 crs.
ART 120 Design 3-D 3 crs.
ART 122 Art History: Ancient to Medieval 3 crs.
ART 123 Art History: Renaissance to Contemporary 3 crs.
ART 127 Intro to Graphic Design 3 crs.
ART 227 Graphic Design Studio I 3 crs.
ART 327 Graphic Design Studio II 3 crs.
ART 427 Graphic Design Studio III 3 crs.
ART 428 Graphic Design Studio IV 3 crs.
GCT 100 Graphic Communication Processes I 3 crs.
GCT 110 Screen Printing Techniques OR
GCT 200 Graphic Communication Processes II (Offset) OR
GCT 220 Black and White Photography OR
GCT 330 Flexography and Package Printing 3 crs.
GCT 240 Electronic Desktop Publishing 3 crs.
GCT 300 Digital Photography 3 crs.
MMT 180 Multimedia Foundations 3 crs.
MMT 320 Digital Video 3 crs.
MMT 330 Web Publishing 3 crs.
MMT 340 Animation 3 crs.
Advisor Approved Elective
(may include BUS, MKT, MGT, ECO, etc.) 3 crs.

Electives (11-14 credits)

Minor in Art - 21 credits

Art History (3 credits)
Select one of the following:
ART 106 Art Appreciation 3 crs.
ART 122 Art History: Ancient to Medieval 3 crs.
ART 123 Art History: Renaissance to Contemporary 3 crs.

Drawing (3 credits)
Select one of the following:
ART 110 Drawing I 3 crs.
ART 310 Advanced Drawing 3 crs.

Studio Concentration (15 credits)
Select one of the following Studio Concentrations:

Ceramics Concentration
ART 113 Ceramics I 3 crs.
ART 293 Ceramics Studio 3 crs.
ART 393 Ceramics Studio 3 crs.
ART 493 Ceramics Studio (repeated for 6 credits)

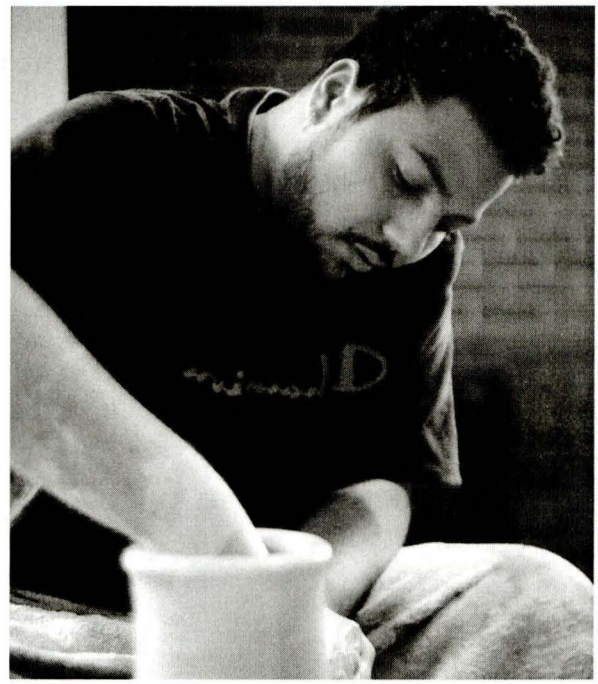
Crafts Concentration
ART 126 Introduction to Crafts 3 crs.
ART 213 Crafts Studio 3 crs.
ART 313 Crafts Studio 3 crs.
ART 413 Crafts Studio (repeated for 6 credits)

Graphic Design Concentration
ART 127 Introduction to Graphic Design 3 crs.
ART 227 Graphic Design Studio 3 crs.
ART 327 Graphic Design Studio 3 crs.
ART 427 Graphic Design Studio 3 crs.
ART 428 Graphic Design Studio 3 crs.

Painting Concentration
ART 116 Painting I 3 crs.
ART 296 Painting Studio 3 crs.
ART 396 Painting Studio 3 crs.
ART 496 Painting Studio (repeated for 6 credits)

Printmaking Concentration
ART 117 Printmaking I 3 crs.
ART 297 Printmaking Studio 3 crs.
ART 397 Printmaking Studio 3 crs.
ART 497 Printmaking Studio (repeated for 6 credits)

Sculpture Concentration
ART 118 Sculpture I 3 crs.
ART 298 Sculpture Studio 3 crs.
ART 398 Sculpture Studio 3 crs.
ART 498 Sculpture Studio (repeated for 6 credits)



Bachelor of Arts in Art

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ART 110 Drawing I	3 crs.
ART 119 Design 2-D	3 crs.
UNI 100 First Year Seminar	1 cr.
ENG 101 English Composition I	3 crs.
General Education courses	6 crs.

Second Semester	15 credits
ART 120 Design 3-D	3 crs.
ART 113 Ceramics I	3 crs.
ART 122 Art History: Ancient to Medieval	3 crs.
ENG 102 English Composition II	3 crs.
General Education Courses	3 crs.

Sophomore Year

Third Semester	15-18 credits
ART 116 Painting I	3 crs.
ART 118 Sculpture I	3 crs.
ART 123 Art History: Renaissance to Contemporary	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Fourth Semester	15-18 credits
ART 117 Printmaking I	3 crs.
Art Elective	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Junior Year

Fifth Semester	15-18 crs.
Art History Elective (305, 306, 307)	3 crs.
Art Elective	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Sixth Semester	15-18 credits
Art Elective	3 crs.
Art Elective	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Senior Year

Seventh Semester	15-18 crs.
Art Elective	3 crs.
Art Elective	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Eighth Semester	15-18 credits
Art Elective	3 crs.
Art Elective	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Bachelor of Science in Graphic Design

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ART 110 Drawing I	3 crs.
ART 119 2-D Design	3 crs.
ART 127 Intro. Graphic Design	3 crs.
General Education Courses	7 crs.

Second Semester	15 Credits
ART 120 3-D Design	3 crs.
ART 227 Graphic Design Studio I	3 crs.
GCT 100 Graphic Comm. Proc. I	3 crs.
General Education Courses	6 crs.

Sophomore Year

Third Semester	18 Credits
ART 122 Art History (Anc. - Med.)	3 crs.
ART 117 Printmaking I	3 crs.
ART 327 Graphic Design Studio II	3 crs.
General Education Courses	9 crs.

Fourth Semester	15 Credits
GCT 240 Elec. Desktop Publishing	3 crs.
ART 116 Painting I	3 crs.
MMT 180 Multimedia Foundations	3 crs.
GCT 110 Screen Printing Tech. or GCT 220 Black and White Photo or. GCT 330 Flexo And Pack. Printing or GCT 200 Graphic Comm. Proc. II	3 crs.
General Education Course	3 crs.

Junior Year

Fifth Semester	18 Credits
GCT 300 Digital Photography	3 crs.
ART 427 Graphic Design Studio III	3 crs.
General Education Courses	12 crs.

Sixth Semester	16 Credits
MMT 320 Digital Video	3 crs.
ART 123 Art History (Ren-Comtemp)	3 crs.
General Education Courses	7 crs.
Elective	3 crs.

Senior Year

Seventh Semester	15 Credits
MMT 330 Web Publishing	3 crs.
ART 428 Graphic Design Studio IV	3 crs.
General Education Courses	6 crs.
Elective	3 crs.

Eighth Semester	15 Credits
MMT 340 Animation	3 crs.
Advisor Approved Elective	3 crs.
General Education Course	3 crs.
Electives	6 crs.

Biological & Environmental Sciences

Purpose

The Biological & Environmental Science programs are intensive scientific curricula that prepare students for graduate work in the biological and environmental sciences and career work in many related areas. The major emphasis of these programs is to provide students with a broad scientific core of courses, including studies in chemistry, physics, mathematics, and biology.

Students have the opportunity to select, in consultation with their faculty advisors, a wide range of biological and environmental science elective courses that best fulfill their needs for future work or graduate study. Practical laboratory experience emphasizes critical thinking and the use of instrumentation to study living systems. Academic credit can be obtained for practical internship experiences.

Programs

A wide variety of majors and concentrations in various degree programs are offered by the department. Students may decide to pursue the B.S. in Biology, the Pre-Professional track, or one of several tracks in the B.S. in Environmental Science. Those interested in teaching may choose the B.S.Ed in Biology. Cooperative programs also allow students to pursue careers in medical technology or mortuary science. The department also offers minors in Biology and in Environmental Studies.

Facilities

The Department of Biological and Environmental Sciences is housed in a modern, four-story building equipped with an array of biological and environmental science instruments. Specialized areas include both scanning and transmission electron microscope facilities, an animal room, greenhouse, herbarium, plant growth facilities, museum and photographic facilities. Teaching laboratories are equipped for the study of anatomy, botany, cytology, ecology, embryology, entomology, genetics, microbiology, parasitology, physiology, zoology, mammalogy, water pollution biology, ichthyology, behavioral ecology, biometry, physiological ecology, solid waste management, air quality monitoring, dendrology, ornithology and wildlife biology.

Academic Societies

Beta Beta Beta is the national honor society for biological sciences. The Upsilon Theta chapter was chartered in 1978. The society fosters the pursuit of knowledge, research experience, and service, in our students. Students can achieve membership if they maintain a QPA of 3.30 after completing 45 credit hours and are extended an invitation to join. Further information can be obtained at the department office.

California University's student chapter of the National Wildlife Society was chartered in 1996. Membership is open to all students interested. The student chapter won first place in the field competition and second place in the quiz bowl at the 1997 Northeastern Conclave of The Wildlife Society and hosted the 1998 Northeastern Conclave.

Careers

Career opportunities include preparation for graduate work in biology and related fields, for industrial research, for government research, for careers in public health, and in the many health-related fields.

A steady demand exists for environmental scientists, such as wildlife biologists, fishery biologists, water analysis technicians, air pollution control monitors, environmental health technicians, and interpretative naturalists. Many graduates are employed in these areas by private industry and by state and federal agencies. Some graduates further their education and teach and do research at a college or university.

Awards

Each year the Department honors graduating seniors who have excelled academically: Commonwealth of Pennsylvania University Biologist Award for Outstanding Student in Biology; Academic Excellence in Biological Science; Academic Excellence in Environmental Science; and Outstanding Woman Graduate in the Biological and Environmental Sciences.

Bachelor of Science in Biology: Biology Track—128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Students in this major should complete:
MAT 273 Basic Calculus OR MAT 281 Calculus I to satisfy the Mathematics Goal. Prerequisites for MAT 273 include MAT 181 OR MAT 182 AND MAT 191 OR MAT 192. Prerequisites for MAT 281 include MAT 181 OR MAT 199 or four years of high school mathematics.
CHE 101 General Chemistry I AND CHE 102 General Chemistry II to satisfy the Natural Science Goal.
If these courses are not completed as part of the student's general education, he or she should complete them within the Elective category.

Major (64 credits)

Required Major Courses (34 credits):

BIO 115 Principles of Biology	4 crs.
BIO 120 General Zoology	4 crs.
BIO 125 General Botany	4 crs.
BIO 310 Ecology	4 crs.
BIO 318 Genetics	4 crs.
BIO 307 Plant Anatomy OR BIO 305 Comparative Vertebrate Anatomy	4 crs.
BIO 335 Plant Physiology OR BIO 486 Comparative Animal Physiology	4 crs.
BIO 478 Evolution	3 crs.
ENS 495 Design & Analysis	3 crs.

Biological or Environmental Science Electives (14-16 credits)
Elective courses selected in consultation with faculty advisor.

Related Courses (16 credits):

CHE 331 Organic Chemistry I	4 crs.
CHE 332 Organic Chemistry II	4 crs.
PHY 121 General Physics I	4 crs.
PHY 122 General Physics II	4 crs.

Electives (10-13 credits)

Bachelor of Science in Biology: Pre-Professional Track—128 credits

Varied program offerings make it possible to satisfy requirements for pre-medical, pre-dental, pre-veterinary, pre-podiatry, pre-pharmacy, pre-chiropractic, and other pre-health fields.

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Students in this track should complete:

MAT 273 Basic Calculus OR MAT 281 Calculus I to satisfy the Mathematics Goal. Prerequisites for MAT 273 include MAT 181 OR MAT 182 AND MAT 191 OR MAT 192. Prerequisites for MAT 281 include MAT 181 OR MAT 199 or four years of high school mathematics.

CHE 101 General Chemistry I AND CHE 102 General Chemistry II to satisfy the Natural Science Goal.

If these courses are not completed as part of the student's general education, he or she should complete them within the Elective category.

Major (55-56 credits)

Required Courses (48 credits)

BIO 115 Principles of Biology	4 crs.
BIO 120 General Zoology	4 crs.
BIO 125 General Botany	4 crs.
BIO 318 Genetics	4 crs.
BIO 306 Human Anatomy or BIO 305 Comparative Vertebrate Anatomy*	4 crs.
BIO 326 Microbiology	4 crs.
BIO 328 Human Physiology OR BIO 486 Comparative Animal Physiology	4 crs.
BIO 480 Cell Biology	4 crs.
CHE 331 Organic Chemistry I	4 crs.
CHE 332 Organic Chemistry II	4 crs.
PHY 121 General Physics I	4 crs.
PHY 122 General Physics II	4 crs.

Biological or Environmental Science Electives (7-8 credits)
Elective courses selected in consultation with faculty advisor.

Electives (18-22 credits)

*Recommended for pre-veterinary

Bachelor of Science in Biology: Mortuary Science Track—128 credits

This track, through affiliation with the Pittsburgh School 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 128 credits: 100 credits in required and elective California University courses and 28 credits for the institute year. Upon completion of the program, the student is granted a Bachelor of Science degree from California and a diploma from the 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.

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 40-45).

Major (64 credits)

Required Courses (36 credits)

BIO 115 Principles of Biology	4 crs.
BIO 120 General Zoology	4 crs.
BIO 125 General Botany	4 crs.
BIO 306 Human Anatomy	4 crs.
BIO 326 Microbiology	4 crs.
BIO 328 Human Physiology	4 crs.
*Biology Electives	4 crs.
CHE 101 General Chemistry I	4 crs.
CHE 102 General Chemistry II	4 crs.

*Requires advisor's approval

School Of Mortuary Sciences (28 credits)

Electives (14-18 credits)

Recommended Elective Courses

ACC 201 Accounting I	3 crs.
ART 118 Sculpture I	3 crs.
BUS 100 Intro to Business	3 crs.
COM 101 Oral Communication	3 crs.
CSC 101 Micro & Applied Software	3 crs.
CSC 105 Basic Programming Language	3 crs.
ECO 100 Elements of Economics	3 crs.
ENG 211 Business and Professional Writing I	3 crs.
MAT 171 Mathematics of Finance	3 crs.
MGT 201 Principles of Management	3 crs.
PHI 220 Ethics	3 crs.
POS 100 Introduction to Political Science	3 crs.
PSY 211 Social Psychology	3 crs.
SOC 100 Principles of Sociology	3 crs.
SOC 220 The Family	3 crs.
SOW 150 Introduction to Social Work	3 crs.

Bachelor of Science in Education: Certification in Biology for Secondary Schools

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Professional Education (41 credits)

EDF 290 Policy Studies in American Ed	3 crs.
EDF 301 Computers for Teachers	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDS 300 Problems of Secondary Education	3 crs.

EDS 430 Educational Tests & Measurements	3 crs.
EDS 461 Student Teaching & School Law	12 crs.
EDS 465 Developmental Reading in Secondary Schools	2 crs.
EDS 467 Teaching of Sciences OR EDS 445 Modern Methods in Secondary Schools with advisor's approval	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming the Exceptional Child	3 crs.
PSY 208 Educational Psychology	3 crs.

Academic Specialization (40 credits)

Required Biology Courses (16 credits)

BIO 115 Principles of Biology	4 crs.
BIO 120 General Zoology	4 crs.
BIO 125 General Botany	4 crs.
BIO 318 Genetics	4 crs.

Biology Core Electives (16 credits)
One course must be chosen from each of the following cores:

Botany Core

BIO 307 Plant Anatomy	4 crs.
BIO 314 Plant Ecology	4 crs.
BIO 332 Economic Botany	4 crs.
BIO 334 Soil Science	4 crs.
BIO 335 Plant Physiology	4 crs.
BIO 336 Plant Taxonomy	4 crs.
BIO 407 Mycology	4 crs.
BIO 442 Dendrology	4 crs.

Zoology Core

BIO 305 Comparative Vertebrate Anatomy	4 crs.
BIO 306 Human Anatomy	4 crs.
BIO 317 Embryology	4 crs.
BIO 325 Animal Histology	4 crs.
BIO 327 Parasitology	4 crs.
BIO 337 Ornithology	4 crs.
BIO 400 Mammalogy	4 crs.
BIO 433 Herpetology	4 crs.
BIO 435 Ichthyology	4 crs.
BIO 445 Entomology	4 crs.

Physiology, Cell and Molecular Core

BIO 326 Microbiology	4 crs.
BIO 328 Human Physiology	4 crs.
BIO 335 Plant Physiology	4 crs.
BIO 405 Human Genetics	4 crs.
BIO 426 Clinical Microbiology	4 crs.
BIO 432 Cellular Ultrastructure	4 crs.
BIO 450 Immunology	4 crs.
BIO 478 Evolution	3 crs.
BIO 480 Cell Biology	4 crs.
BIO 486 Comparative Animal Physiology	4 crs.
BIO 520 Neurobiology	4 crs.

Ecology Core

BIO 310 Ecology	4 crs.
BIO 314 Plant Ecology	4 crs.
BIO 334 Soil Science	4 crs.
BIO 337 Ornithology	4 crs.
BIO 400 Mammalogy	4 crs.
BIO 433 Herpetology	4 crs.
BIO 435 Ichthyology	4 crs.
BIO 441 Ethology	4 crs.
BIO 445 Entomology	4 crs.
BIO 575 Water Pollution Biology	4 crs.
ENS 420 Principles of Wildlife Management	4 crs.
ENS 423 Wildlife Management Techniques	4 crs.

Bachelor of Science in Environmental Science—128 credits

General Education (52 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (63-64 credits)

Biological & Environmental Science Core (23 credits)

BIO 115 Principles of Biology	4 crs.
BIO 120 General Zoology	4 crs.
BIO 125 General Botany	4 crs.
BIO 310 Ecology	4 crs.
BIO 466 Biometry	4 crs.
ENS 495 Design & Analysis	3 crs.

Concentration (40-41 credits)

Students should select one of the following concentrations:

Environmental Conservation Concentration

Biological & Environmental Science Electives (20 credits)
Select courses from the following list:

BIO 314 Plant Ecology	4 crs.
BIO 336 Plant Taxonomy	4 crs.
BIO 337 Ornithology	4 crs.
BIO 400 Mammalogy	4 crs.
BIO 418 Biological Research Investigations	1-4 crs.
BIO 433 Herpetology	4 crs.
BIO 435 Ichthyology	4 crs.
BIO 441 Ethology	4 crs.
BIO 442 Dendrology	3 crs.
BIO 445 Entomology	4 crs.
BIO 492 Biological & Environmental Science Internship	1-4 crs.
BIO 575 Water Pollution Biology	4 crs.
ENS 475 Wetlands Ecology	4 crs.
ENS 492 Animal Population Dynamics	4 crs.

Ancillary Area (21 credits):
Select one of the following ancillary areas. All credits must be taken in a single area.

Anthropology

ANT 100 Introduction to Anthropology	3 crs.
ANT 101 Archaeology Field School	3 crs.
ANT 290 Archaeology	3 crs.
ANT 355 Prehistoric American Indians	3 crs.
Select additional Anthropology (ANT) courses with advisor's approval	9 crs.

Business Management

BUS 100 Introduction to Business	3 crs.
BUS 242 Business Law	3 crs.
ECO 200 Current Economic Issues	3 crs.
ECO 201 Introductory Microeconomics	3 crs.
MGT 201 Principles of Management	3 crs.
Select additional Business (BUS), Economics (ECO), or Management (MGT) courses with advisor's approval	6 crs.

Earth Science
EAS 150 Introduction to Geology 4 crs.
EAS 200 Historical Geology 4 crs.
Select additional Earth Science (EAS) or Geography (GEO) courses with advisor's approval 13 crs.

Parks and Recreation
GEO 311 Geographic Information Systems 3 crs.
GEO 317 Land Use Analysis 3 crs.
GEO 362 Site Planning and Design 3 crs.
Select additional Geography (GEO) or Anthropology (ANT) courses with advisor's approval 12 crs.

Social Science
ANT 250 Culture Change and Culture Shock 3 crs.
HIS 236 History of Urban America 3 crs.
POS 300 Introduction to Public Policy 3 crs.
SOC 235 Urban Sociology 3 crs.
Select additional Anthropology (ANT), History (HIS), Political Science (POS), or Sociology (SOC) courses with advisor's approval 9 crs.

Environmental Science Concentration
General Education (52 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).
Students in the Environmental Science track should complete:
MAT 273 Basic Calculus OR MAT 281 Calculus I to satisfy the Mathematics Goal. Prerequisites for MAT 273 include MAT 181 OR MAT 182 AND MAT 191 OR MAT 192. Prerequisites for MAT 281 include MAT 181 OR MAT 199 or four years of high school mathematics.
CHE 101 General Chemistry I AND CHE 102 General Chemistry II to satisfy the Natural Science Goal.
PHY 121 General Physics to satisfy the Natural Sceince Goal.

If these courses are not completed as part of the student's general education, he or she should complete them within the Elective category.

Biological & Environmental Science Core (23 credits)
BIO 115 Principles of Biology 4 crs.
BIO 120 General Zoology 4 crs.
BIO 125 General Botany 4 crs.
BIO 310 Ecology 4 crs.
BIO 466 Biometry 4 crs.
ENS 495 Design & Analysis 3 crs.

Specialization Courses (10 credits)
ENS 430 Air Quality Monitoring 3 crs.
ENS 431 Solid Waste Management 3 crs.
BIO 575 Water Pollution Biology 4 crs.

Biological & Environmental Science Electives (23 credits)
Select courses from the following list:
BIO 314 Plant Ecology 4 crs.
BIO 318 Genetics 4 crs.
BIO 335 Plant Physiology 4 crs.
BIO 336 Plant Taxonomy 4 crs.
BIO 337 Ornithology 4 crs.
BIO 400 Mammalogy 4 crs.
BIO 418 Biological Research Investigations 1-4 crs.
BIO 433 Herpetology 4 crs.
BIO 435 Ichthyology 4 crs.
BIO 441 Ethology 4 crs.
BIO 442 Dendrology 3 crs.
BIO 445 Entomology 4 crs.
BIO 478 Evolution 3 crs.
BIO 486 Comparative Animal Physiology 4 crs.
BIO 492 Biological & Environmental Science Internship 1-4 crs.
ENS 475 Wetlands Ecology 4 crs.
ENS 492 Animal Population Dynamics 4 crs.

Other Requirements (8 credits)
CHE 331 Organic Chemistry I 4 crs.
CHE 332 Organic Chemistry II OR
CHE 281 Environmental Chemistry 4 crs.

Ecology Concentration
General Education (52 crs.)

Critical Thinking
PHY 121 General Physics 4 crs.

Mathematics
MAT 273 Basic Calculus OR
MAT 281Calculus I 3 crs.

Natural Sciences
CHE 101 General Chemistry I 4 crs.
CHE 102 General Chemistry II 4 crs.

Additonal General Education (35-41 crs.)

Biological & Environmental Science Core (23 credits)
BIO 115 Principles of Biology 4 crs.
BIO 120 General Zoology 4 crs.
BIO 125 General Botany 4 crs.
BIO 310 Ecology 4 crs.
BIO 466 Biometry 4 crs.
ENS 495 Design & Analysis 3 crs.

Specialization Courses (22-23 credits)
BIO 314 Plant Ecology OR
BIO 575 Water Pollution Biology OR
ENS 475 Wetlands Ecology 4 crs.
BIO 318 Genetics 4 crs.
BIO 335 Plant Physiology OR
BIO 486 Comparative Animal Physiology 4 crs.
BIO 336 Plant Taxonomy OR 4 crs.
BIO 442 Dendrology 3 crs.
BIO 478 Evolution 3 crs.
ENS 492 Animal Population Dynamics 4 crs.

Related Electives (10-11 credits)
Select from the following courses:
BIO 314 Plant Ecology 4 crs.
BIO 337 Ornithology 4 crs.
BIO 400 Mammalogy 4 crs.
BIO 418 Biological Research Investigations 2-3 crs.
BIO 433 Herpetology 4 crs.
BIO 435 Ichthyology 4 crs.
BIO 441 Ethology 4 crs.
BIO 445 Entomology 4 crs.
BIO 492 Biological & Environmental Science Internship 2-3 crs.
BIO 575 Water Pollution Biology 4 crs.

ENS 475 Wetlands Ecology	4 crs.
Other Requirements (8 credits)	
CHE 331 Organic Chemistry I	4 crs.
CHE 332 Organic Chemistry II OR	
CHE 281 Environmental Chemistry	4 crs.

Fisheries & Wildlife Biology Concentration

This Concentration is designed to help students complete certification requires in fisheries management and as a wildlife biologist. Students should work closely with their faculty advisor to ensure that certification requirements are met through required and elective courses.

General Education (21 credits)

Biological & Environmental Science Core (23 credits)	
BIO 115 Principles of Biology	4 crs.
BIO 120 General Zoology	4 crs.
BIO 125 General Botany	4 crs.
BIO 310 Ecology	4 crs.
BIO 318 Genetics	4 crs.
BIO 336 Plant Taxonomy OR	
BIO 42 Dendrology	4 crs.
BIO 466 Biometry	4 crs.
ENS 495 Design & Analysis	3 crs.
Fisheries & Wildlife Management (16 credits)	
ENS 420 Principles of Wildlife Management	4 crs.
ENS 576 Wildlife & Fisheries Management Techniques	4 crs.
ENS 492 Animal Population Dynamics	4 crs.
ENS 550 Fisheries Management	4 crs.
Fisheries & Wildlife Biology (16 credits)	
BIO 337 Ornithology	4 crs.**
BIO 400 Mammalogy	4 crs.**
BIO 435 Ichthyology	4 crs.*
BIO 575 Water Pollution Biology	4 crs.*
Related Electives (6 credits)	
300, 400 or 500 level BIO OR ENS courses with advisor's approval	
Policy, Administration and Law (6 credits)***	
GEO 311 Geographical Informaton Systems	3 crs.
GEO 317 Land Use Analysis	3 crs.
GEO 345 Political Geography	3 crs.
GEO 362 Site Planning and Design	3 crs.
HIS 234 Urban Planning	3 crs.
Physical Science (15 credits) ***	
CHE 101 Generan Chemistry I***	4 crs.
CHE 102 General Chemsitry II***	4 crs.
CHE 281 Environmental Chemistry	4 crs.
CHE 331 Organic Chemistry I	4 crs.
EAS 150 Introduction to Geology	4 crs.
EAS 202 Hydrology	3 crs.
PHY 121 General Physics I	4 crs.
Communication skills (12 crs.)***	
ENG 101 English Composition	3 crs.
ENG 102 English Composition	3 crs.
ENG 217 Scientific 7 Technical Writing	3 crs.
COM 101 Oral Communications	3 crs.
Quantitative Skills (6 crs.)***	
MAT 273 Basic Calculus OR	
MAT 281 Calculus I	3 crs.
CSC 101 Microcomputer & Application Software OR	
CSC 201 DOS, Windows, Internet	3 crs.

*Fulfills requirements for fisheries certification
**Fulfills requirements for certification as a wildlife biologist by The Wildlife Society.
*** Fulfills both wildlife and fisheries certification

Electives (11-14 credits)

Bachelor of Science in Education: Certification in Environmental Education for Secondary Schools

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Professional Education (41 credits)

EDF 290 Policy Studies in American Ed	3 crs.
EDF 301 Computers for Teachers	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDS 300 Problems of Secondary Education	3 crs.
EDS 430 Educational Tests & Measurements	3 crs.
EDS 461 Student Teaching & School Law	12 crs.
EDS 465 Developmental Reading in Secondary Schools	2 crs.
EDS 467 Teaching of Sciences OR EDS 445 Modern Methods in Secondary Schools with advisor's approval	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming the Exceptional Child	3 crs.
PSY 208 Educational Psychology	3 crs.

Academic Specialization (40 credits)

Biology Courses (12 credits)	
BIO 115 Principles of Biology	4 crs.
BIO 120 General Zoology	4 crs.
BIO 125 General Botany	4 crs.
Earth Science Courses (6 credits)	
EAS 131 Introduction To Environmental Geology	3 crs.
EAS 232 Earth Resources	3 crs.
Social Science Courses (3 credits)	
POS 220 Introduction to Public Administration OR POS 300 Introduction to Public Policy	3 crs.
Electives (19 credits)	
GEO 374 Development & Management of Leisure Enterprises	3 crs.
GEO 378 Field Course in Geology	3 crs.
ENS 101 Introduction to Environmental Science	3 crs.
ENS 423 Wildlife Management Techniques	4 crs.
ENS 475 Wetlands Ecology	4 crs.

Bachelor of Science in Medical Technology

The program involves a three-year program on campus and one year (12 months) at one of the approved affiliated schools or one acceptable to California University. Upon the completion of the clinical or internship year, the student is granted a Bachelor of Science degree from California University as well as a certificate in medical technology from the hospital school.

In addition, graduates take the national test given by the Registry of Medical Technologists of the American Society of Clinical Pathologists. The students who successfully pass this examination become registered medical technologists M.T. (A.S.C.P.)

To enhance the opportunity of being accepted by one of our affiliated hospital schools of medical technology for the fourth or clinical year, it is strongly recommended that the student maintain a minimum of a 3.0 quality point average in the natural sciences (Biology, Chemistry, Physics, and Mathematics) and a minimum of a 3.0 overall quality point average.

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major

Biological Sciences (35 credits):

BIO 115 Principles of Biology	4 crs.
BIO 120 General Zoology	4 crs.
BIO 306 Human Anatomy	4 crs.
BIO 318 Genetics	4 crs.
BIO 326 Microbiology	4 crs.
BIO 327 Parasitology	4 crs.
BIO 328 Human Physiology	4 crs.
BIO 426 Clinical Microbiology	4 crs.
BIO 450 Immunology	3 crs.

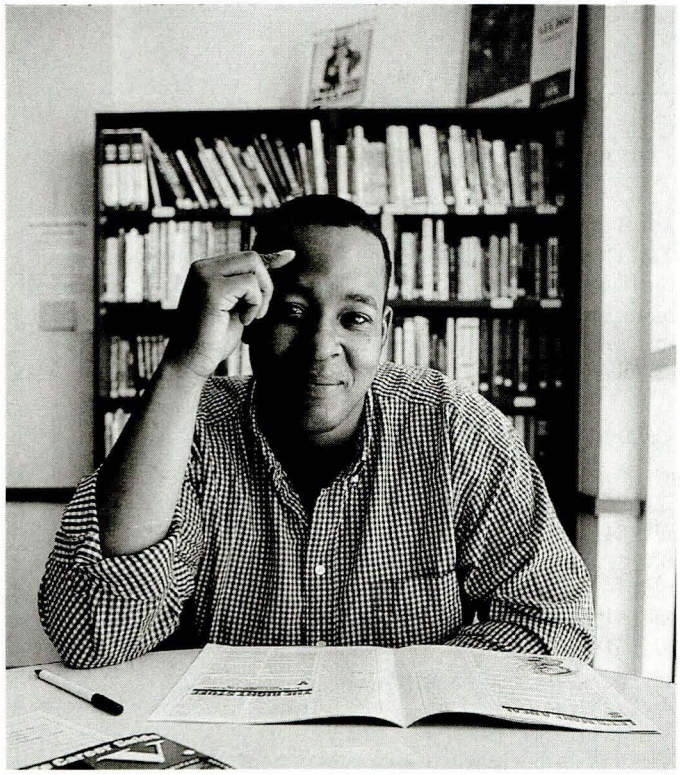
Ancillary Courses (27 credits):

CHE 101 General Chemistry I	4 crs.
CHE 102 General Chemistry II	4 crs.
CHE 261 Analytical Chemistry I	4 crs.
CHE 331 Organic Chemistry I	4 crs.
PHY 121 General Physics I	4 crs.
PHY 122 General Physics II	4 crs.
MAT 181 College Algebra	3 crs.

Approved School Of Medical Technology (29 credits):

The following courses are strongly recommended by the Hospital Schools of Medical Technology to be used as electives:

CHE 332 Organic Chemistry II	4 crs.
BIO 407 Mycology	4 crs.
CHE 411 Biochemistry I	4 crs.
MAT 215 Statistics	3 crs.



Minor in Biology—21 credits

Required Course (12 credits)

BIO 115 Principles of Biology	4 crs.
BIO 120 General Zoology	4 crs.
BIO 125 General Botany	4 crs.

Elective Courses (9 credits)

A minimum of nine credits of BIO electives selected in consultation with an advisor in the Biological & Environmental Science Department.

Minor in Environmental Science—22-24 credits

Required Courses (16 credits)

BIO 115 Principles of Biology	4 crs.
BIO 120 General Zoology	4 crs.
BIO 125 General Botany	4 crs.
BIO 310 Ecology	4 crs.

Elective Courses (6-8 credits)

Two animal and plant ecology courses selected in consultation with an advisor in the Biological & Environmental Sciences Department.

Bachelor of Science In Biology: Biology Track

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	15 credits
BIO 115 Principles of Biology	4 crs.
CHE 101 General Chemistry I	4 crs.
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	3 crs.

Second Semester	17 credits
BIO 120 General Zoology	4 crs.
CHE 102 General Chemistry II	4 crs.
ENG 102 English Composition II	3 crs.
Mathematics	3 crs.
General Education Courses	3 crs.

Sophomore Year

Third Semester	17 credits
BIO 125 General Botany	4 crs.
CHE 331 Organic Chemistry I	4 crs.
General Education, Minor or Elective Courses	9 crs.

Fourth Semester	17 credits
BIO 318 Genetics	4 crs.
CHE 332 Organic Chemistry II	4 crs.
General Education, Minor, or Elective Courses	9 crs.

Junior Year

Fifth Semester	17 credits
BIO 310 Ecology	4 crs.
PHY 121 General Physics I	4 crs.
General Education, Minor or Elective Courses	9 crs.

Sixth Semester	17 credits
BIO 478 Evolution	3 crs.
PHY 122 General Physics II	4 crs.
Biology Elective	4 crs.
General Education, Minor, or Elective Courses	6 crs.

Senior Year

Seventh Semester	16-17 credits
Biology Anatomy course	4 crs.
Biology Elective	3-4 crs
ENS 495 Design & Analysis	3 crs.
General Education, Minor or Elective Courses	6 crs.

Eighth Semester	15-18 credits
Biology Physiology course	4 crs.
Biology Electives	7-8 crs.
General Education, Minor, or Elective Courses	3-6 crs.

Bachelor of Science in Education: Cert. in Biology in Secondary Schools

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	15 credits
BIO 115 Principles of Biology	4 crs.
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	7 crs.

Second Semester	17 credits
BIO 120 General Zoology	4 crs.
ENG 102 English Composition II	3 crs.
General Education Courses	10 crs.

Sophomore Year

Third Semester	17 credits
BIO 125 General Botany	4 crs.
PSY 208 Educational Psychology	3 crs.
Zoology Elective	4 crs.
General Education, Minor or Elective Courses	6 crs.

Fourth Semester	17 credits
BIO 318 Genetics	4 crs.
EDF 301 Computers for Teachers	3 crs.
Botony Elective	4 crs.
General Education, Minor, or Elective Courses	6 crs.

Junior Year

Fifth Semester	18 credits
EDF 290 Policy Studies in American Education	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDS 300 Problems of Secondary Education	3 crs.
Ecology Elective	4 crs.
General Education, Minor or Elective Courses	3 crs.

Sixth Semester	18 credits
EDS 430 Educational Tests and Measures	3 crs.
EDS 465 Developmental Reading in Secondary Schools	2 crs.
EDS 467 Teaching of Science in Secondary Schools	3 crs.
Molecular Elective	4 crs.
General Education, Minor, or Elective Courses	6 crs.

Senior Year

Seventh Semester	15-18 credits
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming Exceptional Learners	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Eighth Semester	12 credits
Student Teaching	12 crs.

Bachelor of Science In Biology: Pre-Professional Track

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	15 credits
BIO 115 Principles of Biology	4 crs.
CHE 101 General Chemistry I	4 crs.
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	3 crs.

Second Semester	17 credits
BIO 120 General Zoology	4 crs.
CHE 102 General Chemistry II	4 crs.
ENG 102 English Composition II	3 crs.
Mathematics (Calculus) course	3 crs.
General Education Courses	3 crs.

Sophomore Year

Third Semester	17 credits
BIO 125 General Botany	4 crs.
CHE 331 Organic Chemistry I	4 crs.
General Education, Minor or Elective Courses	9 crs.

Fourth Semester	17 credits
BIO 318 Genetics	4 crs.
CHE 332 Organic Chemistry II	4 crs.
General Education, Minor, or Elective Courses	9 crs.

Junior Year

Fifth Semester	17 credits
BIO 326 Microbiology	4 crs.
PHY 121 General Physics I	4 crs.
General Education, Minor or Elective Courses	9 crs.

Sixth Semester	17 credits
Biology Elective	3-4 crs.
PHY 122 General Physics II	4 crs.
General Education, Minor, or Elective Courses	9 crs.

Senior Year

Seventh Semester	14-17 credits
BIO 306 Human Anatomy	4 crs.
Biology Elective	3-4 crs
General Education, Minor or Elective Courses	6-9 crs.

Eighth Semester	14-17 credits
BIO 328 Human Physiology	4 crs.
BIO 480 Cell Biology	4 crs.
General Education, Minor, or Elective Courses	6-9 crs.

Bachelor of Science in Environmental Studies: Environmental Conservation Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semster	15 credits
BIO 115 Principles of Biology	4 crs.
CHE 101 General Chemistry I	4 crs.
ENG 101 English Composition I	3 crs
MAT 273 Basic Calculus or MAT 281 Calculus I	3 crs.
UNI 100 First Year Seminar	1 cr.

Second Semester	18 credits
BIO 120 General Zoology	4 crs.
BIO 125 General Botany	4 crs.
CHE 102 General Chemistry II	4 crs.
ENG 102 English Composition II	3 crs.
General Education Course	3 crs.

Sophomore Year

Third Semester	16-17 credits
BIO 310 General Ecology	4 crs.
Ancillary Core Elective	3 crs.
General Education or Elective Courses	9 crs.

Fourth Semester	16-17 credits
CHE 281 Environmental Chemistry	4 crs.
Ancillary Core Elective	3 crs.
General Education or Elective Courses	9 crs.

Junior Year

Fifth Semester	17 credits
Related Electives	8 crs.
Ancillary Core Elective	3 crs.
General Education or Elective Courses	6 crs.

Sixth Semester	16 credits
Related Electives	4 crs.
Ancillary Core Electives	6 crs.
General Education or Elective Courses	6 crs.

Senior Year

Seventh Semester	16 credits
ENS 495 Design and Analysis	3 crs.
Related Elective	4 crs.
Ancillary Core Elective	3 crs.
General Education or Elective Courses	6 crs.

Eight Semester	14 credits
BIO 466 Biometry	4 crs.
Related Elective	4 crs.
Ancillary Core Elective	3 crs.
General Education or Elective Course	3 crs.

Bachelor of Science in Environmental Studies: Environmental Science Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semster	15 credits
BIO 115 Principles of Biology	4 crs.
CHE 101 General Chemistry I	4 crs.
ENG 101 English Composition I	3 crs.
MAT 273 Basic Calculus or MAT 281 Calculus I	3 crs.
UNI 100 First Year Seminar	1 cr.

Second Semester	18 credits
BIO 120 General Zoology	4 crs.
BIO 125 General Botany	4 crs.
CHE 102 General Chemistry II	4 crs.
ENG 102 English Composition II	3 crs.
General Education Course	3 crs.

Sophomore Year

Third Semester	17 credits
BIO 310 General Ecology	4 crs.
CHE 331 Organic Chemistry I	4 crs.
General Education or Elective Courses	9 crs.

Fourth Semester	17 credits
CHE 332 Organic Chemistry II or CHE 281 Environmental Chemistry	4 crs.
Related Elective	4 crs.
General Education or Elective Courses	9 crs

Junior Year

Fifth Semester	14 credits
PHY 121 General Physics I	4 crs.
Related Elective	4 crs.
General Education or Elective Courses	6 crs.

Sixth Semester	17 credits
Related Electives	8 crs.
ENS 430 Air Quality Monitoring	3 crs.
General Education or Elective Courses	6 crs.

Senior Year

Seventh Semester	16 credits
ENS 495 Design and Analysis	3 crs.
Related Electives	3 crs.
BIO 575 Water Pol. Biology	4 crs.
General Education or Elective Courses	6 crs.

Eighth Semester	14 credits
BIO 466 Biometry	4 crs.
ENS 431 Solid Waste Management	3 crs.
Related Elective	4 crs.
General Education or Elective Courses	3 crs.

Bachelor of Science in Education: Certification in Environmental Education for Secondary Schools

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semster	17 credits
BIO 115 Principles of Biology	4 crs.
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education or Elective Courses	9 crs.

Second Semester	16-19 credits
BIO 120 General Zoology	4 crs.
ENS 101 Intro to Environmental Science	3 crs.
ENG 102 English Composition II	3 crs.
General Education Course	6-9 crs.

Sophomore Year

Third Semester	16 credits
BIO 125 General Botony	4 crs.
EAS 131 Intro to Environmental Geology	3 crs.
PSY 208 Educational Psychology	3 crs.
General Education or Elective Courses	6 crs.

Fourth Semester	17 credits
EAS 232 Earth Resources	3 crs.
EDF 290 Policy Studies in American Education	3 crs.
EDF 301 Computers for Teachers	3 crs.
POS 220 Intro to Public Administration	3 crs.
Related Elective	4 crs.
General Education or Elective Courses	3-6 crs

Junior Year

Fifth Semester	16 credits
EDF 302 Applied Instructional Technology	3 crs.
EDS 300 Problems of Secondary Education	3 crs.
ENS 423 Wildlife Management Techniques	4 crs.
GEO 374 Developing & Managing Leisure Enterprises	3 crs.
General Education or Elective Course	3 crs.

Sixth Semester	17 credits
EAS 492 Field Course in Geology	3 crs.
EDS 430 Educational Tests & Measurements	3 crs.
EDS 465 Developmental Reading in Secondary Schools	2 crs.
EDS 467 Teaching of Science in Secondary Schools	3 crs.
General Education or Elective Courses	6 crs.

Senior Year

Seventh Semester	16-19 credits
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming Exceptional Learners	3 crs.
ENS 475 Wetlands Ecoology	4 crs.
General Education or Elective Courses	6-9 crs.

Eighth Semester	12 credits
Student Teaching	12 crs.

Bachelor of Science in Environmental Studies: Ecology Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	15 credits
BIO 115 Principles of Biology	4 crs.
CHE 101 General Chemistry I	4 crs.
ENG 101 English Composition I	3 crs.
MAT 273 Basic Calculus or MAT 281 Calculus I	3 crs.
UNI 100 First Year Seminar	1 cr.

Second Semester	18 credits
BIO 120 General Zoology	4 crs.
BIO 125 General Botany	4 crs.
CHE 102 General Chemistry II	4 crs.
ENG 102 English Composition II	3 crs.
General Education Course	3 crs.

Sophomore Year

Third Semester	17 credits
BIO 310 General Ecology	4 crs.
CHE 331 Organic Chemistry I	4 crs.
General Education or Elective Courses	9 crs.

Fourth Semester	17 credits
BIO 318 Genetics	4 crs.
CHE 332 Organic Chemistry II or CHE 281 Environmental Chemistry	4 crs.
General Education or Elective Courses	9 crs.

Junior Year

Fifth Semester	17 credits
BIO 314 Plant Ecology or BIO 575 Water Pollution Biology or ENS 475 Wetlands Ecology	4 crs.
BIO 442 Dendrology or Related Elective	3 crs.
PHY 121 General Physics I	4 crs.
General Education or Elective Courses	6 crs

Sixth Semester	14 credits
BIO 335 Plant Physiology or BIO 486 Comparative Animal Physiology	4 crs.
BIO 336 Plant Taxonomy or Related Elective	4 crs.
General Education or Elective Courses	6 crs.

Senior Year

Seventh Semester	16 credits
ENS 495 Design and Analysis	3 crs.
BIO 478 Evolution	3 crs.
Related Elective	4 crs.
General Education or Elective Courses	6 crs.

Eighth Semester	14 credits
BIO 466 Biometry	4 crs.
ENS 492 Animal Population Dynamics	4 crs.
Related Elective	3 crs.
General Education or Elective Courses	3 crs.

Bachelor of Science in Environmental Studies: Fisheries & Wildlife Biology Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	15 credits
BIO 115 Principles of Biology	4 crs.
CHE 101 General Chemistry I	4 crs.
ENG 101 English Composition I	3 crs.
MAT 273 Basic Calculus or MAT 281 Calculus I	3 crs.
UNI 100 First Year Seminar	1 cr.

Second Semester	18 credits
BIO 120 General Zoology	4 crs.
BIO 125 General Botany	4 crs.
CHE 102 General Chemistry II	4 crs.
ENG 102 English Composition II	3 crs.
General Education Course	3 crs.

Sophomore Year

Third Semester	17 credits
BIO 310 General Ecology	4 crs.
COM 101 oral Communication	3 crs.
Computer Science Requirement	3 crs.
Physical Science Requirement	4 crs.
General Education or Elective Courses	3 crs.

Fourth Semester	16 credits
BIO 318 Genetics	4 crs.
ENG 217 Scientific & Technical Writing	3 crs.
Physical Science Requirement	3 crs.
Policy, Administration & Law Requirement	3 crs.
General Education or Elective Course	3 crs.

Junior Year

Fifth Semester	15 credits
BIO 400 Mammalogy	4 crs.
BIO 575 Water Pollution Biology	4 crs.
ENS 420 Priniples of Wildlife Management	4 crs.
Policy, Administration & Law Requirement	3 crs.

Sixth Semester	14/15 credits
BIO 337 Ornithology	4 crs.
BIO 336 Plant Taxonomy or Related Elective	3-4 crs.
ENS 423 Wildlife Management Techniques	4 crs.
General Education or Elective Course	3 crs.

Senior Year

Seventh Semester	17 credits
BIO 435 Ichthyology	4 crs.
BIO 442 Dendrology or Related Elective	3-4 crs.
ENS 495 Design and Analysis	3 crs.
ENS 550 Fisheries Management	4 crs.
General Education or Elective Course	3 crs.

Eighth Semester	15-16 credits
BIO 466 Biometry	4 credits
ENS 492 Animal Population Dynamics	4 crs.
Related Elective	3 crs.
General Education or Elective Courses	4-5 crs.

Business & Economics

Purpose

The Business and Economics Department offers a number of degree programs, with emphasis given to the development of fundamental skills that will be beneficial to graduates in both their professional and private lives. The department recognizes that the keys for success are flexibility and adaptability.

The department's programs are fully supported with state-of-the-art computer facilities including current software utilized in the business community, and the faculty offers a diverse background of practical business experience and scholarly achievement to equip the graduating student with the skills necessary for success in business.

Awards

Achievement is recognized in several ways. Membership is open to qualified successful students in Omicron Delta Epsilon, an honorary Economics Fraternity, Phi Beta Lambda-Future Business Leaders, the Student Accounting Association, the Economics Club, the Marketing Club, and the Society for the Advancement of Management. These organizations are involved in a variety of social and scholastic activities. In addition, the achievements of outstanding graduating seniors are recognized with the following awards:

- Wall Street Journal Award for outstanding achievement in the study of Business or Economics;
- Alfred Zeffiro Award for excellence in the study of Business Management;
- Pennsylvania Institute of Certified Public Accountants Award for high scholastic achievement in the study of Accounting;
- John Apessos Award for excellence in the study of Business..

Careers

Career opportunities are in such positions as those of accountant, banker, city manager, general manager, government agency administrator, hospital administrator, industrial relations manager, insurance agent, office manager, personnel manager, production manager, purchasing agent, retail manager, sales manager, sales representative, securities analyst, and stock broker.

Bachelor of Science in Business Administration—128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Students in this major should complete:

MAT 225 Business Statistics to satisfy the Mathematics Goal.

MAT 181 College Algebra or MAT 182 Technical Mathematics I is a prerequisite for MAT 225.

PSY 100 General Psychology to satisfy part of the Social Science Goal.

CSC 101 Microcomputers and Application Software AND CSC 201 DOS, Windows & Internet to satisfy the Technological Literacy Goal.

If these courses are not completed as part of the student's general education, he or she should complete them within the Elective category.

Major (63 credits)

Business Administration Core (33 credits)

ACC 200	Financial Accounting	3 crs.
ACC 321	Managerial Accounting OR	
ACC 331	Cost Accounting I	3 crs.
BUS 242	Business Law I	3 crs.
BUS 271	Analytical Methods	3 crs.
ECO 201	Introductory Microeconomics	3 crs.
ECO 202	Introductory Macroeconomics	3 crs.
FIN 301	Financial Management	3 crs.
MGT 201	Principles of Management	3 crs.
MGT 371	Management Information Systems	3 crs.
MGT 402	Strategic Management	3 crs.
MKT 271	Principles of Marketing	crs.

Concentration (30 credits)

Students should select one of the following concentrations:

Accounting Concentration (30 credits)

Specialized Accounting (ACC) Courses (18 credits)
Electives in ACC, BUS, ECO, FIN, MGT or MKT courses 200 level or above (12 credits)

Business Economics Concentration (30 credits)

Specialized Economics (ECO) Courses (18 credits)
Electives in ACC, BUS, ECO, FIN, MGT or MKT courses 200 level or above (12 credits)

Information Technology Management Concentration (30 credits)

Specialized Computer Science (CSC, CIS, IST) and Management (MGT) Courses (18 credits)
Electives in ACC, BUS, ECO, FIN, MGT or MKT courses 200 level or above (12 credits)

Finance Concentration (30 credits)

Specialized Finance (FIN) Courses (18 credits)
Electives in ACC, BUS, ECO, FIN, MGT or MKT courses 200 level or above (12 credits)

General Business Administration Concentration (30 credits)

ACC, BUS, ECO, FIN, MGT or MKT courses 200 level or above (30 credits)

Human Resource Management Concentration (30 credits)

Specialized Human Resource Management Courses (18 credits)
Electives in ACC, BUS, ECO, FIN, MGT or MKT courses 200 level or above (12 credits)

Management Concentration (30 credits)

Specialized Management (MGT) Courses (18 credits)
Electives in ACC, BUS, ECO, FIN, MGT or MKT courses 200 level or above (12 credits)

Marketing Concentration (30 credits)

Specialized Marketing (MKT) Courses (18 credits)
Electives in ACC, BUS, ECO, FIN, MGT or MKT courses 200 level or above (12 credits)

Electives (11-14 credits)

Bachelor of Arts: Administration and Management Concentration—128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).
Students in this major should complete:
MAT 225 Business Statistics to satisfy the Mathematics Goal.
MAT 181 College Algebra or MAT 182 Technical Mathematics I is a prerequisite for MAT 225.
PSY 100 General Psychology to satisfy part of the Social Science Goal.
CSC 101 Microcomputers and Application Software AND CSC 201 DOS, Windows & Internet to satisfy the Technological Literacy Goal.
If these courses are not completed as part of the student's general education, he or she should complete them within the Elective category.

Major (42 credits)

ACC 200 Financial Accounting	3 crs.
ACC 321 Managerial Accounting	3 crs.
ECO 201 Introductory Microeconomics	3 crs.
ECO 202 Introductory Macroeconomics	3 crs.
ECO 304 Money and Banking	3 crs.
ECO 311 Labor Economics	3 crs.
Economics Elective at 300 or 400 level	3 crs.
FIN 301 Financial Management	3 crs.
MGT 201 Principles of Management	3 crs.
MGT 362 Labor Relations	3 crs.
MKT 271 Principles of Marketing	3 crs.

Business & Management Electives (9 credits)
Select upper-level courses in ACC, BUS, ECO, FIN, MGT or MKT.

Electives and/or Minor (32-35 credits)

Bachelor of Arts: Economics Concentration - 128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 40-45).
Students in this major should complete:
MAT 225 Business Statistics to satisfy the Mathematics Goal. MAT 181 College Algebra or MAT 182 Technical Mathematics I is a prerequisite for MAT 225.
PSY 100 General Psychology to satisfy part of the Social Science Goal.
CSC 101 Microcomputers and Application Software AND CSC 201 DOS, Windows & Internet to satisfy the Technological Literacy Goal.
If these courses are not completed as part of the student's general education, he or she should complete them within the Elective category.

Major (42 credits)

Economics Core (12 credits)

ECO 201 Introductory Microeconomics	3 crs.
ECO 202 Introductory Macroeconomics	3 crs.
ECO 301 Intermediate Microeconomics	3 crs.
ECO 302 Intermediate Macroeconomics	3 crs.

Economics electives at 200 level or above (18 credits)
Selected in consultation with the faculty advisor.

Related Electives (12 credits)
Selected in consultation with the faculty advisor and may include Internship credits.

Electives and/or Minor (32-35 credits)

Bachelor of Arts in International Studies: Business and Economics Concentration—128 credits

This program is administered by the Foreign Languages and Cultures Department, 201 South Hall, 724-938-4246.

General Education (52 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (42 credits)

Business & Economics (21 credits)

ACC 201 Accounting I	3 crs.
ECO 201 Introductory Microeconomics	3 crs.
ECO 202 Introductory Macroeconomics	3 crs.
FIN 301 Financial Management	3 crs.
MGT 201 Principles of Management	3 crs.
MKT 271 Principles of Marketing	3 crs.
MKT 431 International Business Management	3 crs.

Languages: Select courses from FRE or SPN (21 credits)

203 Intermediate I	3 crs.
204 Intermediate II	3 crs.
311 Conversation, Composition and Phonetics I	3 crs.
312 Conversation, Composition and Phonetics II	3 crs.
Culture and Civilization Elective	3 crs.
Language Elective	6 crs.

Electives and/or Minor (32-35 credits)

Associate of Science in Accounting—64 credits

General Education (28 credits)

ENG 101 English Composition I	3 crs.
ENG 211 Business Writing I	3 crs.
MAT 181 College Algebra OR	
MAT 182 Technical Mathematics I	3 crs.
CSC 101 Microcomputers and Application Software	3 crs.
PHI 246 Science, Technology and Society	3 crs.
UNI 100 First Year Seminar	1 cr.

Humanities Elective(3 credits)
Social Science Elective (3 credits)
Natural Science Elective (3 credits)
Free Electives (3 credits)

Major (36 credits)

Required Courses (12 credits)

BUS 100 Intro to Business	3 crs.
ACC 200 Financial Accounting	3 crs.
ACC 331 Cost Accounting	3 crs.
MGT 201 Principles of Management	3 crs.

Economics Electives (6 credits)
Select two courses from the following list:

ECO 100 Elements of Economics	3 crs.
ECO 200 Current Economic Issues	3 crs.
ECO 201 Introductory Microeconomics	3 crs.
ECO 202 Introductory Macroeconomics	3 crs.

Accounting Electives (9 credits)
Select courses with advisor's approval

Electives (9 credits)
Select courses from the following list with advisor's approval:

ACC, BUS, ECO, FIN, MGT or MKT courses	3-9 crs.
COM 250 Oral Communication Management .	3 crs.
MAT 171 Mathematics of Finance I	3 crs.
MAT 225 Business Statistics	3 crs.
PSY 209 Industrial Psychology	3 crs.

Associate of Science in Administration and Management - 64 credits

General Education (28 credits)

ENG 101 English Composition I	3 crs.
ENG 211 Business Writing I	3 crs.
MAT 181 College Algebra OR	
MAT 182 Technical Mathematics	3 crs.
CSC 101 Microcomputer and Application Software	3 crs.
PHI 246 Science, Technology and Society	3 crs.
UNI 100 First Year Seminar	1 cr.

Humanities Elective (3 credits)
Social Science Elective (3 credits)
Natural Science Elective (3 credits)
Free Electives (3 credits)

Major (36 credits)

Required Courses (6 credits)

ACC 200 Financial Accounting	3 crs.
MGT 201 Principles of Management	3 crs.

Concentration - 27 credits

Select one of the following concentrations:

Administration and Management Concentration

Required Course (3 credits)

BUS 100 Introduction to Business	3 crs.

Economics Electives (6 credits)
Select two courses from the following list:

ECO 100 Elements of Economics	3 crs.
ECO 200 Current Economic Issues	3 crs.
ECO 201 Introductory Microeconomics	3 crs.
ECO 202 Introductory Macroeconomics	3 crs.

Business Electives (9-15 credits)
Select ACC, BUS, ECO, FIN, MGT or MKT courses with advisor's approval.

Related Electives (3-9 credits)
Select courses from the following list

COM 250 Oral Communication Management	3 crs.

Computer Science (CSC) electives

MAT 171 Mathematics of Finance I	3 crs.
MAT 225 Business Statistics	3 crs.
PSY 209 Industrial Psychology	3 crs.

Psychology (PSY) electives
Sociology (SOC) electives

Banking Concentration

Required Courses (27 credits)

ACC 321 Managerial Accounting	3 crs.
BUS 100 Introduction to Business	3 crs.
BUS 242 Business Law I	3 crs.
ECO 100 Elements of Economics	3 crs.
ECO 201 Introductory Microeconomics	3 crs.
ECO 202 Introductory Macroeconomics	3 crs.
ECO 304 Money and Banking	3 crs.
FIN 301 Financial Management	3 crs.
MGT. 201 Principles of Management	3 crs.

Finance elective (3 credits)
Banking Electives (6 credits)
A.I.B. courses or courses selected from BUS, MAT, and FIN with advisor's approval.

Information Technology Management Concentration

Required Courses (18 credits)

ACC 200 financial Management	3 crs.
ACC 321 Managerial Accounting OR	
ACC 331 Cost Accounting	3 crs.
BUS 100 Introduction to Business	3 crs.
MGT 201 Principles of Management	3 crs.
MGT 371 Management Information Systems OR	
MGT 373 Computer Based Management Systems	3 crs.
Business/Economics Elective	3 crs.

Economics Electives (9 credits)
Select three courses from the following list:

ECO 100 Elements of Economics	3 crs.
ECO 200 Current Economic Issues	3 crs.
ECO 201 Introductory Microeconomics	3 crs.
ECO 202 Introductory Macroeconomics	3 crs.

Computer Science Electives (9 credits)
Select CSC courses with advisor's approval

Minors In Business Administration - 21 credits

Accounting Concentration

Required Courses (12 credits)

BUS 100 Introduction to Business	3 crs.
ECO 100 Elements of Economics	3 crs.
ACC 201 Financial Accounting	3 crs.
ACC 331 Cost Accounting I	3 crs.

Accounting Electives (9 credits)
Select upper-level (300 and above) ACC courses.

Business Concentration

Required Courses (12 credits)

BUS 100 Introduction to Business	3 crs.
ECO 100 Elements of Economics	3 crs.
ACC 200 Financial Accounting	3 crs.
MGT 201 Principles of Management	3 crs.

Business Electives (9 credits)
Select upper-level (300 and above) ACC, BUS, FIN, MGT or MKT courses.

Finance Concentration

Required Courses (15 credits)

BUS 100 Introduction to Business	3 crs.
ECO 100 Elements of Economics	3 crs.
ACC 200 Financial Accounting	3 crs.
FIN 211 Personal Money Management	3 crs.
FIN 301 Financial Management	3 crs.

Finance Electives (6 credits)
Select upper-level (300 and above) FIN courses.

Management Concentration

Required Courses (12 credits)

BUS 100 Introduction to Business	3 crs.
ECO 100 Elements of Economics	3 crs.
MGT 201 Principles of Management	3 crs.
MGT 301 Organizational Behavior	3 crs.

Management Electives (9 credits)
Select upper-level (300 and above) MGT courses.

Marketing Concentration

Required Courses (12 credits)

BUS 100 Introduction to Business	3 crs.
ECO 100 Elements of Economics	3 crs.
MKT 222 Principles of Selling	3 crs.
MKT 271 Principles of Marketing	3 crs.

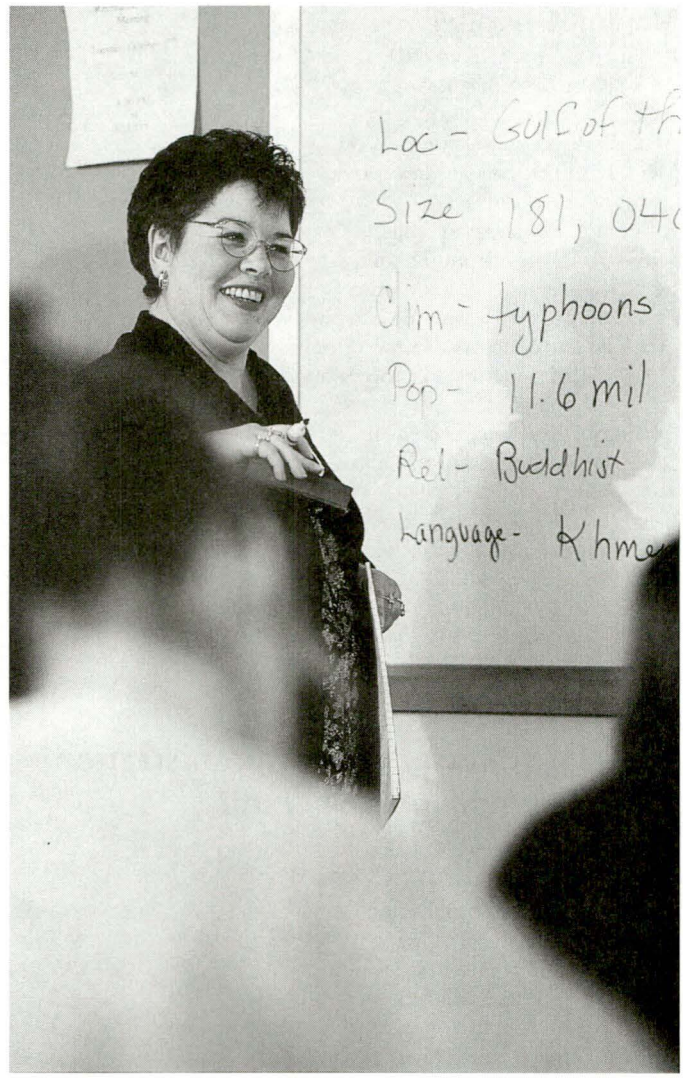
Marketing Electives (9 credits)
Select upper-level (300 and above) MKT courses.

Minor in Economics - 21 credits

Required Courses (9 credits)

BUS 100 Introduction to Business	3 crs.
ECO 201 Introductory Microeconomics	3 crs.
ECO 202 Introductory Macroeconomics	3 crs.

Economics Electives (12 credits)
Select upper-level (300 and above) ECO courses.



Bachelor of Science in Business Administration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
BUS 100 Introduction to Business	3 crs.
ENG 101 English Composition I	3 crs.
PSY 100 General Psychology	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	6 crs.

Second Semester	15-18 credits
ACC 200 Financial Accounting	3 crs.
CSC 101 Microcomputers and Application Software	3 crs.
ENG 102 English Composition II	3 crs.
General Education Courses	6-9 crs.

Sophomore Year

Third Semester	15-18 credits
CSC 201 DOS, Windows & Internet	3 crs.
ECO 201 Introductory Microeconomics	3 crs.
MAT 225 Business Statistics	3 crs.
MGT 201 Principles of Management	3 crs.
General Education or Elective Courses	3-6 crs.

Fourth Semester	15-18 credits
ACC 321 Managerial Accounting	3 crs.
ECO 202 Introductory Macroeconomics	3 crs.
MKT 271 Principles of Marketing	3 crs.
General Education or Elective Courses	6-9 crs.

Junior Year

Fifth Semester	15-18 credits
FIN 301 Financial Management	3 crs.
BUS 242 Business Law I	3 crs.
BUS 271 Analytical Methods	3 crs.
Specialized Concentration Courses/Business Electives	3-6 crs.
General Education or Elective Courses	3 crs.

Sixth Semester	15-18 credits
MGT 371 Management Information Systems	3 crs.
Specialized Concentration Courses	3 crs.
Business Electives	3 crs.
General Education or Elective Courses	6-9 crs.

Senior Year

Seventh Semester	15-18 crs.
MGT 402 Strategic Management	3 crs.
Specialized Concentration Courses	6 crs.
Business Electives	3 crs.
General Education or Elective Courses	3-6 crs.

Eighth Semester	15-18 credits
Specialized Concentration Courses	6 crs.
Business Electives	6 crs.
General Education or Elective Courses	3-6 crs.

Bachelor of Arts: Administration & Management Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
BUS 100 Introduction to Business	3 crs.
ENG 101 English Composition I	3 crs.
PSY 100 General Psychology	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	6 crs.

Second Semester	15-18 credits
ACC Financial Accounting	3 crs.
CSC 101 Microcomputers and Application Software	3 crs.
ENG 102 English Composition II	3 crs.
General Education Courses	9-12 crs.

Sophomore Year

Third Semester	15-18 credits
CSC 201 DOS, Windows & Internet	3 crs.
ECO 201 Introductory Microeconomics	3 crs.
MAT 225 Business Statistics	3 crs.
MGT 201 Principles of Management	3 crs.
General Education, Minor or Elective Courses	3-6 crs.

Fourth Semester	15-18 credits
ACC 321 Managerial Accounting	3 crs.
ECO 202 Introductory Macroeconomics	3 crs.
MKT 271 Principles of Marketing	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Junior Year

Fifth Semester	15-18 credits
FIN 301 Financial Management	3 crs.
ECO 304 Money and Banking	3 crs.
BUS 242 Business Law I	3 crs.
General Education, Minor or Elective Courses	3 crs.
Specialized Courses/Business Elective	3-6 crs.

Sixth Semester	15-18 credits
MGT 362 Labor Relations	3 crs.
ECO 311 Labor Economics	3 crs.
Business & Management Electives	3 crs.
General Education, Minor, or Elective Courses	6-9 crs.

Senior Year

Seventh Semester	15-18 crs.
Specialized Courses	6 crs.
Business & Management Electives	3 crs.

Economics Elective	3 crs.
General Education, Minor or Elective Courses	3-6 crs.

Eighth Semester — 15-18 credits

Business & Management Electives	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Bachelor of Arts: Economics Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester — 16 credits

ACC 200 Financial Accounting	3 crs.
ENG 101 English Composition I	3 crs.
PSY 100 General Psychology	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	6 crs.

Second Semester — 15-18 credits

CSC 101 Microcomputers and Application Software	3 crs.
ENG 102 English Composition II	3 crs.
General Education Courses	9-12 crs.

Sophomore Year

Third Semester — 15-18 credits

CSC 201 DOS, Windows & Internet	3 crs.
ECO 201 Introductory Microeconomics	3 crs.
MAT 225 Business Statistics	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Fourth Semester — 15-18 credits

ECO 202 Introductory Macroeconomics	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Junior Year

Fifth Semester — 15-18 credits

ECO 301 Intermediate Microeconomics	3 crs.
Economics Elective	3 crs.
Related Elective	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Sixth Semester — 15-18 credits

ECO 302 Intermediate Macroeconomics	3 crs.
Economics Elective	3 crs.
Related Elective	3 crs.
General Education, Minor, or Elective Courses	6-9 crs.

Senior Year

Seventh Semester — 15-18 credits

Economics Electives	6 crs.
Related Elective	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Eighth Semester — 15-18 credits

Economics Electives	6 crs.
Related Elective	3 crs.
General Education, Minor, or Elective Courses	6-9 crs.

Chemistry & Physics

Purpose

The Department, located in the New Science Building, houses both the Chemistry and Physics programs at the university. These programs provide students with a strong foundation in chemistry, physics, and related disciplines and prepare them for employment in the private and public sector as well as for advanced professional or graduate study. The department also participates in the BS in natural sciences program.

Programs

The department offers the BS in Chemistry and the BA in Physics. In addition, students interested in secondary school teaching may select BSED certification programs in chemistry, physics, or general science.

California University participates in cooperative engineering programs with both the Pennsylvania State University and the University of Pittsburgh. The student undertakes a three-year curriculum at California University of Pennsylvania concentrating on studies in liberal arts and pre-engineering courses in natural sciences. Upon successful completion of that curriculum and the recommendation of faculty, the student spends two years at the Pennsylvania State University or the University of Pittsburgh, at which time the student will complete the engineering course requirements as specified by the institution. For students who have yet to choose between engineering or another discipline as a field endeavor, the programs provide initial studies in both the arts and sciences at California University, during which time students may ascertain whether their abilities and interests lie in the field of engineering or another discipline. In addition, the program permits qualified students to receive both a liberal and technical education at relatively low cost.

The BS in Natural Sciences is an extremely flexible program that provides the student with an opportunity to structure a course of study that encompasses the broad areas of science and mathematics. Students enrolling in this program are expected to work carefully and regularly with their academic advisor to develop a program that meets their individual needs.

Careers

Career opportunities include positions as analytical chemist, quality control specialist, industrial management trainee, technical writer, chemical purchasing agent and sales person with the chemical industry. Some graduates have chosen to continue their education or to pursue careers in medicine, dentistry, pharmacy, management, and college and university teaching and research.

Bachelor of Science in Chemistry

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (64 credits)

CHE 101 General Chemistry I	4 crs.
CHE 102 General Chemistry II	4 crs.
CHE 205 Inorganic Chemistry	4 crs.
CHE 261 Analytical Chemistry	4 crs.
CHE 331 Organic Chemistry I	4 crs.
CHE 332 Organic Chemistry II	4 crs.
CHE 361 Instrumental Methods	4 crs.
CHE 368 Individual Work	1 cr.
CHE 451 Physical Chemistry I	4 crs.
CHE 452 Physical Chemistry II	4 crs.
CHE 495 Chemistry Seminar	1 cr.
MAT 281 Calculus I	3 crs.
MAT 282 Calculus II	3 crs.
PHY 101 College Physics I	4 crs.
PHY 202 College Physics II	4 crs.
Chemistry Elective	3-4 crs.

Select any Chemistry (CHE) course numbered 200 or higher with advisor's approval.

Computer Science Elective	3 crs.

Select any Computer Science (CSC) course numbered 120 or higher with advisor's approval. (CSC 201 may not be used as an elective.)

Related electives (6 credits)
Select courses from the following list with advisor's approval
Any Biology (BIO) course numbered 115 or higher.
Any Chemistry (CHE) course numbered 200 or higher.
Any Computer Science (CSC) course numbered 120 or higher (CSC 201 may not be used as an elective).
Any Earth Science (EAS) course numbered 300 or higher.
Any Electrical Engineering Technology (EET) course numbered 170 or higher.
Any Environmental Science (ENS) course numbered 300 or higher.
Any Industry & Technology (IND) course numbered 135 or higher.
Any Industrial Technology (ITE) course numbered 200 or higher.
MAT 215 Statistics or any Mathematics (MAT) course numbered 300 or higher.
Any Manufacturing Technology (MTE) course numbered 200 or higher.
Any Physics (PHY) course numbered 203 or higher.

Electives (11-13 credits)

Bachelor of Arts in Physics

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).
Students in this major should complete:
MAT 281 Calculus I to satisfy the Mathematics Goal. Prerequisites for MAT 281 include MAT 181, MAT 199, or appropriate background in mathematics.
CHE 101 General Chemistry I AND CHE 102 General Chemistry II to satisfy the Natural Science Goal.
CSC 120 Problem Solving & Programming Constructs to satisfy part of the Technological Literacy Goal.
If these courses are not completed as part of the student's general education, he or she should complete them within the Elective category.

Major (43 credits)

Required Courses

PHY 101 College Physics I	4 crs.
PHY 202 College Physics II	4 crs.
PHY 203 College Physics III	4 crs.

PHY 221 Intermediate Mechanics	4 crs.
PHY 301 Intermediate Electricity and Magnetism	4 crs.
PHY 331 Modern Physics I	3 crs.
PHY 495 Physics Seminar	1 cr.
CHE 451 Physical Chemistry I	4 crs.
MAT 282 Calculus II	3 crs.
MAT 381 Calculus III	3 crs.
MAT 382 Calculus IV	3 crs.
MAT 406 Differential Equations	3 crs.

Physics Elective (3 credits)
Courses should be selected in consultation with advisor.

Electives and/or Minor (31-34 credits)

Bachelor of Science in Education Certification in Chemistry for Secondary Schools

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Professional Education (41 credits)

EDF 290 Policy Studies in American Education	3 crs.
EDF 301 Computers for Teachers	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDS 300 Problems of Secondary Education	3 crs.
EDS 430 Educational Tests and Measurements in Secondary Schools	3 crs.
EDS 461 Student Teaching and School Law	12 crs.
EDS 465 Developmental Reading in the Secondary School	2 crs.
EDS 467 Teaching of Science in Secondary Schools OR EDS 455 Modern Methods in Secondary Sch (with advisor's approval)	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming Exceptional Learners	3 crs.
PSY 208 Educational Psychology	3 crs.

Professional Specialization (38 credits)

CHE 101 General Chemistry	4 crs.
CHE 102 General Chemistry II	4 crs.
CHE 255 Geochemistry	3 crs.
CHE 261 Analytical Chemistry I	4 crs.
CHE 331 Organic Chemistry I	4 crs.
CHE 411 Biochemistry I	4 crs.
CHE 451 Physical Chemistry I	4 crs.
CHE 368 Individual Work I	1 cr.
MAT 281 Calculus I	3 crs.
MAT 282 Calculus II	3 crs.
PHY 101 College Physics I	4 crs.

Pennsylvania certification requires a satisfactory score on the Praxis II

Bachelor of Science in Education: Certification in Physics for Secondary Schools

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Professional Education (41 credits)

EDF 290 Policy Studies in American Education	3 crs.
EDF 301 Computers for Teachers	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDS 300 Problems of Secondary Education	3 crs.
EDS 430 Educational Tests and Measurements in Secondary Schools	3 crs.
EDS 461 Student Teaching and School Law	12 crs.
EDS 465 Developmental Reading in the Secondary School	2 crs.
EDS 467 Teaching of Science in Secondary Schools OR EDS 455 Modern Methods in Secondary Sch (with advisor's approval)	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming Exceptional Learners	3 crs.
PSY 208 Educational Psychology	3 crs.

Professional Specialization (40 credits)

PHY 101 College Physics I	4 crs.
PHY 202 College Physics II	4 crs.
PHY 203 College Physics III	4 crs.
PHY 221 Intermediate Mechanics	4 crs.
PHY 301 Intermediate Electricity and Magnetism	4 crs.
PHY 331 Modern Physics I	3 crs.
PHY 341 Mathematical Methods of Physics I	3 crs.
PHY 495 Physics Seminar	1 crs.
MAT 281 Calculus I	3 crs.
MAT 282 Calculus II	3 crs.
MAT 381 Calculus III	3 crs.
CHE 101 General Chemistry I	4 crs.

Pennsylvania certification requires a satisfactory score on the Praxis II.

Bachelor of Science in Education: Certification in General Science for Secondary Schools

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48.

Professional Education (41 credits)

EDF 290 Policy Studies in American Education	3 crs.
EDF 301 Computers for Teachers	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDS 300 Problems of Secondary Education	3 crs.
EDS 430 Educational Tests and Measurements	3 crs.
EDS 461 Student Teaching and School Law	12 crs.
EDS 465 Developmental Reading in the Secondary School	2 crs.
EDS 467 Teaching of Science in Secondary Schools OR EDS 455 Modern Methods in Secondary Sch (with advisor's approval)	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming Exceptional Learners	3 crs.
PSY 208 Educational Psychology	3 crs.

Professional Specialization (37 credits)

BIO 120 General Zoology	4 crs.
BIO 125 General Botany	4 crs.
CHE 101 General Chemistry I	4 crs.
CHE 102 General Chemistry II	4 crs.
PHY 121 General Physics I	4 crs.
PHY 122 General Physics II	4 crs.

EAS 150 Intro to Geology	4 crs.
EAS 163 Introduction to Oceanography	3 crs.
Science electives from BIO, CHE, EAS or PHY (12 credits)	

Pennsylvania certification requires a satisfactory score on the Praxis II Exam.

Bachelor of Science in Natural Sciences

Additional information on this program is available in the Chemistry and Physics Department Office, the Office of the Eberly College of Science and Technology, and the Office of Lifelong Learning.

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 40-45).

Major (64 credits)

Students may select courses from the following disciplines: Biology (BIO), Chemistry (CHE), Computer Science (CSC), Earth Science (EAS), Environmental Science (ENS), Mathematics (MAT), Physical Science (PHS), and Physics (PHY). At least 38 credits must be above the introductory level.

Electives (10-13 credits)

Bachelor of Science in Chemistry

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	17 credits
CHE 101 General Chemistry I	4 crs.
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	9 crs.

Second Semester	16 credits
CHE 102 General Chemistry II	4 crs.
ENG 102 English Composition II	3 crs.
General Education Courses	9 crs.

Sophomore Year

Third Semester	16 credits
CHE 261 Analytical Chemistry I	4 crs.
MAT 281 Calculus I	3 crs.
General Education or Elective Courses	9 crs.

Fourth Semester	17 credits
CHE 205 Inorganic Chemistry	4 crs.
MAT 282 Calculus II	3 crs.
PHY 101 College Physics I	4 crs.
General Education or Elective Courses	6 crs.

Junior Year

Fifth Semester	17-18 credits
CHE 331 Organic Chemistry I	4 crs.
Related Elective	3-4 crs
PHY 202 College Physics II	4 crs.
General Education or Elective Courses	6 crs.

Sixth Semester	17-18 credits
CHE 332 Organic Chemistry II	4 crs.
CHE 361 Instrumental Analysis	4 crs.
Related Elective	3-4 crs
General Education or Elective Courses	6 crs.

Senior Year

Seventh Semester	15-18 credits
CHE 368 Individual Work	1 cr.
CHE 451 Physical Chemistry I	4 crs.
Related Elective	3-4 crs
General Education or Elective Courses	6-9 crs.

Eighth Semester	15-18 credits
CHE 452 Physical Chemistry II	4 crs.
CHE 495 Chemistry Seminar	1 cr.
Related Elective	3-4 crs
General Education or Elective Courses	6-9 crs.

Bachelor Science in Education: Cert. in Chemistry for Secondary Schools

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	17 credits
CHE 101 General Chemistry I	4 crs.
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	9 crs.

Second Semester	16 credits
CHE 102 General Chemistry II	4 crs.
ENG 102 English Composition II	3 crs.
PSY 208 Educational Psychology	3 crs.
General Education Courses	6 crs.

Sophomore Year

Third Semester	19 credits
CHE 261 Analytical Chemistry I	4 crs.
MAT 281 Calculus I	3 crs.
EDF 290 Policy Studies in American Education	3crs.
EDF 301 Computers for Teachers	3 crs.
General Education or Elective Courses	6 crs.

Fourth Semester	16 credits
CHE 255 Geochemistry	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
MAT 282 Calculus II	3 crs.
PHY 101 College Physics I	4 crs.
General Education or Elective Course	3 crs.

Junior Year

Fifth Semester	19 credits
CHE 331 Organic Chemistry I	4 crs.
EDS 300 Problems of Secondary Education	3 crs.
EDS 430 Educational Tests and Measurements	3 crs.
EDS 465 Developmental Reading in the Secondary School	3 crs.
General Education or Elective Course	3 crs.

Sixth Semester	17 credits
CHE 411 Biochemistry I	3 crs.
EDS 467 Teaching of Science in Secondary Schools	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
General Education or Elective Course	3 crs.

Senior Year

Seventh Semester	17 credits
CHE 368 Individual Work	1 cr.
CHE 451 Physical Chemistry I	4 crs.
EDU 340 Mainstreaming Exceptional Learners	3 crs.
General Education or Elective Courses	9 crs.

Eighth Semester	12 credits
Student Teaching	12 crs.

Bachelor of Arts in Physics

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	17 credits
CHE 101 General Chemistry I	4 crs.
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	9 crs.

Second Semester	17 credits
CHE 102 General Chemistry II	4 crs.
ENG 102 English Composition II	3 crs.
MAT 281 Calculus I	3 crs.
PHY 101 College Physics I	4 crs.
General Education Courses	3 crs.

Sophomore Year

Third Semester	16 credits
CSC 120 Problem Solving & Programming Constructs	3 crs.
MAT 282 Calculus II	3 crs.
PHY 202 College Physics II	4 crs.
General Education, Minor or Elective Courses	6 crs.

Fourth Semester	17 credits
MAT 381 Calculus III	3 crs.
PHY 203 College Physics III	4 crs.
PHY 221 Intermediate Mechanics	4 crs.
General Education, Minor or Elective Courses	6 crs.

Junior Year

Fifth Semester	16 credits
MAT 382 Calculus IV	3 crs.
PHY 301 Intermediate Electricity and Magnetism	4 crs.
PHY 331 Modern Physics I	3 crs.
General Education, Minor or Elective Courses	6 crs.

Sixth Semester	15-16 credits
MAT 406 Differential Equations	3 crs.
Physics Elective	3-4 crs
General Education, Minor or Elective Courses	9 crs.

Senior Year

Seventh Semester	16 credits
CHE 451 Physical Chemistry I	4 crs.
General Education, Minor or Elective Courses	12 crs.

Eighth Semester	16 credits
PHY 495 Physics Seminar	1 cr.
General Education, Minor or Elective Courses	15 crs.

Bachelor Science in Education in Physics: Cert. for Secondary Schools

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	17 credits
CHE 101 General Chemistry I	4 crs.
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	9 crs.

Second Semester	19 credits
EDF 290 Policies Studies in American Education	3 crs.
ENG 102 English Composition II	3 crs.
MAT 281 Calculus I	3 crs.
PHY 101 College Physics I	4 crs.
General Education Courses	6 crs.

Sophomore Year

Third Semester	19 credits
EDF 301 Computers for Teachers	3 crs.
MAT 282 Calculus II	3 crs.
PHY 202 College Physics II	4 crs.
PSY 208 Educational Psychology	3 crs.
General Education, Minor or Elective Courses	6 crs.

Fourth Semester	17 credits
EDF 302 Applied Instructional Technology	3 crs.
EDS 300 Problems of Secondary Education	3 crs.
MAT 381 Calculus III	3 crs.
PHY 203 College Physics III	4 crs.
PHY 221 Intermediate Mechanics	4 crs.

Junior Year

Fifth Semester	19 credits
EDS 430Educational Tests and Measurements	3 crs.
EDS 465 Developmental Reading in the Secondary School	3 crs.
PHY 301 Intermediate Electricity and Magnetism	4 crs.
PHY 331 Modern Physics I	3 crs.
General Education, Minor or Elective Courses	6 crs.

Sixth Semester	15-18 credits
EDS 467 Teaching Science in Secondary Schools	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
PHY 341 Mathematical Methods of Physics	3 crs.
General Education, Minor or Elective Courses	9 crs.

Senior Year

Seventh Semester	16 credits
EDU 340 Mainstreaming Exceptional Learners	3 crs.
PHY 495 Physics Seminar	1 cr.
General Education, Minor or Elective Courses	12 crs.

Eighth Semester	12 credits
Student Teaching	12 crs.

Bachelor Science in Education: Cert. in General Science for Secondary Schools

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	17 credits
CHE 101 General Chemistry I	4 crs.
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	9 crs.

Second Semester	16 credits
CHE 102 General Chemistry II	4 crs.
ENG 102 English Composition II	3 crs.
PSY 208 Educational Psychology	3 crs.
General Education Courses	6 crs.

Sophomore Year

Third Semester	16 credits
EAS 150 Introduction to Geology	3 crs.
EDF 290 Policy Studies in American	3 crs.
PHY 121 General Physics I	4 crs.
General Education or Elective Courses	6 crs.

Fourth Semester	16 credits
EDF 301 Computers for Teachers	3 crs.
EDS 300 Problems of Secondary Education	3 crs.
PHY 122 General Physics II	4 crs.
General Education or Elective Course	6 crs.

Junior Year

Fifth Semester	18 credits
BIO 120 General Zoology	4 crs.
EDF 302 Applied Instructional Technology	3 crs.
EAS 163 Introduction to Oceanography	3 crs.
EDS 465 Developmental Reading in the Secondary School	3 crs.
General Education or Elective Course	6 crs.

Sixth Semester	16-17 credits
BIO 125 General Botany	4 crs.
EDS 430 Educational Tests and Measurements	3 crs.
Sceince Elective	3-4 crs.
General Education or Elective Courses	6 crs.

Senior Year

Seventh Semester	18-19 credits
EDU 340 Mainstreaming Exceptional Learners	3 crs.
EDS 467 Teaching of Science in Secondary Schools	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
Science Elective	3-4 crs.
General Education or Elective Courses	6 crs.

Eighth Semester	12 credits
Student Teaching	12 crs.

Communication Disorders

Purpose

The Communication Disorders program, accredited by the Council on Academic Accreditation (CAA) of the American Speech, Language and Hearing Association (ASHA), provides students with 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. This degree is the first step in becoming a certified speech-language pathologist (SLP). SLPs work with patients of all ages and a wide variety of disorders, such as stuttering, "stroke," learning disability, birth defects, serious disease, hearing impairment, and voice disorders.

According to the 1995 Money Magazine report on the "Fifty Hottest Jobs," speech-language pathology was ranked number 11 and will be one of the fastest growing jobs over the next five years. The US Department of Labor's Bureau of Labor Statistics 1994-1995 Occupational Handbook states that SLP positions are expected to grow. Today's changing popluation contributes to the growth of he field. The younger population has a growing incidence of head, neck and brain injuries that cuase speec and language disorders, and the aging population is more suseptible to hearing loss, stoke, brain pathology and other communication disorders.

The objectives of the program are to:
Develop an understanding of the basic acoustical, anatomical and neurological development of normal speech, language and hearing,
Develop knowledge of the various disorders affecting speech and language and the underlying pathologies and symptoms of the disorders,
Create awareness of the instruments and procedures available to assess speech and language disorders and develop the ability to select and use such instruments correctly,
Develop the clinical skills to effectively perform therapeutic procedures to correct or improve speech and language disorders, and
Instill the principles and practices of ethical professional behavior.

Program

The BSED in Communication Disorders (CMD) is a pre-professional degree program. Students, therefore, should be aware that they are preparing for future graduate training before employment as a speech-language pathologist (SLP) is possible. It is important to maintain a QPA of 3.0 or higher because few graduate schools will accept less.

Some students choose not to study beyond the bachelors degree level, and seek employment without earning a masters degree. Assistant-level certification is currently being considered by ASHA, and it is possible that employment with only a bachelors degree may soon be available. Students who do not choose to continue their education at the masters level will find that a bachelors degree in Communication Disorders may be used for entry into related careers.

Clinical Experience

Students must experience "hands-on" clinical contact early in their program of study, and the Department of Communication Disorders provides such contact by having students in this program:

Work in the Department's Pre-School Program, which offers a developmentally appropriate curriculum for three to five year-old children within a classroom setting.

Assist in providing diagnostic and therapeutic services in the Speech & Hearing Clinic housed within the Department. Clients include stoke patients, stutterers, language delayed children, as well as individuals with voice disorders,traumatic brain injuries, and other speech and language disorders.

Assist in the Department's Audiology Clinic where comprehensive hearing evaluations are provided to the pediatric and adult population

Bachelor of Science in Education in Communication Disorders - 128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (72 credits)

Communication Disorders Courses (36 credits)	
CMD 100 Survey of Speech Pathology	3 crs.
CMD 105 Language and Speech Development	3 crs.
CMD 203 Phonetics	3 crs.
CMD 204 Anatomy and Physiology	3 crs.
CMD 215 Speech Science	3 crs.
CMD 216 Articulation	3 crs.
CMD 218 Introduction to Clinical Procedures	3 crs.
CMD 220 Communication Across the Lifespan	3 crs.
CMD 300 Speech Pathology I	3 crs.
CMD 301 Speech Pathology II	3 crs.
CMD 305 Introduction to Audiology	3 crs.
CMD 320 Assessment of Speech and Language	3 crs.
CMD 108 Nature of Language	3 crs.
CMD 400 Clinical Practicum	Variable crs.
	(A maximum of 6 credits)

Related Professional Courses (24 credits)

Additional courses may be selected with advisor's approval from the following list:

EDF 290 Policy Studies in American Education	3 crs.
EDF 301 Computers for Teachers	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming Exceptional Learners	3 crs.
XGE 101 Introduction to Gerontology	3 crs.
PSY 205 Child Psychology	3 crs.
PSY 207 Developmental Psychology	3 crs.
PSY 208 Educational Psychology	3 crs.
PSY 225 Psychological Statistics	3 crs.

Bachelor of Science in Education in Communication Disorders

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester. The schedules for the sophomore and junior years will be determined by the departmental course rotation. Students may complete a maximum of six credits in CMD 400 Clinical Practicum.

Freshman Year

First Semester	16 credits
CMD 100 Survey of Speech Pathology	3 crs.
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	9 crs.

Second Semester	15-18 credits
CMD 105 Language and Speech Development	3 crs.
CMd 108 Nature of Language	3 crs.
CMD 203 Phonetics	3 crs.
ENG 102 English Composition II	3 crs.
General Education Courses	3-6 crs.

Sophomore/Junior Year

Third/Fifth Semester	16 credits
CMD 215 Speech Science	3 crs.
CMD 216 Articulation	3 crs.
CMD 300 Speech Pathology I	3 crs.
CMD 400 Clinical Practicum	1 cr.
General Education or Related Courses	6 crs.

Fourth/Sixth Semester	16-19 credits
CMD 204 Anatomy and Physiology	3 crs.
CMD 220 Communication Across Lifespan	3 crs.
CMD 305 Introduction to Audiology	3 crs.
CMD 400 Clinical Practicum	1 cr.
General Education or Related Courses	6-9 crs.

Sophomore/Junior Year

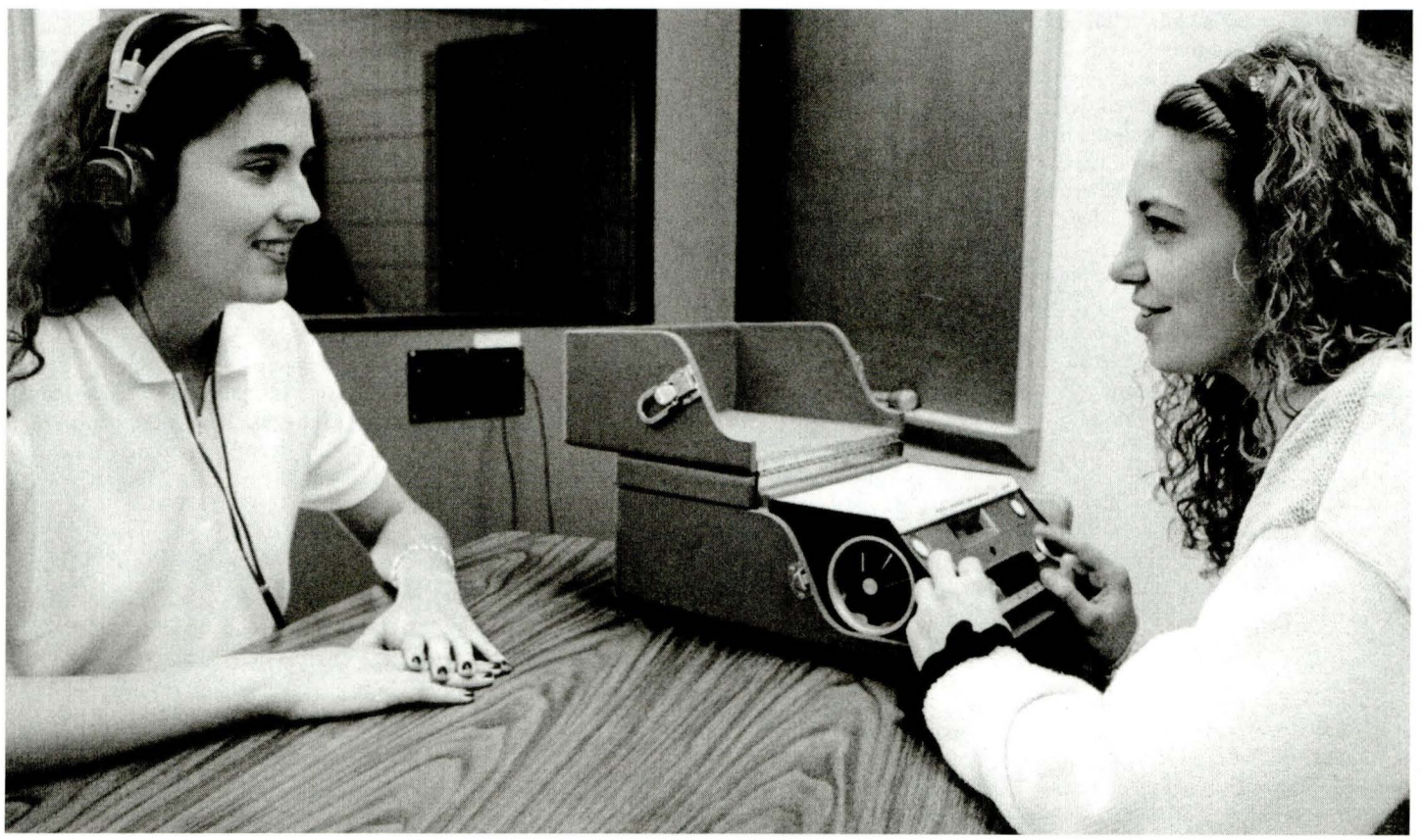
Third/Fifth Semester	16 credits
CMD 301 Speech Pathology II	3 crs.
CMD 400 Clinical Practicum	1 cr.
General Education or Related Courses	9 crs.

Fourth/Sixth Semester	16 credits
CMD 320 Assessment of Speech and Language	3 crs.
CMD 400 Clinical Practicum	1 cr.
General Education or Related Courses	12 crs.

Senior Year

Seventh Semester	18 credits
CMD 218 Introduction to Clinical Procedures	3 crs.
CMD 400 Clinical Practicum	1-3 crs.
General Education or Related Courses	12 crs.

Eighth Semester	13-18 credits
CMD 400 Clinical Practicum	1-3 crs.
General Education or Related Courses	12-15 crs.



Communication Studies

Purpose

Communication Studies is the discipline that focuses on human communicative behavior and its influence on our personal, professional, social and cultural lives. The faculty in Communication Studies believes that human communication is fundamental to an individual's capacity to function as an effective and ethical participant in an information society. To that end, students should understand communication from both broad theoretical and specifically applied perspectives. Accordingly, the department offers courses and activities designed to help students deal with the demands of varied communication situations. The curriculum provides the student with an opportunity:
to understand more fully the human communication process and how it affects the ways people interact when making decisions, developing relationships, and influencing each other, and
to develop communication skills which enhance the individual person's capacity to function in communication situations at work, home, social gatherings, and in civic organizations.

Programs

Students majoring in Communication Studies have four academic program options:
The Speech Communication Concentration focuses on developing an understanding of the uniquely human capacity for producing and using symbols. Throughout life, during nearly every conscious minute, humans are either formulating messages or passing judgment on the messages formulated by others. Students in this program develop an understanding of and skill in the human ability to share and examine facts, ideas, opinions, values, and attitudes.

The Radio/Television Concentration emphasizes the application of mass communication theory to audio and video production. The electronic communication media have had an immense impact on human communication. Understanding the dynamics of these technologies and their effects is the most important focus on this degree program. Graduates will have an understanding of the dynamics, as well as skills necessary to function in entry level jobs in many organizations concerned with mediated messages.

The Public Relations Concentration seeks to create graduates who understand how public opinion emerges and changes. It seeks to provide the tools graduates will need for helping clients track changes in public opinion and create messages using an ever increasing variety of media. Students who complete the degree requirements may advise a wide variety of organizations regarding their publics' responses to policies, programs, campaigns, and messages.

The fourth Concentration is for persons who want to teach in the area of Communication. The Communication Studies Department in cooperation with the College of Education and Human Services provides course work necessary for secondary school certification in communication with a speech concentration.

In addition to the four options identified above, students majoring in any other program on campus may minor in one of three minor concentrations available in Communication Studies – Public Communication, Public Relations, and Television Production. Successful completion of any of the three minor programs requires that the student complete twenty-one (21) credits.

The academic programs are enhanced by co-curricular activities. In addition, junior and senior students who have maintained a 3.0 grade point average are encouraged to seek internship opportunities in regional radio-television studios, public relations agencies, advertising firms, municipal governments, school districts, hospitals, labor organizations, and businesses.

The on-campus television studio and radio station provide students with "hands-on" production experience in the electronic media. The television studio supports student video production. The radio station, WVCS, broadcasts regionally. It is a student-operated and student-managed station.

Honor Society

Pi Kappa Delta is the honor society for intercollegiate debaters, individual events competitors, and teachers of communication. The Penn Zeta Chapter was organized in 1963. Undergraduate students can achieve membership in this society if they meet the minimum standards of forensic participation and are extended an invitation to join. Further information can be obtained at the departmental office.

Awards

Each year the faculty in Communication Studies selects a deserving graduating senior as an Outstanding Graduate. The honoree receives a plaque, a one-year membership in the National Communication Association, the national organization for communication professionals, and a one year subscription to one of its five professional journals.

Careers

Aside from the obvious careers in broadcast journalism or public relations, graduates can obtain positions in management training programs, as speech writers and as salespeople. Communicating effectively and evaluating the communication efforts of others are inescapable activities associated with any job. By understanding the theory and mastering the skills associated with a Communication Studies degree program, graduates who can demonstrate their capabilities make themselves attractive to a wide variety of employers.

An undergraduate major or minor in Communication Studies is an asset for careers in law, religion, education, labor relations, politics, marketing and human resource development. Unless one seeks employment in which highly technical, specialized knowledge is required (e.g. accounting, medical technology, computer programming, and others) the career opportunities with a Communication Studies degree are extensive. Those considering a degree in this department are urged to consult with the chairperson or other faculty in the department to identify additional possibilities.

Bachelor of Arts in Communication Studies

General Education (51-54 Credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (42 credits)

Required Courses (15 credits)

COM 100 Perspectives on Communication	3 crs.
COM 107 Fundamentals of Discussion OR COM 102 Group Discussion Management	3 crs.
COM 105 Survey of Radio, Television, and Film	3 crs.
COM 481 Communication Research Techniques	3 crs.
COM 490 Communication Theory	3 crs.

Concentration (27 Credits)

Students should select one of the following concentrations

Speech Communication Concentration

Required Speech Communication Courses (18 credits)

COM 165 Interpersonal Communication	3 crs.
COM 210 Voice and Articulation OR COM 224 Introduction to Oral Interpretation	3 crs.
COM 230 Argumentation and Debate	3 crs.
COM 350 Persuasion	3 crs.
COM 370 Public Communication Law and Policy	3 crs.
COM 461 Communication Criticism	3 crs.

Speech Communication Electives: (9 credits with at least 3 credits at the 300 or 400 level)

COM 141 Audio Production I	3 crs.
COM 142 Video Production I	3 crs.
COM 235 Presidential Rhetoric	3 crs.
COM 315 Language and Behavior	3 crs.
COM 324 Advanced Oral Interpretation	3 crs.
COM 445 Radio & Television in a Free Society	3 crs.
COM 463 Media Criticism	3 crs.

Radio and TV Concentration (27 credits)

Required Courses (12 credits):

COM 141 Audio Production I	3 crs.
COM 142 Video Production I	3 crs.
COM 445 Radio & Television in a Free Society	3 crs.
COM 463 Media Criticism	3 crs.

Writing Electives (6 credits):

COM 331 Radio & Television Commercials	3 crs.
COM 332 Radio & Television News	3 crs.
COM 335 Radio & Television Drama	3 crs.

Management Electives (3 credits)

COM 355 Broadcast Management	3 crs.
COM 370 Public Communication Law & Policy	3 crs.
COM 410 Professional Video Communications	3 crs.

Performance or Production Electives (6 credits from one area)

Performance:

COM 210 Voice and Articulation	3 crs.
COM 224 Introduction to Oral Interpretation	3 crs.
COM 246 Radio & Television Announcing	3 crs.
COM 336 Broadcast Reporting	3 crs.

Production:

COM 241 Audio Production II	3 crs.
COM 242 Video Production II	c res.
COM 341 Audio Aesthetics & Applications	3 crs.
COM 342 Video Aesthetics & Applications	3 crs.

Public Relations Concentration (27 credits)

Required Public Relations Courses (18 credits)

COM 203 Introduction to Public Relations	3 crs.
COM 303 Public Relations Applications	3 crs.
COM 370 Communication Law and Policy	3 crs.
COM 438 Public Relations Campaign Management	3 crs.
COM 484 Public Relations Cases & Problems	3 crs.
GCT 240 Electronic Desktop Publishing	3 crs.

Writing Courses (9 credits):

ENG 167 Journalism I	3 crs.
ENG 375 Advanced Writing OR ENG 435 Article Writing	3 crs.
COM 331 Radio & Television Commercials OR ENG 401 Copywriting OR ENG 437 Advertising	3 crs.

Electives and/or Minor (32-35 Credits)

Bachelor of Science in Education: Certification in Communication (Speech Concentration) for Secondary School

General Education (51-54 Credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Professional Education (41 credits)

EDF 290 Policy Studies in American Ed	3 crs.
EDF 301 Computers for Teachers	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDS 300 Problems of Secondary Education	3 crs.
EDS 430 Educational Tests & Measurements	3 crs.
EDS 461 Student Teaching & School Law	12 crs.
EDS 465 Developmental Reading in Secondary Schools	2 crs.
EDS 467 Teaching of Sciences OR EDS 445 Modern Methods in Secondary Schools with advisor's approval	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming the Exceptional Child	3 crs.
PSY 208 Educational Psychology	3 crs.

Academic Specialization: Speech Concentration (45 credits)

ENGLISH: (18 credits)

ENG 345 English Grammar and Usage	3 crs.
ENG 375 Advanced Writing	3 crs.
ENG 301 English Literature I OR ENG 302 English Literature II	3 crs.
ENG 425 Shakespeare	3 crs.
ENG 337 Survey of American Literature I	3 crs.
ENG 338 Survey of American Literature II	3 crs.

THEATRE (6 credits)

THE 131 Fundamentals of Acting	3 crs.
THE 141 Stagecraft I	3 crs.
THE 320 Fundamentals of Directing	3 crs.
THE 350-358 Practicum	variable crs.

COMMUNICATION (15 credits)

COM 141 Audio Production I OR COM 142 Video Production	3 crs.
COM 201 Intercollegiate Forensic Activities	3 crs.
COM 224 Introduction to Oral Interpretation	3 crs.
COM 230 Argumentation and Debate	3 crs.
COM 350 Persuasion	3 crs.

Select one of the following: (3 credits)
COM 315 Language and Behavior 3 crs.
COM 461 Communication Criticism 3 crs.
COM 481 Communication Research Techniques 3 crs.

Select one of the following: (3 credits)
COM 242 Video Production II 3 crs.
COM 324 Advanced Oral Interpretation 3 crs.
Pennsylvania Certification requires a satisfactory score on the Praxis II.

Minor in Communication Studies

Concentration in Public Communication—21 credits

Required Courses (21 credits)
COM 101 Oral Communication 3 crs.
COM 105 Survey of Radio, TV, & Film 3 crs.
COM 203 Introduction to Public Relations 3 crs.
COM 235 Presidential Rhetoric 3 crs.
COM 370 Public Communication Law & Policy 3 crs.
COM 445 Radio & TV in a Free Society 3 crs.
COM 461 Communication Criticism 3 crs.

Concentration in Public Relations—21 credits

Required courses (21 credits)
COM 203 Introduction to Public Relations 3 crs.
COM 303 Public Relations Applications 3 crs.
COM 315 Language and Behavior 3 crs.
COM 370 Public Communication Law & Policy 3 crs.
COM 438 Public Relations Campaign Management 3 crs.
COM 481 Communication Research Techniques 3 crs.
COM 484 Public Relations Cases and Problems 3 crs.

Concentration in Television Production—21 credits

Required courses (12 credits)
COM 105 Survey of Radio, TV, and Film 3 crs.
COM 141 Audio Production I 3 crs.
COM 142 Video Production I 3 crs.
COM 242 Video Production II 3 crs.

Writing Electives (6 credits)
Select two courses from the following list:
COM 331 Radio & Television Commercials 3 crs.
COM 332 Radio & Television News 3 crs.
COM 335 Radio & Television Drama 3 crs.

Electives (3 credits)
Select one course from the following list:
COM 336 Broadcast Reporting 3 crs.
COM 360 Appreciation of Film 3 crs.
COM 410 Professional Video Communications 3 crs.

Bachelor of Arts in Communication Studies Speech Communication Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester 16 credits
COM 100 Perspectives on Communication 3 crs.
COM 101 Oral Communication 3 crs.
UNI 100 First Year Seminar 1 cr.
ENG 101 English Composition I 3 crs.
General Education courses 6 crs.

Second Semester 15 credits
COM 105 Survey of Radio, Television, and Film 3 crs.
COM 107 Fundamentals of Discussion or COM 102 Group Discussion Management 3 crs.
ENG 102 English Composition II 3 crs.
General Education Courses 6 credits

Sophomore Year

Third Semester 15-18 credits
COM 165 Interpersonal Communication 3 crs.
COM 210 Voice and Articulation or COM 224 Introduction to Oral Interpretation 3 crs.
General Education, Minor or Elective Courses 9-12 crs.

Fourth Semester 15-18 credits
COM 230 Argumentation and Debate 3 crs.
Communication Studies Elective 3 crs.
General Education, Minor, or Elective Courses 9-12 crs.

Junior Year

Fifth Semester 15-18 credits
COM 350 Persuasion 3 crs.
COM 461 Communication Criticism 3 crs.
Communication Studies Elective 3 crs.
General Education, Minor or Elective Courses 6-9 crs.

Sixth Semester 15-18 credits
COM 370 Public Communication Law and Policy 3 crs.
Communication Studies Elective 3 crs.
General Education, Minor, or Elective Courses 9-12 crs.

Senior Year

Seventh Semester 15-18 credits
COM 481 Communication Research Techniques 3 crs.
General Education, Minor or Elective Courses 12-15 crs.

Eighth Semester 15-18 credits
COM 490 Communication Theory 3 crs.
General Education, Minor, or Elective Courses 12-15 crs.

Bachelor of Science in Education: Certification in Communication (Speech Concentration) for Secondary Schools

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
UNI 100 First Year Seminar	1 cr.
ENG 101 English Composition I	3 crs.
General Education courses	12 crs.
Second Semester	**15-18 credits**
ENG 102 English Composition II	3 crs.
THE Elective	3 crs.
General Education Courses	9-12 crs.

Sophomore Year

Third Semester	15-18 credits
COM 224 Introduction to Oral Interpretation	3 crs.
ENG 337 Survey of American Literature I	3 crs.
PSY 208 Educational Psychology	3 crs.
THE Elective	3 crs.
General Education, Minor or Elective Course	3-6 crs.
Fourth Semester	**18 credits**
COM 230 Argumentation and Debate	3 crs.
COM 141 Audio Production I or	
COM 142 Video Production I	3 crs.
EDF 290 Policy Stuies in American Education	3 crs.
EDF 301 Computers for Teachers	3 crs.
ENG 338 Survey of American Literature II	3 crs.
General Education, Minor, or Elective Courses	3 crs.

Junior Year

Fifth Semester	15-18 credits
COM 350 Persuasion	3 crs.
COM 201 Intercollegiate Forensic Activities	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
ENG 301 English Literature I OR	
ENG 302 English Literature II	3 crs.
General Education, Minor or Elective Courses	3-6 crs.
Sixth Semester	**17 credits**
EDS 300 Problems of Secondary Education	3 crs.
EDS 430 Educational Tests & Measurements	3 crs.
EDS 465 Developmental REading in Secondary Schools	2 crs.
ENG 425 Shakespeare	3 crs.
ENG 345 English Graqmmar and Usage	3 crs.
General Education, Minor, or Elective Course	3 crs.

Senior Year

Seventh Semester	15-18 credits
ENG 375 Advanced Writing	3 crs.
EDS 440 Teaching of English in Secondary Schools	3 crs.
EDU 210 Teching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming Exceptional Learners	3 crs.
General Education, Minor or Elective Courses	3-6 crs.
Eighth Semester	**12 credits**
Student Teaching	12 crs.

Bachelor of Arts in Communication Studies Radio/Television Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
COM 100 Perspectives on Communication	3 crs.
COM 101 Oral Communication	3 crs.
COM 141 Audio Production I	3 crs.
UNI 100 First Year Seminar	1 cr.
ENG 101 English Composition I	3 crs.
General Education courses	3 crs.
Second Semester	**15 credits**
COM 105 Survey of Radio, Television, and Film	3 crs.
COM 107 Fundamentals of Discussion or COM 102 Group Discussion Management	3 crs.
COM 142 Video Production I	3 crs.
ENG 102 English Composition II	3 crs.
General Education Courses	3 credits

Sophomore Year

Third Semester	15-18 credits
Communication Studies Elective (Performance, Production, or Writing)	3 crs.
General Education, Minor or Elective Courses	12-15 crs.
Fourth Semester	**15-18 credits**
Communication Studies Elective (Performance, Production, or Writing)	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Junior Year

Fifth Semester	15-18 credits
Communication Studies Elective (Performance, Production, or Writing)	3 crs.
Communication Studies Elective (Management)	3 crs.
General Education, Minor or Elective Courses	9-12 crs.
Sixth Semester	**15-18 credits**
COM 463 Media Criticism	3 crs.
Communication Studies Elective (Performance, Production, or Writing)	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Senior Year

Seventh Semester	15-18 credits
COM 481 Communication Research Techniques	3 crs.
General Education, Minor or Elective Courses	12-15 crs.
Eighth Semester	**15-18 credits**
COM 445 Radio & Television in a Free Society	3 crs.
COM 490 Communication Theory	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Bachelor of Arts in Communication Studies Public Relations Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester — 16 credits

COM 100 Perspectives on Communication	3 crs.
COM 101 Oral Communication	3 crs.
UNI 100 First Year Seminar	1 cr.
ENG 101 English Composition I	3 crs.
General Education courses	6 crs.

Second Semester — 15 credits

COM 105 Survey of Radio, Television, and Film	3 crs.
COM 107 Fundamentals of Discussion or COM 102 Group Discussion Management	3 crs.
ENG 102 English Composition II	3 crs.
General Education Courses	6 credits

Sophomore Year

Third Semester — 15-18 credits

ENG 167 Journalism I	3 crs.
General Education, Minor or Elective Courses	12-15 crs.

(MGT 201 Principles of Management – recommended elective)

Fourth Semester — 15-18 credits

GCT 240 Electronic Desktop Publishing	3 crs.
General Education, Minor, OR Elective Courses	12-15 crs.

Junior Year

Fifth Semester — 15-18 credits

COM 203 Introduction to Public Relations	3 crs.
ENG 375 Advanced Writing OR ENG 435 Article Writing	3 crs.
General Education, Minor OR Elective Courses	9-12 crs.

(MKT 301 Principles of Marketing – recommended elective)

Sixth Semester — 15-18 credits

COM 303 Public Relations Applications	3 crs.
COM 370 Communication Law and Policy	3 crs.
COM 331 Radio & Television Commercials or ENG 401 Copywriting or ENG 437 Advertising	3 crs.
General Education, Minor, or Elective Courses	6-9 crs.

Senior Year

Seventh Semester — 15-18 credits

COM 438 Public Relations Campaign Management	3 crs.
COM 481 Communication Research Techniques	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Eighth Semester — 15-18 credits

COM 484 Public Relations Cases & Problems	3 crs.
COM 490 Communication Theory	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Earth Science

Purpose

The Department of Earth Science is committed to the practical advancement of knowledge; to serving the local, national, and world community; and to the education of earth scientists and geographers. To fulfill this commitment, the department offers a broad spectrum of courses, tutoring, research, and services that enable a student, with the help of an advisor, to acquire a body of knowledge and variety of skills that serve as a basis for a professional career. The department is also committed to research and to the enhancement of the human condition through cooperation with individuals, communities, departments, institutions, organizations, and government agencies.

The department provides students with opportunities to work with modern technologies, software, data bases, and field methods. In addition to the traditional courses, the department offers field courses designed to give practical experiences.

The Department of Earth Science has adopted a holistic philosophy of geography and the earth sciences that lays the foundation for interdisciplinary relationships. Traditional academic disciplines, such as physical geography, cultural geography, regional geography, and economic geography, or divisions such as meteorology, geomorphology, and hydrology, are presented in a manner that ties together information or principles from related disciplines. The goal of the department is to produce a well-rounded, well-trained individual who is ready for a professional career.

Programs

The Earth Science major has four concentrations: Environmental Earth Science, Operational Meteorology, Hydro-Meteorology, and Broadcast Meteorology. The Geography major has three concentrations: Planning, Geographic Information Science, and Travel and Tourism. In addition, there are three single concentration majors: Geology, International Studies: Geography, and Parks and Recreation Management. The department, in conjunction with the College of Education and Human Services, provides a teacher certification program for those interested teaching Earth Science in secondary schools.

Honors

The national Earth Science honor society, Sigma Gamma Epsilon, has a chapter (Alpha Zeta) on campus. Students recognized for their academic and professional achievements are elected to it. Honor students in Geography are eligible for induction into Gamma Theta Upsilon. Membership is also available to students of high scholastic attainment in the California University Chapter of Rho Phi Lambda Fraternity, the professional honor society for parks and recreation majors.

Careers

A student who desires a professional career in the earth sciences or in geography in most instances will need to have an advanced degree. This is the case for such professions as geologist, meteorologist, hydrologist, climatologist, environmental geologist, regional planner, and cartographer. Undergraduates seeking employment, however, will find opportunities in businesses undertaking environmental assessments.

Students with undergraduate majors in Parks and Recreation Management or Travel and Tourism can enter directly the job market, in such positions as directors or staff persons in schools, governmental agencies (municipal and military, for example), industries or resorts with recreational programs or as travel managers, sales staff or meeting planners.

Bachelor of Science in Earth Science – 128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (64 credits)

Required Earth Science and Geography Courses (22 credits):

EAS 100 Introduction to Earth Science	3 crs.
EAS 150 Introduction to Geology	4 crs.
EAS 163 Introduction to Oceanography	3 crs.
EAS 202 Hydrology	3 crs.
EAS 241 Meteorology	3 crs.
EAS 242 Climatology	3 crs.
GEO 110 Map Principles	3 crs.

Concentrations (42 credits)

Students may select one of the following concentrations:

Environmental Earth Science Concentration

Required Environmental Earth Science Courses (6 credits):

EAS 131 Introduction to Environmental Geology	3 crs.
EAS 541 Advanced Environmental Geology	3 crs.

Required Biological & Environmental Science Courses (6 credits):

BIO 103 Contemporary Issues in Biology	3 crs.
ENS 101 Introduction to Environmental Science	3 crs.

Quantitative Electives (9 credits)
Select three courses from the following list:

EAS 353 Statistical Atmospheric Science	3 crs.
EAS 538 Computer Applications in Water Resources	3 crs.
MAT 191 College Trigonometry OR	
MAT 192 Technical Math II	3 crs.
MAT 199 Pre-Calculus	3 crs.
MAT 215 Statistics	3 crs.
MAT 225 Business Statistics	3 crs.
MAT 273 Basic Calculus	3 crs.
MAT 281 Calculus I	3 crs.
MAT 282 Calculus II	3 crs.
MAT 303 Geometry	3 crs.
MAT 381 Calculus III	3 crs.
MAT 382 Calculus IV	3 crs.
MAT 406 Differential Equations	3 crs.

Earth Science Electives (21 credits):
Courses must be selected from the following lists. A minimum of six (6) credits must be taken from each group. At least nine (9) credits must be taken at the 300 level or above.
Lithospheric Electives

EAS 160 Physical Geography	3 crs.
EAS 200 Historical Geology	4 crs.*
EAS 331 Mineralogy	3 crs.
EAS 332 Petrology	3 crs.

EAS 343 Geomorphology 3 crs.
EAS 421 Sedimentology 3 crs.*
EAS 422 Stratigraphy 3 crs.
EAS 425 Structural Geology 3 crs.
EAS 527 Tectonics 3 crs.
EAS 563 Coastal Geomorphology 3 crs.
GEO 520 Physiography of the United States 3 crs.

Atmospheric/Hydrologic Electives
EAS 340 Synoptic Meteorology I 3 crs.
EAS 345 Synoptic Meteorology II 3 crs.
EAS 352 Thermodynamic Meteorology 3 crs.
EAS 361 Weather Analysis 3 crs.
EAS 371 Weather Forecasting 3 crs.
EAS 381 Severe Weather 3 crs.
EAS 385 Hydro-Meteorology 3 crs.
EAS 402 Groundwater Hydrology 3 crs.*
EAS 465 Seminar in Atmospheric Science 3 crs.*
EAS 542 Applied Climatology 3 crs.
EAS 548 Watershed Evaluation 3 crs.

Techniques Electives
EAS 273 Computer Cartography 3 crs.
EAS 335 Remote Sensing: Map and Aerial Photo Interpretation 3 crs.
EAS 365 Remote Sensing: Satellite and Radar Interpretation 3 crs.
EAS 431 Practicum in Broadcast Meteorology I 3 crs.
EAS 538 Computer Applications in Water Resources 3 crs.
GEO 311 Geographic Information Systems 3 crs.
GEO 317 Land Use Analysis 3 crs.
GEO 479 Internship Variable crs.

Operational Meteorology Concentration

Required Meteorology Courses (33 credits)
EAS 340 Synoptic Meteorology I 3 crs.
EAS 345 Synoptic Meteorology II 3 crs.
EAS 352 Thermodynamic Meteorology 3 crs.
EAS 353 Statistical Atmospheric Science 3 crs.*
EAS 361 Weather Analysis 3 crs.
EAS 365 Remote Sensing: Satellite and Radar Interpretation 3 crs.
EAS 371 Weather Forecasting 3 crs.
EAS 381 Severe Weather 3 crs.
EAS 385 Hydro-Meteorology 3 crs.
EAS 465 Seminar in Atmospheric Science 3 crs.*
EAS 542 Applied Climatology 3 crs.

Quantitative Electives to be chosen from the following (Select 9 credits):
MAT 191 College Trigonometry OR MAT 192 Technical Mathematics II 3 crs.
MAT 199 Pre-Calculus 3 crs.
MAT 215 Statistics 3 crs.
MAT 225 Business Statistics 3 crs.
MAT 273 Basic Calculus 3 crs.
MAT 281 Calculus I 3 crs.
MAT 282 Calculus II 3 crs.
MAT 303 Geometry 3 crs.
MAT 381 Calculus III 3 crs.
MAT 406 Differential Equations 3 crs.

The following courses are recommended for General Education and Electives.
CHE 101 General Chemistry I 4 crs. (Natural Science)
GEO 100 Introduction to Geography 3 crs. (Social Science)
GEO 220 Geography of U.S. and PA 3 crs. (Social Science)
GEO 479 Internship Variable crs. (Elective)
MAT 181 College Algebra 3 crs. (Mathematics)
PHY 101 College Physics I OR
PHY 121 General Physics I 4 crs. (Natural Science)
PHY 122 General Physics II OR
PHY 202 College Physics II 4 crs. (Natural Science)

Water Resources Concentration

Quantitative courses to be chosen from the following (select 9 credits)
MAT 181 College Algebra OR MAT 182 Tec Mathematics I 3 crs.
MAT 191 College Trigonometry OR
MAT 192 Tech Mathematics II 3 crs.
MAT 199 Pre-Calculus 3 crs.
MAT 215 Statistics 3 crs.
MAT 273 Basic Calculus 3 crs.

A total of 33 credits must be taken in the following three elective categories with a minimum of six (6) credits in each.

Lithospheric Electives (choose minimum of 6 credits):
EAS 131 Introduction to Environmental Geology 3 crs.
EAS 160 Physical Geography 3.crs.
EAS 200 Historical Geology 3 crs.
EAS 232 Earth Resources 3 crs
EAS 331 Mineralogy 3 crs.
EAS 332 Petrology 3 crs.
EAS 343 Geomorphology 3 crs.
EAS 421 Sedimentology 3 crs.
EAS 422 Stratigraphy 3 crs.
EAS 425 Structural Geology 3 crs.
EAS 527 Tectonics 3 crs.
EAS 541 Advanced Environmental Geology 3 crs.
EAS 563 Coastal Geomorphology 3 crs.
GEO 520 Physiography 3 crs.

Atmospheric/Hydrologic/Biospheric Electives (choose minimum of 6 credits):
EAS 352 Thermodynamic Meteorology 3 crs.
EAS 353 Statistical Atmospheric Science 3 crs
EAS 385 Hydro-Meteorology 3 crs
EAS 402 Groundwater Hydrology 3 crs.
EAS 542 Applied Climatology 3 crs.
EAS 548 Watershed Evaluation 3 crs.
BIO 103 Contemporary Issues in Biology 3 crs.
ENS 101 Introduction to Environmental Science 3 crs.

Technique Electives(choose minimum of 6 credits)
EAS 273 Computer Cartography 3 crs.
EAS 317 Land Use 3 crs.
EAS 335 Remote Sensing: Map and Aerial Photo Interpreta 3 crs.
EAS 365 Remote Sensing: Satellite and Radar Interpretation 3 crs.
EAS 372 Field Mapping 3 crs.
EAS 373 Statistical Cartography 3 crs.
EAS 538 Computer Applications in Water Resources 3 crs.
GEO 123 Introduction to CAD/GIS 3 crs.
GEO 175 Introduction to Planning 3 crs.
GEO 311 Geographic Information Systems 3 crs.
GEO 474 Developing the Master Plan 3 crs.
GEO 479 Internship 3 crs.
GEO 550 Advanced Geographic Information Systems 3 crs.

Courses are also recommended from the following:
CHE 101 General Chemistry 4 crs.
PHY 101 College Physics I or PHY 121 General Physics 1 4 crs
PHY 122 General Physics II or CHE 102 Gen Chemistry II 4 crs.
CHE 136 Environmental Chemistry 4 crs.

Broadcast Meteorology Concentration

Required Atmospheric Science Courses (30 credits)

EAS 340 Synoptic Meteorology I	3 crs.
EAS 345 Synoptic Meteorology II	3 crs.
EAS 352 Thermodynamic Meteorology	3 crs.
EAS 353 Statistical Atmospheric Science	3 crs.*
EAS 361 Weather Analysis	3 crs.
EAS 365 Remote Sensing: Satellite and Radar Interpretation	3 crs.
EAS 371 Weather Forecasting	3 crs.
EAS 381 Severe Weather	3 crs.
EAS 465 Seminar in Atmospheric Science	3 crs.*
EAS 542 Applied Climatology	3 crs.

Required Broadcast Meteorology Courses (6 credits)

EAS 431 Practicum in Broadcast Meteorology I	3 crs.
EAS 432 Practicum in Broadcast Meteorology II	3 crs.

Required Communication Studies Courses (6 credits)

COM 142 Video Production I	3 crs.
COM 246 Radio and TV Announcing	3 crs.

The following courses are recommended for General Education and Electives.

CHE 101 General Chemistry I	4 crs. (Natural Science)
GEO 100 Introduction to Geography	3 crs. (Social Science)
GEO 220 Geography of U.S. and PA	3 crs. (Social Science)
GEO 479 Internship	Variable crs. (Elective)
COM 105 Survey of Radio, TV, and Film	3 crs. (Elective)
COM 210 Voice and Articulation or THE 101 Voice and Speech	3 crs. (Elective)
COM 242 Video Production II	3 crs. (Elective)
MAT 181 College Algebra	3 crs. (Mathematics)
PHY 121 General Physics I	4 crs. (Natural Science)
PHY 122 General Physics II	4 crs. (Natural Science)
THE 100 Introduction to Theatre	3 crs. (Fine Arts)
THE 131 Fundamentals of Acting	3 crs. (Elective)

* Writing Intensive Course

Electives (10-13 credits)

Bachelor of Science in Environmental Studies: Environmental Resources Concentration - 128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Required Core Courses (17 credits)

EAS 150 Introduction to Geology	4 crs.
EAS 200 Historical Geology	4 crs.
EAS 202 Hydrology	3 crs.
EAS 241 Meteorology	3 crs.
EAS 402 Groundwater Hydrology	3 crs.

Area of Specialization (15 credits)

AS 331 Mineralogy	3 crs.
EAS 332 Petrology	3 crs.
EAS 421 Sedimentology	3 crs.
EAS 425 Structural Geology	3 crs.
EAS 527 Tectonics	3 crs.

Other Science Requirements (12 credits)

CHE 101 General Chemistry I	4 crs.
PHY 121 General Physics	4 crs.
BIO 125 General Botany	4 crs.

Related Electives (20 credits)

BIO 310 General Ecology	4 crs.
EAS 163 Oceanography	3 crs.
EAS 242 Climatology	3 crs.
EAS 273 Computer Cartography	3 crs.
EAS 335 Remote Sensing: Map and Aerial Photo Interpretation	3 crs.
EAS 340 Synoptic Meteorology	3 crs.
EAS 343 Geomorphology	3 crs.
EAS 365 Remote Sensing: Satellite and Radar Interpretation	3 crs.
EAS 372 Field Mapping	3 crs.
EAS 373 Statistical Cartography	3 crs.
EAS 385 Hydrometeorology	3 crs.
EAS 538 Computer Applications in Water Resources	3 crs.
EAS 541 Advanced Environmental Geology	3 crs.
EAS 548 Watershed Evaluation	3 crs.
GEO 100 Map Principles	3 crs.
GEO 311 Geographic Information Systems	3 crs.
GEO 317 Land Use Analysis	3 crs.
GEO 362 Site Planning and Design	3 crs.
GEO 474 Developing the Master Plan	3 crs.
GEO 520 Physiography of the U.S.	3 crs.
BIO 206 Conservation Bio Res	4 crs.
CHE 255 Geochemistry	3 crs.
CHE 281 Environmental Chemistry	3 crs.

Electives (10-13 credits)

Bachelor of Science in Education: Certification in Environmental Education for Secondary Schools

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Professional Education (41 credits)

EDF 290 Policy Studies in American Ed	3 crs.
EDF 301 Computers for Teachers	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDS 300 Problems of Secondary Education	3 crs.
EDS 430 Educational Tests & Measurements	3 crs.
EDS 461 Student Teaching & School Law	12 crs.
EDS 465 Developmental Reading in Secondary Schools	2 crs.
EDS 467 Teaching of Sciences OR EDS 445 Modern Methods in Secondary Schools with advisor's approval	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming the Exceptional Child	3 crs.
PSY 208 Educational Psychology	3 crs.

Academic Specialization (38 credits)

Biology Courses (12 credits)

BIO 115 Principles of Biology	4 crs.

BIO 120 General Zoology 4 crs.
BIO 125 General Botany 4 crs.

Earth Science Courses (6 credits)
EAS 131 Introduction To Environmental Geology 3 crs.
EAS 232 Earth Resources 3 crs.

Social Science Courses (3 credits)
POS 220 Introduction to Public Administration OR
POS 300 Introduction to Public Policy 3 crs.

Related (17 credits)
GEO 374 Development & Management of Leisure Enterprises 3 crs.
EAS 492 Field Course in Geology 3 crs.
ENS 101 Introduction to Environmental Science 3 crs.
ENS 423 Wildlife Management Techniques 4 crs.
ENS 475 Wetlands Ecology 4 crs.
3 crs.

Pennsylvania Certification requires a satisfactory score on the Praxis II.

Bachelor of Arts in Geography - 128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (42-43 credits)

Required Geography Courses (18 credits):
GEO 100 Introduction to Geography 3 crs.
GEO 110 Map Principles 3 crs.
GEO 175 Introduction to Planning 3 crs.
GEO 317 Land Use Analysis 3 crs.
GEO 474 Developing the Master Plan 3 crs.*
GEO 479 Internship 3 crs.

Concentration (24-25credits)

Students may select one of the following concentrations

Planning Concentration

Required Planning Courses (9 credits):
GEO 200 Economic Geography 3 crs.
GEO 311 Geographic Information Systems 3 crs.
GEO 485 Seminar in Planning 3 crs.

Techniques Courses (6 credits)
Select two courses from the following list:
GEO 362 Site Planning & Design 3 crs.
GEO 550 Advanced Geographic Information Systems 3 crs.
EAS 273 Computer Cartography 3 crs.
EAS 335 Remote Sensing: Map and Aerial Interpretation 3 crs.
EAS 365 Remote Sensing: Satellite and Radar Interpretation 3 crs.
EAS 373 Statistical Cartography 3 crs.

Related Electives (9 credits)
Select three courses from the following list:
EAS 202 Hydrology 3 crs.
EAS 343 Geomorphology 3 crs.
EAS 402 Groundwater Hydrology 3 crs.
EAS 548 Watershed Evaluation 3 crs.
GEO 210 Urban Geography 3 crs.
GEO 217 Demographic Analysis 3 crs.
GEO 306 Marketing Geography 3 crs.
GEO 319 Transportation Geography 3 crs.
GEO 345 Political Geography 3 crs.
GEO 358 Comprehensive Travel Planning 3 crs.
GEO 374 Developing and Managing Leisure Enterprises 3 crs.
GEO 378 Recreation Industry Management 3 crs.

Geographic Information Sciences Concentration

Required Spatial Information System Courses (19 credits):
GEO 217 Demographic Analysis 3 crs.
GEO 311 Geographic Information Systems 3 crs.
GEO 319 Transportation Geography 3 crs.*
GEO 550 Advanced Geographic Information Systems 3 crs.
EAS 273 Computer Cartography 3 crs.
EAS 335 Remote Sensing: Map and Aerial Photo Interpretation 3 crs.

Required Computer Science Courses (6 Credits):
CSC 120 Problem Solving and Programming Constructs 3 crs.
CSC 223 C Programming 3 crs.

Travel And Tourism Concentration

Required Travel and Tourism Courses (24 credits)
GEO 150 Survey of Travel and Tourism 3 crs.
GEO 205 World Cities/Geography of Tourism 3 crs.
GEO 285 Retail Travel 3 crs.
GEO 311 Geographic Information Systems 3 crs.
GEO 350 Systems Applications for the Travel Industry 3 crs.
GEO 358 Comprehensive Travel Planning 3 crs.*
GEO 362 Site Planning & Design 3 crs.
GEO 425 Corporate Travel Operations 3 crs.

* Writing Intensive Course

Electives and/or Minor (31-35 credits)

Bachelor of Science in Geology - 128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (63 credits)

Required Earth Science Courses (38 credits):
EAS 131 Introduction to Environmental Geology 3 crs.
EAS 150 Introduction to Geology 4 crs.
EAS 200 Historical Geology 4 crs.
EAS 202 Hydrology 3 crs.
EAS 331 Mineralogy 3 crs.
EAS 332 Petrology 3 crs.
EAS 343 Geomorphology 3 crs.
EAS 402 Groundwater Hydrology 3 crs.*
EAS 421 Sedimentology 3 crs.*
EAS 422 Stratigraphy 3 crs.
EAS 425 Structural Geology 3 crs.
EAS 527 Tectonics 3 crs.

Required Chemistry and Physics Courses (16 credits):

CHE 101 General Chemistry I	4 crs.
CHE 102 General Chemistry II	4 crs.
PHY 121 General Physics I	4 crs.
PHY 122 General Physics II	4 crs.

Mathematics and/or Computer Science Electives (9 credits)

Electives (11-14 credits)

* Writing Intensive Course

Bachelor of Arts in International Studies: Geography Track - 128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (42 credits)

Geography (21 credits)

GEO 105 Human Geography	3 crs.
GEO 200 Economic Geography	3 crs.
GEO 325 Geography of Europe	3 crs.
GEO 328 Geography of Latin America	3 crs.
GEO 338 Geography of the Pacific Basin	3 crs.
Geography Elective at 300 or 400 level	3 crs.

Language (21 credits)
Select either FRE or SPN

203 Intermediate I	3 crs.
204 Intermediate II	3 crs.
311 Conversation, Composition and Phonetics I	3 crs.
312 Conversation, Composition and Phonetics II	3 crs.
Culture and Civilization Elective	3 crs.
Language Electives at the 400 level	6 crs.

Electives and/or Minor (32-35 credits)

Bachelor of Arts in Parks and Recreation Management - 128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48.

Major (42 credits)

Required Geography Courses (21 credits):

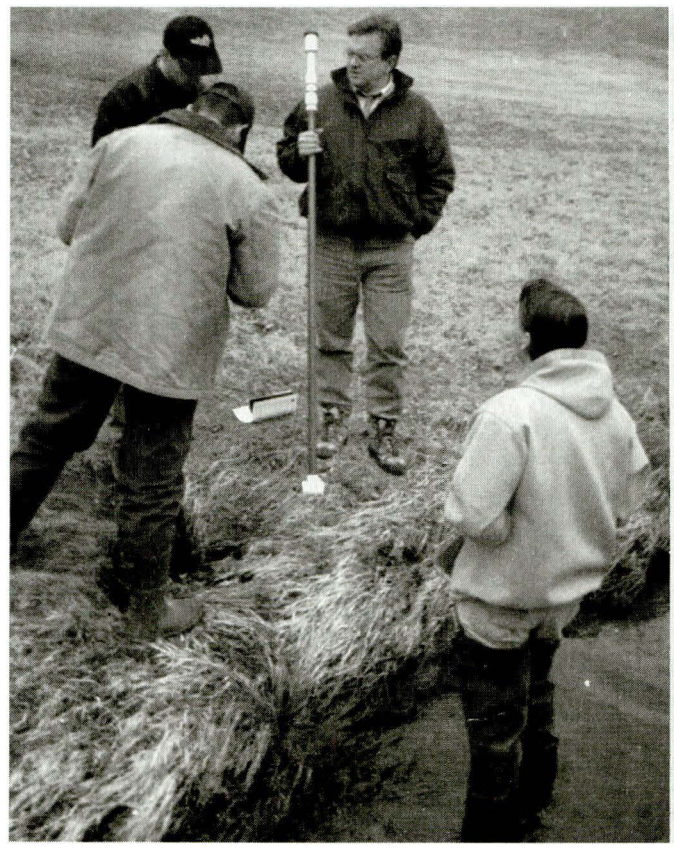
GEO 110 Map Principles	3 crs.
GEO 200 Economic Geography	3 crs.
GEO 362 Site Planning & Design	3 crs.
GEO 374 Developing & Managing Leisure Enterprises	3 crs.
GEO 378 Recreation Industry Management	3 crs.
GEO 412 Program Planning & Administration	3 crs.*
GEO 474 Developing the Master Plan	3 crs.*

Parks and Recreation Management Electives (15 credits)
Select courses from the following list:

GEO 105 Human Geography	3 crs.
GEO 150 Survey of Travel and Tourism	3 crs.
GEO 155 Hospitality Management and Operations	3 crs.
GEO 165 Introduction to Recreation and Leisure	3 crs.
GEO 210 Urban Geography	3 crs.
GEO 217 Demographic Analysis	3 crs.
GEO 220 Geography of U.S. & Pennsylvania	3 crs.
GEO 306 Marketing Geography	3 crs.
GEO 311 Geographic Information Systems	3 crs.
GEO 317 Land Use Analysis	3 crs.
GEO 365 Recreation Resource Management	3 crs.
GEO 358 Comprehensive Travel Planning	3 crs.*
GEO 479 Internship	Variable crs.

Related Electives (6 credits)
Select two courses the following list: **

BUS 100 Introduction to Business	3 crs.
COM 250 Oral Communication: Management	3 crs.
ENG 211 Business Writing I	3 crs.
MGT 201 Principles of Management	3 crs.
MGT 301 Organization Behavior	3 crs.
MGT 305 Small Business Management	3 crs.
MGT 352 Human Resource Management	3 crs.
MGT 362 Labor Relations	3 crs.
MKT 271 Principles of Marketing	3 crs.
MKT 341 Marketing for Non-Profit Organizations	3 crs.
POS 100 Introduction to Political Science	3 crs.
POS 105 American National Government	3 crs.
POS 205 Municipal Government	3 crs.



POS 220 Introduction to Public Administration 3 crs.
POS 300 Introduction to Public Policy 3 crs.
PSY 209 Industrial Psychology 3 crs.
SOW 150 Introduction to Social Work 3 crs.
SOW 208 Minority Group Relations 3 crs.
SOW 366 Policy Analysis/Service Delivery 3 crs.
** Some of these courses have prerequisites that are not included on the list of related electives.

Electives and/or Minor (31-35 credits)

* Writing Intensive Courses

Minor in Earth Science – 21 credits

Required Courses (12 credits)
EAS 150 Introduction to Geology 3 crs.
EAS 200 Historical Geology 3 crs.
EAS 346 Field Methods in Earth Science 3 crs.
EAS 541 Advanced Environmental Geology 3 crs.
Electives (9 credits)
Select three of the following:
EAS 163 Introduction to Oceanography 3 crs.
EAS 202 Hydrology 3 crs.
EAS 241 Meteorology 3 crs.
EAS 242 Climatology 3 crs.

Minor in Geology – 24 credits

EAS 150 Introduction to Geology 4 crs.
EAS 200 Historical Geology 4 crs.
EAS 331 Mineralogy OR EAS 421 Sedimentology 3 crs.
EAS 343 Geomorphology OR
EAS 437 Field Methods in Geology 3 crs.
EAS 425 Structural Geology OR EAS 527 Tectonics 3 crs.
EAS 437 Field Methods in Geology OR
EAS 492 Field Course in Geology 3 crs.
EAS 521 Advanced Environmental Geology 3 crs.

Minor in Geographic Information Science - 21 credits

UNI 150 Introduction to CAD/GIS 3 crs.
GEO 311 Geographic Information Systems 3 crs.
GEO 319 Transportation Geography 3 crs.
GEO 550 Advanced Geographic Information Systems 3 crs.
EAS 273 Computer Cartography 3 crs.
EAS 335 Remote Sensing: Map and
Aerial Photo Interpretation 3 crs.
EAS 365 Remote Sensing: Satellite and Radar Interpretation 3 crs.

Minor in Geography – 21 credits

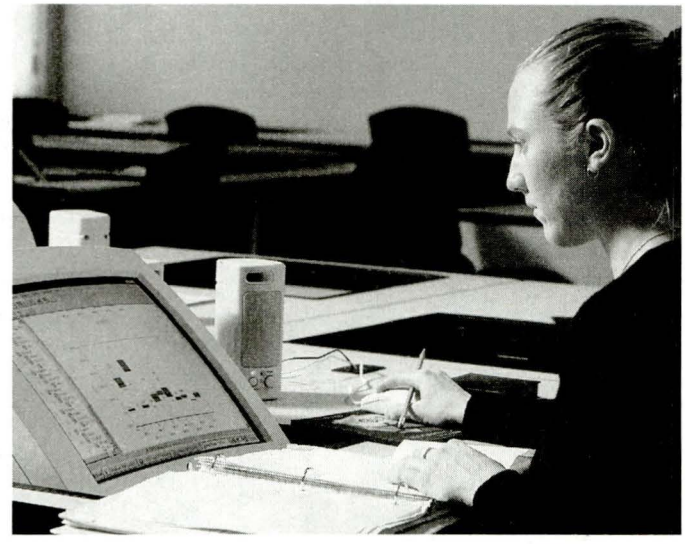
Required Courses (9 credits)
GEO 325 Geography of Europe 3 crs.
GEO 311 Geographic Information Systems OR
GEO 317 Land Use Analysis 3 crs.
GEO 345 Political Geography 3 crs.
Electives (12 credits)
Select four of the following:
GEO 100 Introduction to Geography 3 crs.
GEO 105 Human Geography 3 crs.
GEO 200 Economic Geography 3 crs.
GEO 210 Urban Geography 3 crs.
GEO 220 Geography of the U.S. and PA 3 crs.

Minor in Parks and Recreation - 21 credits

GEO 165 Introduction to Recreation and Leisure 3 crs.
GEO 365 Recreation Resource Management 3 crs.
GEO 362 Site Planning and Design 3 crs.
GEO 374 Developing and Managing Leisure Enterprises 3 crs.
GEO 378 Recreation Industry Management 3 crs.
GEO 412 Program Planning and Administration 3 crs.
GEO 474 Developing the Master Plan 3 crs.

Minor in Planning - 21 credits

GEO/IND123 Introduction to CAD/GIS 3 crs.
GEO 110 Map principles 3 crs.
GEO 175 Introduction to Planning 3 crs.
GEO 311 Geographic Information Systems 3 crs.
GEO 317 Land Use Analysis 3 crs.
GEO 474 Developing the Master Plan 3 crs.
GEO 485 Seminar in Planning 3 crs.



Bachelor of Science in Earth Science: Environmental Earth Science Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	17 credits
EAS 100 Introduction to Earth Science	3 crs.
EAS 150 Introduction to Geology	4 crs.
EAS 241 Meteorology	3 crs.
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Course	3 crs.

Second Semester	15 credits
EAS 163 Introduction to Oceanography	3 crs.
EAS 242 Climatology	3 crs.
ENG 102 English Composition II	3 crs.
GEO 110 Map Principles	3 crs.
Math Elective	3 crs.

Sophomore Year

Third Semester	15-18 credits
BIO 103 Contemporary Issues in Biology	3 crs.
EAS 131 Introduction to Environmental Geology	3 crs.
EAS 202 Hydrology	3 crs.
Math Elective	3 crs.
General Education, Minor or Elective Courses	3-6 crs.

Fourth Semester	15-18 credits
ENS 101 Introduction to Environmental Science	3 crs.
Math Elective	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Junior Year

Fifth Semester	15-18 credits
EAS 541 Advanced Environmental Geology.	3 crs.
Earth Science Elective	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Sixth Semester	15-18 credits
Earth Science Elective	3 crs.
Earth Science Elective	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Senior Year

Seventh Semester	15-18 credits
Earth Science Elective	3 crs.
Earth Science Elective	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Eighth Semester	15-18 credits
Earth Science Elective	3 crs.
Earth Science Elective	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Bachelor of Science in Earth Science: Operational Meteorology Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	17 credits
EAS 100 Introduction to Earth Science	3 crs.
EAS 150 Introduction to Geology	4 crs.
EAS 241 Meteorology	3 crs.
ENG 101 English Composition I	3 crs.
MAT 181 College Algebra	3 crs. (recommended)
UNI 100 First Year Seminar	1 crs.

Second Semester	16 credits
CHE 101 General Chemistry I	4 crs. (recommended)
EAS 163 Introduction to Oceanography	3 crs.
EAS 242 Climatology	3 crs.
EAS 340 Synoptic Meteorology I	3 crs.
ENG 102 English Composition II	3 crs.

Sophomore Year

Third Semester	16 credits
EAS 202 Hydrology	3 crs.
EAS 345 Synoptic Meteorology II	3 crs.
EAS 361 Weather Analysis	3 crs.
Math Elective	3 crs.
PHY 121 General Physics I	4 crs. (recommended)

Fourth Semester	16 credits
EAS 353 Statistical Atm. Science	3 crs.
EAS 371 Weather Forecasting	3 crs.
GEO 110 Map Principles	3 crs.
Math Elective	3 crs.
PHY 122 General Physics II	4 crs. (recommended)

Junior Year

Fifth Semester	15-18 credits
EAS 385 Hydro-Meteorology	3 crs.
EAS 465 Seminar in Atmospheric Science	3 crs.
GEO 100 Introduction to Geography	3 crs. (recommended)
General Education, Minor or Elective Courses	6-9 crs.

Sixth Semester	15-18 credits
EAS 381 Severe Weather	3 crs.
GEO 220 Geography of U.S. and PA	3 crs. (recommended)
Math Elective	3 crs.
General Education, Minor, or Elective Courses	6-9 crs.

Summer Session	3 credits
GEO 479 Internship	3 crs.

Senior Year

Seventh Semester	15-18 credits
EAS 365 Remote Sensing Radar & Sat.	3 crs.
EAS 542 Applied Climatology	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Eighth Semester	15-18 credits
EAS 352 Thermodynamic Meteorology	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Bachelor of Science in Earth Science: Water Resources Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	17 credits
EAS 100 Introduction to Earth Science	3 crs
EAS 150 Introduction to Geology	4 crs.
EAS 241 Meteorology	3 crs.
ENG 101 English Composition I	3 crs
MAT 181 College Algebra	3 crs. (recommended)
UNI 100 First Year Seminar 1 cr.	

Second Semester	17 credits
CHE 101 General Chemistry	4 crs. (recommended)
EAS 163 Introduction to Oceanography	3 crs.
EAS 200 Historical Geology	4 crs.
EAS 242 Climatology	3 crs.
ENG 102 English Composition II	3 crs.

Sophomore Year

Third Semester	16 credits
EAS 202 Hydrology	3 crs.
Math Elective	3 crs.
PHY 121 General Physics I	4 crs. (recommended)
General Education, Minor or Elective Courses	9 crs.

Fourth Semester	16 credits
GEO 110 Map Principles	3 crs
Math Elective	3 crs
PHY 122 General Physics II	4 crs. (recommended)
General Education, Minor, or Elective Course	6 crs.

Junior Year

Fifth Semester	15-18 credits
EAS 402 Groundwater Hydrology	3 crs.
EAS 465 Seminar in Atmospheric Science	3 crs
Major Elective	3 crs.
General Education, Minor, or Elective Courses	6-9 crs.

Sixth Semester	15-18 credits
Math Elective	3 crs.
Major Elective	6 crs.
General Education, Minor, or Elective Courses	6-9 crs.

Summer Session	3 credits
GEO 479 Internship	3 crs.

Senior Year

Seventh Semester	15-18 credits
GEO 311 Geographic Information Systems	3 crs.
Major Elective	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Eighth Semester	15-18 credits
EAS 538 Computer Application in Water Resources	3 crs.
EAS 548 Watershed Evaluation	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Bachelor of Science in Earth Science: Broadcast Meteorology Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	17 credits
EAS 100 Introduction to Earth Science	3 crs.
EAS 150 Introduction to Geology	4 crs.
EAS 241 Meteorology	3 crs.
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 crs.
General Education Course	3 crs.

Second Semester	16 credits
CHE 101 General Chemistry I	4 crs. (recommended)
COM 105 Survey of Radio, TV, & Film	3 crs. (recommended)
EAS 242 Climatology	3 crs.
EAS 340 Synoptic Meteorology I	3 crs.
ENG 102 English Composition II	3 crs.

Sophomore Year

Third Semester	16 credits
COM 210 Voice and Articulation	3 crs. (recommended)
EAS 345 Synoptic Meteorology II	3 crs.
EAS 361 Weather Analysis	3 crs.
MAT 181 College Algebra	3 crs. (recommended)
PHY 121 General Physics I	4 crs. (recommended)

Fourth Semester	16 credits
COM 142 Video Production I	3 crs.
EAS 163 Introduction to Oceanography	3 crs.
EAS 371 Weather Forecasting	3 crs.
GEO 110 Map Principles	3 crs.
PHY 122 General Physics II	4 crs. (recommended)

Junior Year

Fifth Semester	18 credits
COM 242 Video Production II	3 crs. (recommended)
EAS 202 Hydrology	3 crs.
EAS 431 Practicum in Broadcast Met. I	3 crs.
EAS 465 Seminar in Atmospheric Science	3 crs.
GEO 100 Introduction to Geography	3 crs. (recommended)
General Education, Minor or Elective Courses	3 crs.

Sixth Semester	15-18 credits
EAS 381 Severe Weather	3 crs.
EAS 432 Practicum in Broadcast Meteorology II	3 crs.
GEO 220 Geography of U.S. and PA	3 crs. (recommended)
THE 100 Introduction to Theatre	3 crs. (recommended)
General Education, Minor, or Elective Courses	3-6 crs.

Summer Session	3 credits
GEO 479 Internship	3 crs.

Senior Year

Seventh Semester	15-18 credits
EAS 365 Remote Sensing Sat./Rad. Int.	3 crs.
EAS 542 Applied Climatology	3 crs.
THE 131 Fundamentals of Acting	3 crs. (recommended)
General Education, Minor or Elective Courses	6-9 crs.

Eighth Semester	15-18 credits
COM 246 Radio and TV Announcing	3 crs.
EAS 352 Thermodynamic Meteorology	
EAS 353 Statistical Atmospheric Science	3 crs.
General Education, Minor, or Elective Courses	6-9 crs.

Bachelor of Arts in Geography: Planning Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ENG 101 English Composition I	3 crs.
GEO 100 Introduction to Geography	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	9 crs.

Second Semester	15 credits
ENG 102 English Composition II	3 crs.
GEO 110 Map Principles	3 crs.
General Education Courses	6 crs.

Sophomore Year

Third Semester	15-18 credits
GEO 200 Economic Geography	3 crs.
GEO 175 Introduction to Planning	3 crs.
Techniques Elective	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Fourth Semester	15-18 credits
GEO 317 Land Use Analysis	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Junior Year

Fifth Semester	15-18 credits
GEO 474 Developing the Master Plan	3 crs.
Related Elective	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Sixth Semester	15-18 credits
Related Elective	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Summer Session	3 credits
GEO 479 Internship	3 crs.

Senior Year

Seventh Semester	15-18 credits
GEO 311 Geog. Info. Systems	3 crs.
GEO 485 Seminar in Planning	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Eighth Semester	15-18 credits
Techniques Elective	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Bachelor of Arts in Geography: Geographic Information Science Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
CSC 120 Problem Solving & Programming Constructs	3 crs.
ENG 101 English Composition I	3 crs.
GEO 100 Introduction to Geography	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	6 crs.

Second Semester	15 credits
ENG 102 English Composition II	3 crs.
GEO 110 Map Principles	3 crs.
Related Elective	3 crs.
General Education Courses	6 crs.

Sophomore Year

Third Semester	15-18 credits
CSC 225 C Programming	3 crs.
GEO 175 Introduction to Planning	3 crs.
EAS 273 Computer Cartography	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Fourth Semester	15-18 credits
GEO 217 Demographic Analysis	3 crs.
GEO 317 Land Use Analysis	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Junior Year

Fifth Semester	15-18 credits
GEO 474 Developing the Master Plan	3 crs.
General Education, Minor or Elective Courses	12-15 crs.

Sixth Semester	15-18 credits
GEO 319 Transportation Geography	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.
Summer Session	3 credits
GEO 479 Internship	3 crs.

Senior Year

Seventh Semester	15-18 credits
EAS 335 Remote Sensing: Map & Aerial	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Eighth Semester	16-18 credits
GEO 550 Advanced Geographic Information Systems	4 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Bachelor of Arts in Geography: Travel & Tourism Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ENG 101 English Composition I	3 crs.
GEO 100 Introduction to Geography	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	9 crs.

Second Semester	15 credits
ENG 102 English Composition II	3 crs.
GEO 110 Map Principles	3 crs.
GEO 150 Survey of Travel & Tourism	3 crs.
General Education Courses	6 crs.

Sophomore Year

Third Semester	15-18 credits
GEO 175 Introduction to Planning	3 crs.
General Education, Minor or Elective Courses	12-15 crs.

Fourth Semester	15-18 credits
GEO 205 World Cities./Geography Of Tourism	3 crs.
GEO 317 Land Use Analysis	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Junior Year

Fifth Semester	15-18 credits
GEO 285 Retail Travel	3 crs.
GEO 350 Systems Applications for Travel Industry	3 crs.
GEO 474 Developing the Master Plan	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Sixth Semester	15-18 credits
GEO 358 Comprehensive Travel Planning	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.
Summer Session	3 credits
GEO 479 Internship	3 crs.

Senior Year

Seventh Semester	15-18 credits
GEO 311 Geographic Information Systems	3 crs.
GEO 425 Corporate Travel Operations	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Eighth Semester	15-18 credits
GEO 362 Site Planning & Design	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Bachelor of Science in Geology

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	17 credits
EAS 150 Intro to Geology	4 crs.
ENG 101 English Composition I	3 crs.
Math/Computer Sci Elective	3 crs.
UNI 100 First Year Seminar	1 crs.
General Education courses	6 crs.

Second Semester	17 credits
CHE 101 General Chemistry I	4 crs.
EAS 200 Historical Geology	4 crs.
ENG 102 English Composition II	3 crs.
Math/Computer Sci Elective	3 crs.
General Education Courses	3 crs.

Sophomore Year

Third Semester	16 credits
CHE 102 General Chemistry II	4 crs.
EAS 131 Intro. to Environmental Geol.	3 crs.
EAS 202 Hydrology	3 crs.
General Education, Minor or Elective Courses	6 crs.

Fourth Semester	16 credits
PHY 121 General Physics I	4 crs.
Math/Computer Sci Elective	3 crs.
General Education, Minor, or Elective Courses	9 crs.

Junior Year

Fifth Semester	16 credits
EAS 331 Mineralogy	3 crs.
PHY 122 General Physics II	4 crs.
General Education, Minor or Elective Courses	9 crs.

Sixth Semester	15-18 credits
EAS 332 Petrology	3 crs.
EAS 343 Geomorphology	3 crs.

EAS 402 Groundwater Hydrology	3 crs.
General Education, Minor, or Elective Courses	6-9 crs.

Senior Year

Seventh Semester	15-18 credits
EAS 421 Sedimentology	3 crs.
EAS 425 Structural Geology	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Eighth Semester	15-18 credits
EAS 422 Stratigraphy	3 crs.
EAS 527 Tectonics	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Bachelor of Arts in Parks & Recreation Management

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ENG 101 English Composition I	3 crs.
GEO 110 Map Principles	3 crs.
Parks And Recreation Mgt Elective	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	6 crs.

Second Semester	15 credits
ENG 102 English Composition II	3 crs.
Parks And Recreation Mgt Elective	3 crs.
General Education Courses	9 crs.

Sophomore Year

Third Semester	15-18 credits
GEO 200 Economic Geography	3 crs.
Parks And Recreation Mgt Elective	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Fourth Semester	15-18 credits
Parks And Recreation Mgt Electives	6 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Junior Year

Fifth Semester	15-18 credits
GEO 374 Developing& Managing Leisure Enterprises	3 crs.
GEO 474 Developing the Master Plan	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Sixth Semester	15-18 credits
Related Electives	6 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Summer Session	3 credits
GEO 479 Internship	3 crs.

Senior Year

Seventh Semester	15-18 credits
GEO 362 Site Planning and Design	3 crs.
GEO 412 Program Planning and Admin.	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Eighth Semester	15-18 credits
GEO 378 Recreation Industry Management	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Educational Studies

Purpose

The Educational Studies Department is responsible for the Secondary Education Program at the undergraduate level, the Master of Arts in Teaching and the Principals and Superintendents Programs at the graduate level, and professional courses in the College of Education and Human Services and in the Graduate School.

The department is committed to educational reform and works in partnerships with a number of public schools. Through field experiences and student teaching, Secondary Education majors are expected to become involved in these teaching centers and in the activities of the department.

All programs in the department are engaged in professional development. Periodic reviews of student progress including board review are part of that professional preparation as are long-term personal/professional relationships.

Programs

Secondary certification is offered in Biology, Chemistry, Communication* (with a concentration in either Speech or Theater), Comprehensive Social Studies, Earth Science, English*, Environmental Education, General Science, Mathematics, Modern Foreign Languages (French and Spanish), and Physics. The curriculum for each certification program is listed in the description of the department that offers the academic area for that program.

*Communication and English certifications allow teaching in both areas.

Additional opportunities are available. Athletic Training may be combined with certification in an academic area. Technology Education is offered through the Department of Applied Engineering and Technology. Art certification is available for Art majors through a cooperative agreement with other area colleges. These opportunities are described more fully in the description of the department offering these majors.

Individuals with bachelor's degrees may become certified through the Certification Only Program taking those courses required for public school certification.

Secondary Education Majors are advised both in the Education Studies Department and in the Department of their academic area.

All Pennsylvania teachers must pass the Praxis examinations for certification. A grade point average of 2.6 must be maintained both overall and in the academic specialization in order to be admitted to and maintain good standing in the teacher education program. This requirement is changing over the next two years.

Elementary & Early Childhood Education

Purpose

The Elementary/Early Childhood Education Department, accredited by the National Council for Accreditation of Teacher Education (NCATE), seeks to have students acquire the knowledge, skills, and attitudes essential to becoming successful members of the teaching profession. All course work and experiences in the major prepares students to meet the following standards:

1. Knowledge of subject matter
2. Knowledge of human development and learning
3. Adapting instruction for individual needs
4. Multiple instructional strategies
5. Classroom motivation and management skills
6. Communication skills
7. Instructional planning skills
8. Assessment of student learning
9. Professional commitment and responsibility
10. Partnerships

Programs

The Elementary/Early Childhood Education Department offers teacher education programs in Early Childhood Education, Elementary Education, Elementary Education with a concentration in Middle School Education, and a dual major in Early Childhood and Elementary Education. The department also offers an Associate Degree in Early Childhood Education.

The Elementary/Early Childhood and Special Education Departments together offer two dual-major programs: Elementary/Special Education and Early Childhood/Special Education. See the section on Special Education for more information on these programs.

Honor Society

Kappa Delta Pi, an international honor society in education, has a California University chapter. Students in education who have demonstrated a high level of academic achievement are invited to apply for induction.

Careers

With the anticipated retirements of millions of public school teachers, the future looks bright for those students interested in a career in early childhood, elementary, or middle school education. Students with undergraduate degrees in these fields are prepared to pursue advanced study in a variety of disciplines. Career Services aids students seeking teaching positions locally and out-of-state.

Admission to the Elementary Education and Early Childhood Education Programs

Students must achieve a 2.6 QPA and a satisfactory score on the Pre-Professional Skills Test (PPST) of Praxis Series to be admitted to the programs in Elementary Education and Early Childhood Education.

Bachelor of Science in Education: Early Childhood Education—minimum of 128 credits

General Education (64-67 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

To satisfy certification requirements, students in this teacher education program also need to complete:

Three additional credits in Mathematics,

Six additional credits in Social Science with courses in American History, Geography, Economics and Political Science, and

Three to four additional credits in Natural Science with courses in Physical Science, Life Science and Earth Science.

Professional Education (36 credits)

EDE 461 Student Teaching	12 crs.
EDF 290 Policy Studies for American Education	3 crs.
EDF 301 Computers for Teachers	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming Exceptional Learners	3 crs.
PSY 100 General Psychology	3 crs.
PSY 205 Child Psychology	3 crs.
PSY 208 Educational Psychology	3 crs.

Professional Specialization (33 credits)

ECE 203 Field Experience with Infants, Toddlers, and Preschoolers	3 crs.
ECE 302 Emerging Literacy	3 crs.
ECE 304 Thematic Teaching in Early Childhood	3 crs.
ECE 315 Mathematical Content in Early Childhood	3 crs.
ECE 319 Parent and Community Involvement in Education	3 crs.
ECE 405 Early Childhood Education Seminar	3 crs.
EDE 211 Instructional Strategies in Elementary and Early Childhood Education	3 crs.
EDE 311 Children's Literature	3 crs.
EDE 321 Field Experiences Elementary School	3 crs.
EDE 450 Assessing Children's Performance	3 crs.
Elective in Elementary/Early Childhood	3 crs.

Area of Concentration (12 credits in one selected area; 6 credits must be 300-400 level)

Humanities: Language, Cultures, Literature, Philosophy, Fine Arts

Natural Sciences: Mathematics, Biology, and Physical Science

Social Sciences: History, Political Science, Sociology, Anthropology, Psychology, and Economics Technology/ Computer Science: Computer Science and Technology courses

Health Education: Health, Safety, and First Aid Community and Family: Parenting, Sociology, Anthropology, Psychology, Social Work

Bachelor of Science in Education: Elementary Education—minimum of 128 credits

General Education (64-67 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

To satisfy certification requirements, students in this teacher education program also need to complete:
Three additional credits in Mathematics,
Six additional credits in Social Science with courses in American History, Geography, Economics and Political Science, and
Three to four additional credits in Natural Science with courses in Physical Science, Life Science and Earth Science.

Professional Education (36 credits)

EDE 461 Student Teaching	12 crs.
EDF 290 Policy Studies for American Education	3 crs.
EDF 301 Computers for Teachers	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming Exceptional Learners	3 crs.
PSY 100 General Psychology	3 crs.
PSY 205 Child Psychology	3 crs.
PSY 208 Educational Psychology	3 crs.

Professional Specialization (33 credits)

ECE 319 Parent and Community Involvement in Education	3 crs.
EDE 211 Instructional Strategies in Elementary and Early Childhood Education	3 crs.
EDE 300 Language and Literacy in the Elementary School I	3 crs.
EDE 305 Mathematical Content and Method in the Elementary School	3 crs.
EDE 306 Teaching of Social Studies for Elementary Grades	3 crs.
EDE 307 Science for the Elementary School	3 crs.
EDE 311 Children's Literature	3 crs.
EDE 320 Field Experiences Middle School	3 crs.
EDE 321 Field Experiences Elementary School	3 crs.
EDE 340 Language and Literacy in the Elementary School II	3 crs.
EDE 450 Assessing Children's Performance	3 crs.

Area of Concentration (12 credits in one selected area; 6 credits must be 300-400 level)
Humanities: Language, Cultures, Literature, Philosophy, Fine Arts
Natural Sciences: Mathematics, Biology, and Physical Science
Social Sciences: History, Political Science, Sociology, Anthropology, Psychology, and Economics
Technology/Computer Science: Computer Science and Technology courses
Health Education: Health, Safety, First Aid, and Women's Studies.

Bachelor of Science in Education: Elementary Education with Middle School Education Concentration—minimum of 128 credits

General Education (64-67 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48.
To satisfy certification requirements, students in this teacher education program also need to complete:
Three additional credits in Mathematics,
Six additional credits in Social Science with courses in American History, Geography, Economics and Political Science, and
Three to four additional credits in Natural Science with courses in Physical Science, Life Science and Earth Science.

Professional Education (36 credits)

EDE 461 Student Teaching	12 crs.
EDF 290 Policy Studies for American Education	3 crs.
EDF 301 Computers for Teachers	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming Exceptional Learners	3 crs.
PSY 100 General Psychology	3 crs.
PSY 205 Child Psychology	3 crs.
PSY 208 Educational Psychology	3 crs.

Professional Specialization (38 credits)

EDE 211 Instructional Strategies in Elementary and Early Childhood Education	3 crs.
EDE 300 Language and Literacy in the Elementary School I	3 crs.
EDE 305 Mathematical Content and Method in the Elementary School	3 crs.
EDE 306 Teaching of Social Studies for Elementary Grades	3 crs.
EDE 307 Science for the Elementary School	3 crs.
EDE 311 Children's Literature	3 crs.
ECE 319 Parent and Community Involvement in Education	3 crs.
EDE 320 Field Experiences Middle School	3 crs.
EDE 321 Field Experiences Elementary School	3 crs.
EDE 330 Teaching in the Middle School	3 crs.
EDE 340 Language and Literacy in the Elementary School II	3 crs.
EDE 450 Assessing Children's Performance	3 crs.
EDS 465 Developmental Reading in Secondary Schools	2 crs.

Area of Concentration (12 credits in one selected area; six credits must be 300-400 level)
Humanities: Language, Cultures, Literature, Philosophy, Fine Arts
Natural Sciences: Mathematics, Biology, and Physical Science
Social Sciences: History, Political Science, Sociology, Anthropology, Psychology, and Economics
Technology/Computer Science: Computer Science and Technology courses
Health Education: Health, Safety, First Aid and Women's Studies.

Bachelor of Science in Education: Early Childhood Education & Elementary Education (Dual Major)—142-145 credits

General Education (64-67 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).
To satisfy certification requirements, students in this teacher education program also need to complete:
Three additional credits in Mathematics,
Six additional credits in Social Science with courses in American History, Geography, Economics and Political Science, and
Three to four additional credits in Natural Science with courses in Physical Science, Life Science and Earth Science.

Professional Education (36 credits)

EDE 461 Student Teaching	12 crs.
EDF 290 Policy Studies for American Education	3 crs.
EDF 301 Computers for Teachers	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming Exceptional Learners	3 crs.
PSY 100 General Psychology	3 crs.
PSY 205 Child Psychology	3 crs.
PSY 208 Educational Psychology	3 crs.

Professional Specialization (45 credits)

ECE 203 Field Experiences with Infants, Toddlers, and Preschoolers 3 crs.
ECE 302 Emerging Literacy 3 crs.
ECE 304 Thematic Teaching in Early Childhood 3 crs.
ECE 315 Mathematical Content in Early Childhood 3 crs.
ECE 319 Parent and Community Involvement in Education 3 crs.
ECE 405 Early Childhood Education Seminar 3 crs.
EDE 211 Instructional Strategies in Elementary and Early Childhood Education 3 crs.
EDE 300 Language and Literacy in the Elementary School I 3 crs.
EDE 305 Mathematical Content and Methods in the Elementary School 3 crs.
EDE 306 Teaching of Social Studies for Elementary Grades 3 crs.
EDE 307 Science for the Elementary School 3 crs.
EDE 311 Children's Literature 3 crs.
EDE 321 Field Experiences Elementary School 3 crs.
EDE 340 Language and Literacy in the Elementary School II 3 crs.
EDE 450 Assessing Children's Performance 3 crs.

Area of Concentration (6 credits in one selected area; 3 credits must be 300-400 level)
Humanities: Language, Cultures, Literature, Philosophy, Fine Arts
Natural Sciences: Mathematics, Biology, and Physical Science
Social Sciences: History, Political Science, Sociology, Anthropology, Psychology, and Economics Technology/ Computer Science: Computer Science and Technology courses
Health Education: Health, Safety, and First Aid Community and Family: Parenting, Sociology, Anthropology, Psychology, Social Work

Associate of Science in Early Childhood Education—72 credits

General Education (24 credits)

Humanities including
ENG 101 English Composition I 3 crs.
COM 101 Oral Communication 3 crs.
Humanities Electives selected from Art History or Art Appreciation or Literature or Culture or Music or Philosophy 9 crs
Natural Sciences Electives including Mathematics and Biological Science or Physical Science 6 crs.
Social Sciences Electives including General Psychology, and Geography or American Government or US History or Economics (6 credits)
Health and Physical Education (3 credits)

Professional Education (15 credits)

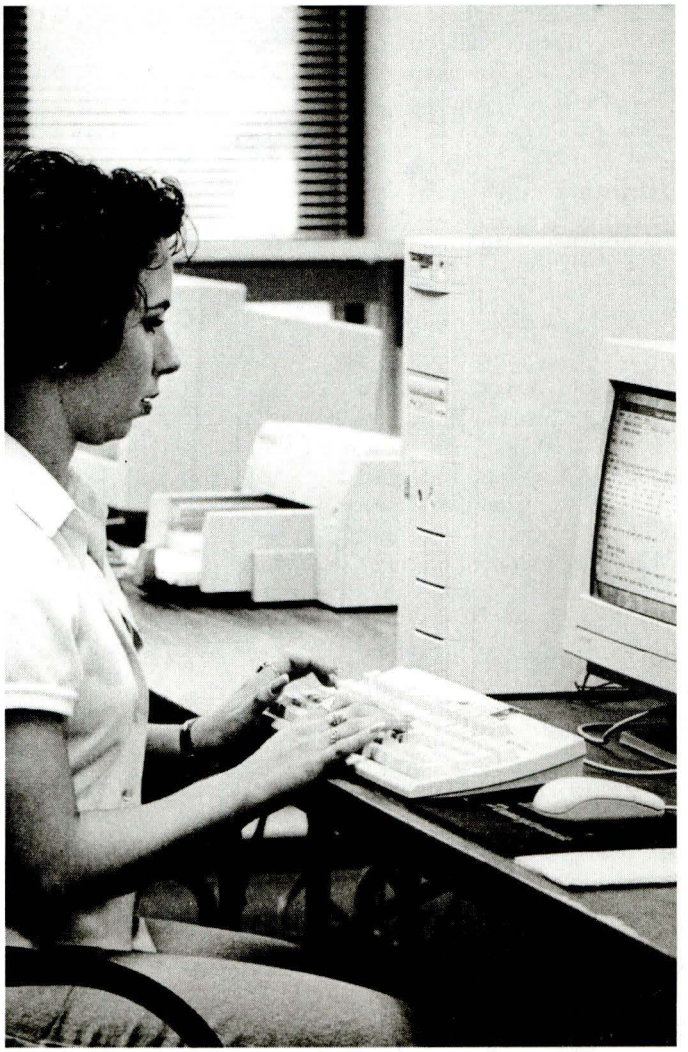
EDF 301 Computers for Teachers 3 crs.
EDF 302 Applied Instructional Technology 3 crs.
EDU 210 Teaching in a Multicultural Society 3 crs.
PSY 208 Educational Psychology 3 crs.
PSY 205 Child Psychology 3 crs.

Professional Specialization (21 credits)

ECE 203 Field Experiences with Infants, Toddlers, and Preschoolers 3 crs.
ECE 302 Emerging Literacy 3 crs.
ECE 304 Thematic Teaching in Early Childhood 3 crs.
ECE 319 Parent and Community Involvement in Education 3 crs.
EDE 211 Instructional Strategies in Elementary and Early Childhood Education 3 crs.
EDE 311 Children's Literature 3 crs.
EDE 450 Assessing Children's Performance 3 crs.

Area of Concentration (12 credits in one selected area)

Humanities: Language, Cultures, Literature, Philosophy, Fine Arts
Natural Sciences: Mathematics, Biology, and Physical Science
Social Sciences: History, Political Science, Sociology, Anthropology, Psychology, and Economics
Technology/Computer Science: Computer Science and Technology courses
Health Education: Health, Safety, and First Aid
Community and Family: Parenting, Sociology, Anthropology, Psychology, Social Work



Bachelor of Science in Education: Early Childhood Education

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	12 crs.

Second Semester	15-18 credits
ENG 102 English Composition II	3 crs.
General Education Courses	12-15 crs.

Sophomore Year

Third Semester	15-18 credits
EDE 211 Instructional Strategies in Elementary and Early Childhood Education	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
General Education or Elective Courses	9-12 crs.

Fourth Semester	15-18 credits
ECE 302 Emerging Literacy	3 crs.
ECE 405 Early Childhood Education Seminar	3 crs.
EDF 290 Policy Studies for American Education	3 crs.
PSY 205 Child Psychology	3 crs.
General Education or Elective Courses	3-6 crs.

Junior Year

Fifth Semester	15-18 credits
ECE 304 Thematic Teaching in Early Childhood	3 crs.
ECE 315 Mathematical Content in Early Childhood	3 crs.
General Education or Elective Courses	9-12 crs.

Sixth Semester	15-18 credits
EDE 311 Children's Literature	3 crs.
EDE 321 Field Experiences Elementary School	3 crs.
EDE 450 Assessing Children's Performance	3 crs.
EDF 301 Computers for Teachers	3 crs.
PSY 208 Educational Psychology	3 crs.
General Education or Elective Courses	0-3 crs.

Senior Year

Seventh Semester	15-18 credits
ECE 203 Field Experience with Infants, Toddlers, and Preschoolers	3 crs.
ECE 319 Parent and Community Involvement in Education	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDU 340 Mainstreaming Exceptional Learners	3 crs.
General Education or Elective Courses	3-6 crs.

Eighth Semester	12 credits
EDE 461 Student Teaching	12 crs.

Bachelor of Science in Education: Elementary Education

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	12 crs.

Second Semester	15-18 credits
ENG 102 English Composition II	3 crs.
General Education Courses	12-15 crs.

Sophomore Year

Third Semester	15-18 credits
EDE 211 Instructional Strategies in Elementary and Early Childhood Education	3 crs.
General Education or Elective Courses	12-15 crs.

Fourth Semester	15-18 credits
EDE 300 Language and Literacy in the Elementary School I	3 crs.
EDE 305 Mathematical Content and Method in the Elementary School	3 crs.
EDF 290 Policy Studies for American Education	3 crs.
PSY 205 Child Psychology	3 crs.
General Education or Elective Courses	3-6 crs.

Junior Year

Fifth Semester	18 credits
EDE 306 Teaching of Social Studies for Elementary Grades	3 crs.
EDE 307 Science for the Elementary School	3 crs.
EDE 340 Language and Literacy in the Elementary School II	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming Exceptional Learners	3 crs.
PSY 208 Educational Psychology	3 crs.

Sixth Semester	15-18 credits
EDE 311 Children's Literature	3 crs.
EDE 321 Field Experiences Elementary School	3 crs.
EDE 450 Assessing Children's Performance	3 crs.
EDF 301 Computers for Teachers	3 crs.
General Education or Elective Courses	3-6 crs.

Senior Year

Seventh Semester	15-18 credits
ECE 319 Parent and Community Involvement in Education	3 crs.
EDE 320 Field Experiences Middle School	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
General Education or Elective Courses	6-9 crs.

Eighth Semester	12 credits
EDE 461 Student Teaching	12 crs.

Bachelor of Science in Education: Elementary Education with Middle School Education Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	12 crs.
Second Semester	**15-18 credits**
ENG 102 English Composition II	3 crs.
General Education Courses	12-15 crs.

Sophomore Year

Third Semester	15-18 credits
EDE 211 Instructional Strategies in Elementary and Early Childhood Education	3 crs.
General Education or Elective Courses	12-15 crs.
Fourth Semester	**15-18 credits**
EDE 300 Language and Literacy in the Elementary School I	3 crs.
EDE 305 Mathematical Content and Method in the Elementary School	3 crs.
EDE 311 Children's Literature	3 crs.
EDF 290 Policy Studies for American Education	3 crs.
PSY 205 Child Psychology	3 crs.
General Educationor Elective Courses	0-3 crs.

Junior Year

Fifth Semester	18 credits
EDE 306 Teaching of Social Studies for Elementary Grades	3 crs.
EDE 307 Science for the Elementary School	3 crs.
EDE 340 Language and Literacy in the Elementary School II	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming Exceptional Learners	3 crs.
PSY 208 Educational Psychology	3 crs.
Sixth Semester	**15-18 credits**
EDE 321 Field Experiences Elementary School	3 crs.
EDE 330 Teaching in the Middle School	3 crs.
EDF 301 Computers for Teachers	3 crs.
General Education or Elective Courses	6-9 crs.

Senior Year

Seventh Semester	17 credits
ECE 319 Parent and Community Involvement in Education	3 crs.
EDE 320 Field Experiences Middle School	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDE 450 Assessing Children's Performance	3 crs.
EDS 465 Developmental Reading in Secondary Schools	2 crs.
General Education or Elective Courses	3 crs.
Eighth Semester	**12 credits**
EDE 461 Student Teaching	12 crs.

Bachelor of Science in Education: Early Childhood Education & Elementary Education (Dual Major)

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	12 crs.
Second Semester	**15 credits**
ENG 102 English Composition II	3 crs.
General Education Courses	12 crs.

Sophomore Year

Third Semester	15-18 credits
EDE 211 Instructional Strategies in Elementary and Early Childhood Education	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
General Education or Elective Courses	9-12 crs.
Fourth Semester	**15-18 credits**
EDF 290 Policy Studies for American Education	3 crs.
EDE 305 Mathematical Content and Methods in the Elementary School	3 crs.
EDE 300 Language and Literacy in the Elementary School I	3 crs.
PSY 205 Child Psychology	3 crs.
General Education or Elective Courses	3-6 crs.

Junior Year

Fifth Semester	15-18 credits
EDE 306 Teaching of Social Studies for Elementary Grades	3 crs.
EDE 307 Science for the Elementary School	3 crs.
EDE 340 Language and Literacy in the Elementary School II	3 crs.
General Education or Elective Courses	6-9 crs.
Sixth Semester	**15-18 credits**
ECE 405 Early Childhood Education Seminar	3 crs.
EDE 311 Children's Literature	3 crs.
EDE 321 Field Experiences Elementary School	3 crs.
EDF 301 Computers for Teachers	3 crs.
PSY 208 Educational Psychology	3 crs.
General Education or Elective Courses	0-3 crs.

Senior Year

Seventh Semester	15-18 credits
ECE 302 Emerging Literacy	3 crs.
ECE 315 Mathematical Content in Early Childhood	3 crs.
ECE 319 Parent and Community Involvement in Education	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
General Education, Minor or Elective Courses	3-6 crs.

Eighth Semester	15-18 credits
ECE 203 Field Experiences with Infants, Toddlers, and Preschoolers	3 crs.
ECE 304 Thematic Teaching in Early Childhood	3 crs.
EDU 340 Mainstreaming Exceptional Learners	3 crs.
EDE 450 Assessing Children's Performance	3 crs.
General Education or Elective Courses	12-15 crs.

Fifth Year

Ninth Semester	12 crs.
EDE 461 Student Teaching	12 crs.

English

Purpose

English is a comprehensive discipline. Its scope encompasses a study of the evolution of the language itself, the various types of writing, the literature in English (poetry, drama, fiction, and essay regardless of national origin), and the comparative study of literature.

As a course of study, English enables people to express themselves clearly and to read their ideas and those of others in an appreciative and critical manner. The ideas expressed are boundless, the content emotive as well as rational. What is written is a personal and social record of the struggle to create meaning. Insight into the past and present creates a common core of ideas to be considered by scholars in many disciplines.

Language competency is essential to the exchange of ideas, the successful completion of course work and meaningful employment. To insure that students will develop their language skills and will have the means to meet these expectations, the university requires that all entering students take the English placement examination. Initial course placement is based on the results of that examination. Placement into either ENG 100 English Language Skills or ENG 101 Composition I depends on the results of this holistically scored writing sample. Since college performance incorporates the ability to express ideas clearly, all students are encouraged to take the two composition courses during their first semesters.

Programs

The English major has several concentrations including the Literature program and three concentrations in Professional Writing: Creative Writing, Journalism, and Technical Writing. For persons who want to teach English or to teach in an allied area, secondary school certification in English and in Communication (Speech Communication and Theater) are offered in cooperation with the College of Education and Human Services.

A well developed internship system supports classroom studies in the Professional Writing Program. Depending upon the Professional Writing concentration undertaken, a student may take as many as sixteen credits of internship experience. Policies and procedures regarding internships can be secured from the departmental office or faculty internship supervisor.

Honor Society

Sigma Tau Delta is the National English Honor Society. The California University chapter, Delta Theta, was chartered in 1959 and is the oldest chapter in the Pennsylvania State System of Higher Education. Membership in Sigma Tau Delta is open not only to English majors, but also to all those who have English as an interest, provided they have at least a 3.0 average in their English courses, rank in the highest 35% of their class in general scholarship, have completed at least three semesters of college, and have completed at least two courses in literature in addition to freshman English.

Awards

The English Department encourages and rewards academic achievement in several ways. The Eleanore C. Hibbs Writing Award is given annually to one student each in Composition I and Composition II. An applicant for the award must submit an essay that was written for that class and that carries the recommendation of the student's instructor. All entries are judged by a special committee of the English Department. The two winners receive $150 prizes plus certificates of merit, both awarded at a luncheon in May.

The Minor W. Major Award is given annually to a junior who has achieved distinction in the study of English. The award is based on merit alone. A departmental committee reviews the academic records of prospective recipients, usually English majors, and singles out the student who best meets its standards. The award, named for Dr. Minor W. Major, late professor of English, includes a certificate of merit and cash.

The English Faculty Award is given annually to the student in English whose development has been most noteworthy over four years. The recipient receives a certificate of merit and an inscribed book, awarded at the senior dinner in May.

Careers

Besides preparing students for graduate work in English and American literature, English education, linguistics, library studies, law, communication, and a number of other fields, the English program offers career opportunities in such positions as secondary school teacher, newspaper reporting, magazine editing, creative writing, public information, advertising, copywriting, communications, proof reading, and radio and television editing.

Bachelor of Arts in English—128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (39 credits)

Writing Core: (9 credits)
Students should select nine credits from the following:

ENG 308 Research for Writers	3 crs.
ENG 352 Studies in Writing	3 crs.
ENG 496 Writing for Publication	3 crs.
ENG 345 English Grammar and Usage OR ENG 347 Introduction to Linguistics OR ENG 346 History of the English Language	3 crs.

Literature Core (12 credits)
Students should select 12 credits from the following:

ENG 301 English Literature I	3 crs.
ENG 302 English Literature II	3 crs.
ENG 337 Survey of American Literature I	3 crs.
ENG 338 Survey of American Literature II	3 crs.
ENG 205 World Literature I	3 crs.
ENG 206 World Literature II	3 crs.

Concentration (18 credits)

Students should select one of the following concentrations

Literature Concentration

Students in the Literature Concentration should select 18 credits of literature courses at the 300 or 400 level in consultation with the faculty advisor.

Creative Writing Concentration

Students in the Creative Writing Concentration should select 18 credits from the following:

ENG 351 Publishing the Magazine	3 crs.
ENG 375 Advanced Writing	3 crs.
ENG 376 Creative Writing: Fiction	3 crs.
ENG 377 Creative Writing: Poetry	3 crs.
ENG 378 Creative Writing: Drama	3 crs.
ENG 430 Adaptation of Literary Materials	3 crs.
ENG 495 Creative Writing Seminar	3 crs.

Journalism Concentration

Students in the Journalism Concentration should complete the following:

ENG 167 Journalism I	3 crs.
ENG 168 Journalism II	3 crs.
ENG 334 Newspaper Reporting	3 crs.
ENG 419 Internship	3 crs.

Students should select 6 credits from the following:

ENG 254 American Journalism	3 crs.
ENG 313 Sportswriting	3 crs.
ENG 336 Computer Assisted Newsreporting	3 crs.
ENG 351 Publishing the Magazine	3 crs.
ENG 401 Copywriting	3 crs.
ENG 437 Advertising	3 crs.

Technical Writing Concentration

Students in the Technical Writing Concentration should complete the following:

ENG 211 Business Writing I	3 crs.
ENG 217 Scientific and Technical Writing I	3c rs.
ENG 218 Scientific and Technical Writing II	3 crs.
ENG 419 Internship	3 crs.

Students should select 6 credits from the following:

CSC 201 DOS, Windows, Internet	3 crs.
ENG 401 Copywriting	3 crs.
ENG 437 Advertising	3 crs.
GCT 225 Principles of Layout and Design	3 crs.
GCT 240 Electronic Desktop Publishing	3 crs.

Electives and/or Minor (32-35 credits)

Bachelor of Science in Education: Certification in English for Secondary Schools

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Professional Education (41 credits)

EDF 290 Policy Studies in American Ed	3 crs.
EDF 301 Computers for Teachers	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDS 300 Problems of Secondary Education	3 crs.
EDS 430 Educational Tests & Measurements	3 crs.
EDS 461 Student Teaching & School Law	12 crs.
EDS 465 Developmental Reading in Secondary Schools	2 crs.
EDS 467 Teaching of Sciences OR EDS 445 Modern Methods in Secondary Schools with advisor's approval	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming the Exceptional Child	3 crs.
PSY 208 Educational Psychology	3 crs.

Professional Specialization (48 credits)

COM 230 Argumentation and Debate	3 crs.
COM 490 Communication Theory	3 crs.
ENG 205 World Literature to 1600 OR ENG 206 World Literature after 1600	3 crs.
ENG 301 English Literature I	3 crs.
ENG 302 English Literature II	3 crs.
ENG 337 Survey of American Literature I	3 crs.
ENG 338 Survey of American Literature II	3 crs.
ENG 345 English Grammar and Usage	3 crs.
ENG 346 History of the English Language	3 crs.
ENG 347 Introduction to Linguistics	3 crs.
ENG 371 Critical Theory and the Teaching of Literature	3 crs.
ENG 372 Composition Theory and the Teaching of Writing	3 crs.
ENG 425 Shakespeare	3 crs.
American Literature Elective	3 crs.
Literature Elective (at 300-400 level)	3 crs.
Theatre Elective (3 credits)	
Select one of the following courses:	
THE 130 Fundamentals of Acting	3 crs.
THE 141 Stagecraft	3 crs.
THE 320 Fundamentals of Directing	3 crs.

Students must also achieve a satisfactory score on the Praxis II examination to obtain Pennsylvania Certification.

Minors in English – 21 credits

Students may select one of the following concentrations:

Literature Concentration

Required Courses (12 credits): (select one from each group)

ENG 106 Introduction to Poetry OR	
ENG 107 Introduction to Fiction OR	
ENG 108 Introduction to Drama	3 crs.
ENG 205 World Literature to 1600 OR	
ENG 206 World Literature after 1600	3 crs.
ENG 301 English Literature I OR	
ENG 302 English Literature II	3 crs.
ENG 337 Survey of American Literature I OR	
ENG 338 Survey of American Literature II	3 crs.

Literature Electives (9 credits at 300-400 level)

Creative Writing Concentration

Required Courses (6 credits):

ENG 495 Creative Writing Seminar	3 crs.
ENG 496 Writing for Publication	3 crs.

Creative Writing Electives (3 to 9 credits):

ENG 376 Creative Writing: Fiction	3 crs.
ENG 377 Creative Writing: Poetry	3 crs.
ENG 378 Creative Writing: Drama	3 crs.

English Electives selected from the following (6-12 credits):

ENG 203 Great Books	3 crs.
ENG 308 Research for Writers	3 crs.
ENG 318 Poetics	3 crs.
ENG 351 Publishing the Magazine	3 crs.
ENG 352 Studies in Writing	3 crs.

ENG 430 Adapt Literary Materials 3 crs.
ENG 435 Article Writing 3 crs.

Journalism Concentration

Required Courses (12 credits):
ENG 167 Journalism I 3 crs.
ENG 169 Journalism II 3 crs.
ENG 306 Press Law & Ethics 3 crs.
ENG 312 Journalism III 3 crs.

Restricted Electives selected from the following (9 credits, at least 6 credits must be ENG):
COM 246 Radio & TV Announcing 3 crs.
COM 332 Radio & TV: News 3 crs.
ENG 254 History of American Journalism 3 crs.
ENG 313 Sportswriting I 3 crs.
ENG 334 Newspaper Reporting I 3 crs.
ENG 336 Computer-Assisted News Reporting 3 crs.
ENG 351 Publish the Magazine 3 crs.
ENG 401 Copywriting 3 crs.
ENG 419 Internship (3 credit limit) 3 crs.
ENG 435 Article Writing 3 crs.
ENG 437 Advertising 3 crs.
GCT 225 Principles of Layout and Design 3 crs.

Technical Writing Concentration

Required Courses (12 credits):
ENG 212 Business Writing II 3 crs.
ENG 217 Science & Technical Writing I 3 crs.
ENG 218 Science & Technical Writing II 3 crs.
ENG 308 Research for Writers 3 crs.

Restricted Electives selected from the following (9 credits, at least 6 credits must be ENG):
ENG 345 Grammar & Usage 3 crs.
ENG 375 Advanced Writing 3 crs.
ENG 419 Internship (3 credit limit) 3 crs.
ENG 435 Article Writing 3 crs.
GCT 225 Principles of Layout and Design 3 crs.

Bachelor of Arts in English: Literature Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education courses	12 crs.
(ENG 106 Intro to Poetry, ENG 107 Intro to Fiction, or ENG 108 Intro to Drama are recommended)	

Second Semester	15 credits
ENG 102 English Composition II	3 crs.
General Education Courses	12 crs.

Sophomore Year

Third Semester	15-18 credits
Literature Core course	3 crs.
Writing Core course	3 crs.
Literature course	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Fourth Semester	15-18 credits
Literature Core course	3 crs.
Writing Core course	3 crs.
Writing Component course	3 crs.
Literature course	3 crs.
General Education, Minor, or Elective Courses	3-6 crs.

Junior Year

Fifth Semester	15-18 credits
Literature Core course	3 crs.
Writing Core course	3 crs.
Writing Component course	3 crs.
Literature course	3 crs.
General Education, Minor or Elective Courses	3-6 crs.

Sixth Semester	15-18 credits
Literature Core course	3 crs.
Literature course	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Senior Year

Seventh Semester	15-18 credits
Literature course	3 crs.
General Education, Minor or Elective Courses	12-15 crs.

Eighth Semester	15-18 credits
Literature course	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Bachelor of Science in Education: Certification in English for Secondary Schools

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education courses	12 crs.
(ENG 106 Intro to Poetry, ENG 107 Intro to Fiction, or ENG 108 Intro to Drama are recommended)	

Second Semester	15-18 credits
ENG 102 English Composition II	3 crs.
ENG 205 World Literature to 1600 or ENG 206 World Literatue from 1600	3 crs.
General Education Courses	9-12 crs.

Sophomore Year

Third Semester	15-18 credits
ENG 301English Literature I	3 crs.
ENG 337 Survey of American Literature	3 crs.
PSY 208 Educational Psychology	3 crs.
THE elective	3 crs.
General Education, Minor or Elective Courses	3-6 crs.

Fourth Semester	18 credits
COM 230 Argumentation and Debate	3 crs.
ENG 302 English Literature II	3 crs.
ENG 338 Survey of American Literature II	3 crs.
ENG. 345 English Grammar and Usage	3 crs.
EDF 290 Policy Studies in American Education	3 crs.
EDF 301 Computers for Teachers	3 crs.

Junior Year

Fifth Semester	18 credits
Com 490 Communication Theory	3 crs.
ENG 347 Introduction to Linguistics	3 crs.
ENG 371 Critical Theory & the Teaching of English	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDS 300 Problems of Secondary Education	3 crs.
EDS 430 Educational Tests & Measurements	3 crs.

Sixth Semester	18 credits
Literature Core course	3 crs.
Literature course	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Senior Year

Seventh Semester	14-17 credits
EDS 465 Developmental Reading in Secondary Schools	2 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming Exceptional Learners	3 crs.
Literature Elective	3 crs.
General Education, Minor or Elective Courses	3-6 crs.

Eighth Semester	12 credits
Student Teaching	12 crs.

Bachelor of Arts in English: Journalism Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education courses	12 crs.
(ENG 106 Intro to Poetry, ENG 107 Intro to Fiction, or ENG 108 Intro to Drama are recommended)	

Second Semester	15 credits
ENG 102 English Composition II	3 crs.
General Education Courses	12 credits

Sophomore Year

Third Semester	15-18 credits
Literature Core course	3 crs.
Writing Core course	3 crs.
Journalism course	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Fourth Semester	15-18 credits
Literature Core course	3 crs.
Writing Core course	3 crs.
Journalism course	3 crs.
Writing Component Course	3 crs.
General Education, Minor, or Elective Courses	3-6 crs.

Junior Year

Fifth Semester	15-18 credits
Literature Core course	3 crs.
Writing Core course	3 crs.
Journalism course	3 crs.
Writing Component Course	3 crs.
General Education, Minor or Elective Courses	3-6 crs.

Sixth Semester	15-18 credits
Literature Core course	3 crs.
Journalism course	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Senior Year

Seventh Semester	15-18 credits
Journalism course	3 crs.
General Education, Minor or Elective Courses	12-15 crs.

Eighth Semester	15-18 credits
Journalism course	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Bachelor of Arts in English: Technical Writing Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education courses	12 crs.
(ENG 106 Intro to Poetry, ENG 107 Intro to Fiction, or ENG 108 Intro to Drama are recommended)	

Second Semester	15 credits
ENG 102 English Composition II	3 crs.
General Education Courses	12 credits

Sophomore Year

Third Semester	15-18 credits
Literature Core course	3 crs.
Writing Core course	3 crs.
Technical Writing course	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Fourth Semester	15-18 credits
Literature Core course	3 crs.
Writing Core course	3 crs.
Technical Writing course	3 crs.
General Education, Minor, or Elective Courses	6-9 crs.

Junior Year

Fifth Semester	15-18 credits
Literature Core course	3 crs.
Writing Core course	3 crs.
Writing Component course	3 crs.
Technical Writing course	3 crs.
General Education, Minor or Elective Courses	3-6 crs.

Sixth Semester	15-18 credits
Literature Core course	3 crs.
Writing Component course	3 crs.
Technical Writing course	3 crs.
General Education, Minor, or Elective Courses	6-9 crs.

Senior Year

Seventh Semester	15-18 credits
Technical Writing course	3 crs.
General Education, Minor or Elective Courses	12-15 crs.

Eighth Semester	15-18 credits
Technical Writing course	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Foreign Languages & Cultures

Purpose

Rapid political and economic changes in the world require that students not only understand other cultures but that they can communicate with persons in those cultures. In this sense familiarity with speaking and reading a foreign language and being aware of how persons in other countries think about the world is pragmatic. Instruction in an unfamiliar language also helps students see the world from a different perspective. Inasmuch as that occurs, students improve self-awareness, lose a blind ethnocentrism, and gain a greater appreciation of all cultures, including their own.

Programs

The department administers four programs: liberal arts language programs in French and Spanish; a language certification program for students who plan to teach in one of the language areas; and an International Studies program with options in Business and Economics, Foreign Languages, Geography, and Political Science (consult the descriptions for the Departments of Business & Economics, Earth Sciences, and History and Political Science for additional information on the International Studies programs). Students in these programs will develop listening, speaking, reading and writing skills, as well as an awareness of cultural diversity and its impact on human behavior.

Language and culture are closely aligned, and a series of culture courses, taught in English, are available. These indicate how artistic expression, geography, and economic and historical development mutually influence each other.

A minor in foreign languages is offered in French and Spanish to provide a global component and international perspective to a liberal arts education and to prepare you for a world where cross cultural communication is vital for success.

Placement

Students entering a foreign language course will be evaluated in order to determine the proper course level placement for them. Students who wish to receive credit for previously acquired language proficiency can take a CLEP examination or a challenge examination.

Awards

The Elsbeth E. Santee Scholarship Fund grants renewal awards annually for students majoring in a foreign language who maintain a 3.0 QPA in their major. Information about the award and application procedures is available in the department office.

Careers

Linguistic ability in languages other than English can promote employment opportunities in organizations working internationally, especially legal, banking and commercial corporations, national and regional governmental agencies, social service and religious organizations, educational institutions, communications, import-export and travel businesses and a variety of translation services.

Bachelor of Arts in French-128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (39 credits)

FRE 203 Intermediate French I	3 crs.
FRE 204 Intermediate French II	3 crs.
FRE 311 French Conversation, Composition, & Phonetics I	3 crs.
FRE 312 French Conversation, Composition, & Phonetics II	3 crs.
FRE 401 Advanced Composition: Grammar & Stylistics	3 crs.
FRE 450 French Colloquium	3 crs.
French Culture and Civilization courses	6 crs.
FRE 421 Survey of French Literature I	3 crs.
FRE 422 Survey of French Literature II	3 crs.
GEO 325 Geography of Europe	3 crs.
One other foreign language	6 crs

Electives and/or Minor (35-39 credits)

Bachelor of Arts in Spanish-128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (39 credits)

SPN 203 Intermediate Spanish I	3 crs.
SPN 204 Intermediate Spanish II	3 crs.
SPN 311 Spanish Conversation, Composition & Phonetics I	3 crs.
SPN 312 Spanish Conversation, Composition & Phonetics II	3 crs.
SPN 401 Advanced Composition: Grammar and Stylistics	3 crs.
Hispanic Culture and Civilization courses	6 crs.
SPN 421 Survey of Spanish Literature	3 crs.
SPN 422 Survey of Spanish-American Literature	3 crs.
SPN 450 Spanish Colloquium	3 crs.
GEO 328 Geography of Latin America	3 crs.
One other foreign language	6 crs.

Electives and/or Minor (35-39 credits)

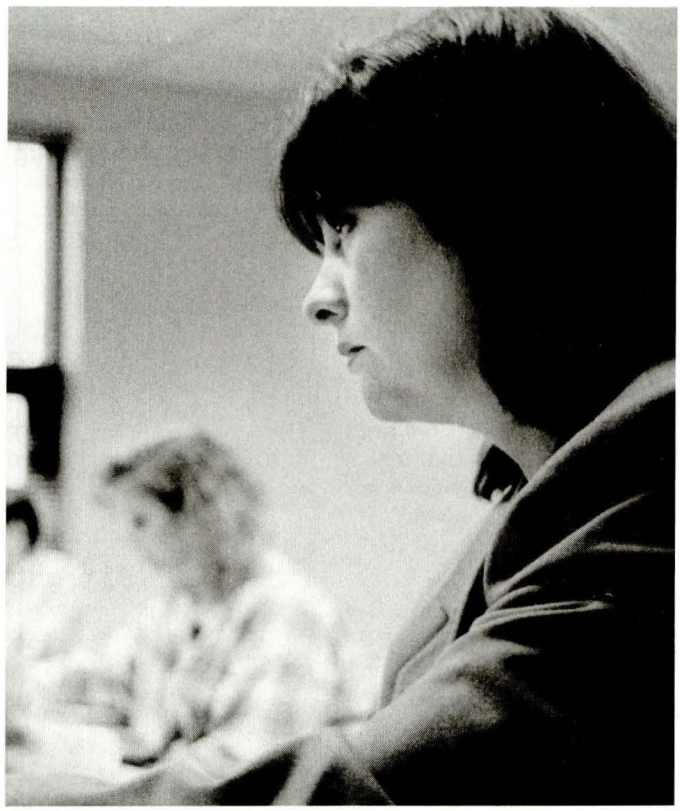
Bachelor of Arts in International Studies: Foreign Language Track-128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (42 credits)

Language I (21 credits)
Select either FRE or SPN
203 Intermediate I 3 crs.



204 Intermediate II	3 crs.
311 Conversation, Composition and Phonetics I	3 crs.
312 Conversation, Composition and Phonetics II	3 crs.
Culture and Civilization Elective	3 crs.
Language Electives at the 400 level	6 crs.

Language II (21 credits)
Select either FRE or SPN

203 Intermediate I	3 crs.
204 Intermediate II	3 crs.
311 Conversation, Composition and Phonetics I	3 crs.
312 Conversation, Composition and Phonetics II	3 crs.
Culture and Civilization Elective	3 crs.
Language Electives at the 400 level	6 crs.

Electives and/or Minor (34-36 credits)

Bachelor of Science in Education: Certification in Foreign Language for Grades K-12

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Professional Education (41 credits)

EDF 290 Policy Studies in American Ed	3 crs.
EDF 301 Computers for Teachers	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDS 300 Problems of Secondary Education	3 crs.
EDS 430 Educational Tests & Measurements	3 crs.
EDS 461 Student Teaching & School Law	12 crs.
EDS 465 Developmental Reading in Secondary Schools	2 crs.
EDS 467 Teaching of Sciences OR EDS 445 Modern Methods in Secondary Schools with advisor's approval	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming the Exceptional Child	3 crs.
PSY 208 Educational Psychology	3 crs.

Professional Specialization (36 credits)

Select either FRE or SPN

203 Intermediate I	3 crs.
204 Intermediate II	3 crs.
311 Conversation, Composition and Phonetics I	3 crs.
312 Conversation, Composition and Phonetics II	3 crs.
401 Advanced Composition: Grammar and Stylistics	3 crs.
Culture and Civilization courses	6 crs.
421 Survey of Literature I	3 crs.
422 Survey of Literature II	3 crs.
450 Foreign Language Colloquium	3 crs.

Electives in major field in second foreign language	6 crs.

Students must also achieve a satisfactory score on the Praxis II examination to obtain Pennsylvania certification.

Minors in Foreign Language

Minor in French - 21 credits

Required Courses (18 credits)

FRE 101 Elementary French I	3 crs.
FRE 102 Elementary French II	3 crs.
FRE 203 Intermediate French I	3 crs.
FRE 204 Intermediate French II	3 crs.
FRE 311 French Conversation, Composition, and Phonetics I	3 crs.
FRE 312 French Conversation, Composition, and Phonetics II	3 crs.

Elective (3 credits)
Select one course from the following:

FRE 401 Advanced Composition; Grammar & Stylistics	3 crs.
FRE 421 Survey of French Literature I	3 crs.
FRE 422 Survey of French Literature II	3 crs.
FRE 450 Foreign Language Colloquium in French	3 crs.

Minor in Spanish - 21 credits

Required Courses (18 credits)

SPN 101 Elementary Spanish I	3 crs.
SPN 102 Elementary Spanish II	3 crs.
SPN 203 Intermediate Spanish I	3 crs.
SPN 204 Intermediate Spanish II	3 crs.
SPN 311 Spanish Conversation, Composition, and Phonetics I	3 crs.
SPN 312 Spanish Conversation, Composition, and Phonetics II	3 crs.

Elective (3 credits)
Select one course from the following:

SPN 401 Advanced Composition; Grammar & Stylistics	3 crs.
SPN 421 Survey of Spanish Literature	3 crs.
SPN 422 Survey of Spanish-American Literature	3 crs.
SPN 450 Foreign Language Colloquium in Spanish	3 crs.

Bachelor of Arts in French

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
FRE 101 Elementary French I or	
FRE 203 Intermediate French I	3 crs.
UNI 100 First Year Seminar	1 cr.
ENG 101 English Composition I	3 crs.
General Education courses	9 crs.

Second Semester	15 credits
FRE 102 Elementary French II or	
FRE 204 Intermediate French II	3 crs.
ENG 102 English Composition II	3 crs.
General Education Courses	9 crs

Sophomore Year

Third Semester	15-18 credits
FRE 203 Intermediate French I or	
FRE 311 French Conversation, Composition, and Phonetics	3 crs.
French Culture course	3 crs.
SPN course	3 crs.
General Education, Minor or Elective	6-9 crs.

Fourth Semester	15-18 credits
FRE 204 Intermediate French II or	
FRE 312 French Conversation, Composition, & Phonetics II	3 crs.
French Culture course	3 crs.
SPN course	3 crs.
General Education, Minor, or Electives	6-9 crs.

Junior Year

Fifth Semester	15-18 credits
FRE 311 French Conversation, Composition, and Phonetics or	
FRE 401 Advanced Composition: Grammar and Stylistics	3 crs.
GEO 325 Geography of Europe	3 crs.
General Education, Minor or Elective	9-12 crs.

Sixth Semester	15-18 credits
FRE 312 French Conversation, Composition, and Phonetics II or	
FRE 450 French Colloquium	3 crs.
General Education, Minor, or Electives	12-15 crs.

Senior Year

Seventh Semester	15-18 credits
FRE 421 Survey of French Literature I	3 crs.
General Education, Minor or Electives	9-12 crs.

Eighth Semester	15-18 credits
FRE 422 Survey of French Literature II	3 crs.
General Education, Minor, or Electives	12-15 crs.

Bachelor of Arts in Spanish

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
SPN101 Elementary Spanish I or	
SPN 203 Intermediate Spanish I	3 crs.
UNI 100 First Year Seminar	1 cr.
ENG 101 English Composition I	3 crs.
General Education courses	9 crs.

Second Semester	15 credits
SPN102 Elementary Spanish II or	
SPN204 Intermediate Spanish II	3 crs.
ENG 102 English Composition II	3 crs.
General Education courses	9 crs

Sophomore Year

Third Semester	15-18 credits
SPN203 Intermediate Spanish I or	
SPN311 Spanish Conversation, Composition, and Phonetics	3 crs.
Spanish Culture course	3 crs.
FRE course	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Fourth Semester	15-18 credits
SPN204 Intermediate Spanish II or	
SPN312 Spanish Conversation, Composition,	
and Phonetics II	3 crs.
Spanish Culture course	3 crs.
FRE course	3 crs.
General Education, Minor, or Elective Courses	6-9 crs.

Junior Year

Fifth Semester	15-18 credits
SPN311 Spanish Conversation, Composition, and Phonetics I or	
SPN401 Advanced Composition: Grammar and Stylistics	3 crs.
GEO 328 Geography of Latin America	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Sixth Semester	15-18 credits
SPN312 Spanish Conversation, Composition, and Phonetics II or	
SPN450 Spanish Colloquium	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Senior Year

Seventh Semester	15-18 credits
SPN421 Survey of Spanish Literature	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Eighth Semester	15-18 credits
SPN422 Survey of Spanish American Literature	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Bachelor of Science in Education: Certification in French for Sec. Schools

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
FRE 101 Elementary French I or	
FRE 203 Intermediate French I	3 crs.
UNI 100 First Year Seminar	1 cr.
ENG 101 English Composition I	3 crs.
General Education courses	9 crs.
Second Semester	**18 credits**
FRE 102 Elementary French II or	
FRE 204 Intermediate French II	3 crs.
ENG 102 English Composition II	3 crs.
PSY 208 Educational Psychology	3 crs.
General Education Courses	9 crs.

Sophomore Year

Third Semester	18 credits
EDF 301 Computers for Teachers	3 crs.
FRE 203 Intermediate French I or	
FRE 311 French Conversation, Composition, and Phonetics	3 crs.
French Culture course	3 crs.
SPN course	3 crs.
General Education, Minor or Elective	6 crs.
Fourth Semester	**18 credits**
EDF 290 Policy Studies in American Education	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
FRE 204 Intermediate French II or	
FRE 312 French Conversation, Composition, & Phonetics II	3 crs.
French Culture course	3 crs.
SPN course	3 crs.
General Education, Minor, or Elective	3 crs.

Junior Year

Fifth Semester	15-18 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDS 300 Problems of Secondary Education	3 crs.
EDS 430 Educational Tests and Measuresments	3 crs.
FRE 311 French Conversation, Composition, and Phonetics or	
FRE 401 Advanced Composition: Grammar and Stylistics	3 crs.
GEO 325 Geography of Europe	3 crs.
General Education, Minor or Elective	0-3 crs.
Sixth Semester	**17 credits**
EDU 340 Mainstreaming Exceptional Learners	3 crs.
EDS 466 Teaching Modern Languages	3 crs.
EDS 465 Developmental Reading in Secondary Schools	2 crs.
FRE 312 French Conversation, Composition, and Phonetics II or	
FRE 450 French Colloquium	3 crs.
FRE 421 Survey of French Literature I	3 crs.
General Education, Minor, or Elective	3 crs.

Senior Year

Seventh Semester	15-18 crs.
EDS 455 Modern Methods in Secondary Schools	3 crs.
FRE 422 Survey of French Literature II	3 crs.
General Education, Minor or Electives	6-9 crs.
Eighth Semester	**12 credits**
Student Teaching	12 crs.

Bachelor of Science in Education: Certification in Spanish for Sec. Schools

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
SPN101 Elementary Spanish I or	
SPN 203 Intermediate Spanish I	3 crs.
UNI 100 First Year Seminar	1 cr.
ENG 101 English Composition I	3 crs.
General Education courses	9 crs.
Second Semester	**18 credits**
SPN102 Elementary Spanish II or	
SPN204 Intermediate Spanish II	3 crs.
ENG 102 English Composition II	3 crs.
PSY 208 Educational Psychology	3 crs.
General Education courses	9 crs

Sophomore Year

Third Semester	18 credits
EDF 301 Computers for Teachers	3 crs.
SPN203 Intermediate Spanish I or	
SPN311 Spanish Conversation, Composition, and Phonetics	3 crs.
Spanish Culture course	3 crs.
FRE course	3 crs.
General Education, Minor or Elective Courses	6 crs.
Fourth Semester	**18 credits**
EDF 290 Policy Studies in American Education	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
SPN204 Intermediate Spanish II or	
SPN312 Spanish Conversation, Composition, & Phonetics II	3 crs.
Spanish Culture course	3 crs.
FRE course	3 crs.
General Education, Minor, or Elective Courses	3 crs.

Junior Year

Fifth Semester	15-18 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDS 300 Problems of Secondary Education	3 crs.
EDS 430 Educational Tests and Measuresments	3 crs.
SPN311 Spanish Conversation, Composition, and Phonetics I or	
SPN401 Advanced Composition: Grammar and Stylistics	3 crs.
GEO 328 Geography of Latin America	3 crs.
General Education, Minor or Elective Courses	0-3 crs.
Sixth Semester	**17 credits**
EDU 340 Mainstreaming Exceptional Learners	3 crs.
EDS 466 Teaching Modern Languages	3 crs.
EDS 465 Developmental Reading in Secondary Schools	2 crs.
SPN312 Spanish Conversation, Composition, & Phonetics II or	
SPN450 Spanish Colloquium	3 crs.
SPN421 Survey of Spanish Literature	3 crs.
General Education, Minor, or Elective Courses	3 crs.

Senior Year

Seventh Semester	15-18 crs.
EDS 455 Modern Methods in Secondary Schools	3 crs.
SPN422 Survey of Spanish American Literature	3 crs.
General Education, Minor or Elective Courses	6-9 crs.
Eighth Semester	**12 credits**
Student Teaching	12 crs.

Health Science and Sport Studies

Purpose and Programs

The Department of Health Science & Sport Studies offers the Athletic Training Education Program (ATEP), which is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). Students may major in athletic training or combine athletic training with teacher education. The basic concept of athletic training involves prevention, care, treatment, and rehabilitation of athletic injuries.

A dual-degree program in Athletic Training and Teacher Certification enables interested students to pursue the education and training necessary for a career as effective teachers and athletic trainers. Teacher Education program options for dual program are: Biology, Chemistry, Communication (Theatre), Earth Science, English, Foreign Languages, General Science, Mathematics, Physics, Social Studies, Special Education. The dual program includes the Athletic Training major requirements and the Professional Education and Professional Specialization requirements of the selected Teacher Education Program. Students interested in this dual program should contact the Program Director of the Athletic Training Education Program for details. This program also requires satisfactory performance on the Praxis II examination.

The Sport Management Studies Program provides students with a depth of knowledge on a broad range of competencies in management, marketing, and communication. The program requires that students gain experience through practica and internships in their specialty area. Students will also be able to supplement their education experience with a minor.

The Physical Therapist Assistant Program at California University will graduate ethical physical therapist assistants who will provide safe, effective, high quality service to the people they treat. Physical therapist assistants (PTA) work in partnership with physical therapists to provide rehabilitation services for individuals who are unable to function due to neuromuscular disease, neuromuscular injury, or want to improve function via prevention. Physical therapists and physical therapist assistants provide services to these individuals to improve their level of functioning, thereby improving their quality of life. The PTA program leads to an Associate of Applied Science degree. The program is housed in modern classrooms and well-equipped laboratories in the newly renovated Hamer Hall. Students gain experience at both campus and off-campus clinical sites.

Occupational therapy assistants work in partnership with and are supervised by registered occupational therapists to provide preventative and/or rehabilitative services to improve the quality of life of persons whose lives have been disrupted by mental, physical, emotional, developmental impairments or environmental, socioeconomic, or cultural barriers. The goal is to help these persons achieve independence and personal satisfaction in the activities of daily living, work and leisure pursuits. The Occupational Therapy Assistant Program has **applied** for accreditation by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220. AOTA's phone number is 301-652-AOTA.

New, modern athletic training facilities are located in Hamer Hall and Adamson Stadium. The California University intercollegiate athletic program, which is a strong NCAA Division II program and a member of the Pennsylvania State Athletic Conference (PSAC), comprises 13 varsity sports that enable students to gain valuable experience as student athletic trainers. Students will also receive additional hours at many area high schools or local colleges as partial fulfillment of their required clinical experience.

Careers in Athletic Training

The high incidence of injuries occurring through athletic participation has become a national concern and has created a demand for individuals who have completed athletic training courses, fulfilled clinical requirements, and earned a minimum of a bachelor's degree. Job opportunities for certified athletic trainers have increased substantially, and the employment potential for athletic trainers should continue to increase. The ultimate goal of this program is to prepare graduates for certification by the NATABOC and for careers in athletic training.

Many high schools hire athletic trainers to help provide better health care for their interscholastic athletic programs. In addition, four-year colleges and universities as well as junior and community colleges provide significant possibilities for employment. Positions with professional teams exist; however, they are fewer in number than those associated with interscholastic athletic programs.

Careers in PTA

The aging of the baby boomer generation has created many new opportunities in physical therapy. Pennsylvania has the nation's second oldest population with 15% of all Pennsylvanians over the age of 65. According to Pennsylvania's Department of Labor and Industry, the need for physical therapist assistants is expected to grow much faster than the average through the year 2008 (as projected by the US Department of Labor).

Careers in Occupational Therapy

The U.S. Department of Labor Statistics projects the COTA employment rate to grow much faster that average (36%) for all occupations through 2008. Individuals who complete the program earn competitive salaries in a variety of practice settings such as group homes, hospitals, home health agencies, hospice, homeless shelters, industry, mental health facilities, nursing homes, prison systems, rehab centers, school systems, and wellness centers.

Careers in Sport Management

The Sport Management major offers career-minded students the opportunity to gain a broad-based understanding of the major areas of Sport Management. Graduates move on to challenging and exciting careers in academic settings, professional sports, sports and recreation facilities, as well as health, fitness, and sport clubs.

The Sport Management major is designed to prepare students to blend general management skills with the specific demands of managing sports organizations. Sport Management majors acquire a strong foundation in management, finance, communication, ethics, and legal aspects of business. Specific courses in Sport Management provide students with an understanding of the role of sports in society, the role of management in sports, and the opportunity to apply their knowledge in sports-related organizations. Students supplement classroom teaching with a variety of practical experiences through field trips and by working in Sport Management settings through completion of internship

placement. Students in Sport Management gain both the knowledge and practical experiences necessary for their future success in a variety of sport management careers.

Bachelor of Science in Athletic Training

Admission to the Athletic Training Program

Admission into the Athletic Training Education Program is competitive, and only a limited number of students are selected each year. Applications for the Athletic Training curriculum are accepted during the second semester of the freshman year and screened by the Admissions and Academic Standards Committee (AASC). During the spring semester, the student submits a letter of application to the AASC, which screens, interviews, and selects the students to be admitted. Criteria for selection are a minimum of a 3.00 QPA, minimum 150 observation hours, and an interview with a departmental faculty member.

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (64 credits)

ATE 115 Foundations of Weight Training & Conditioning	2 crs.
ATE 150 Intro to Athletic Training	3 crs.
ATE 225 Evaluative Techniques I with Laboratory	4 crs.
ATE 265 Evaluative Techniques II with Laboratory	4 crs.
ATE 300 Practicum Athletic Training III	3 crs.
ATE 340 Sports Nutrition	3 crs.
ATE 330 Therapeutic Exercise with Laboratory	4 crs.
ATE 405 Sports Medicine Practicum	4 crs.
(1 credit repeatable to 4 crs.)	
ATE 425 Administrative Strategies in Athletic Training	2 crs.
ATE 460 Sports Medicine Research	3 crs.
ATE 500 Pharmacology	2 crs.
HPE 105 Current Health Issues	3 crs.
HSC 110 Human Anatomy and Physiology I	4 crs.
HSC 120 Human Anatomy and Physiology II with Lab	4 crs.
HSC 270 Physiology of Exercise	3 crs.
HSC 275 Functional Kinesiology	3 crs.
HSC 290 Therapeutic Modalities with Laboratory	4 crs.
HSC 300 Emergency Medical Technician	4 crs.
PSY 100 General Psychology	3 crs.

Clinical hours: minimum of 800 hours during junior and senior years.

Electives (10-13 credits)

Bachelor Of Science In Sport Management

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (63 credits)

COM 203 Introduction to Public Relations	3 crs.
COM 363 Sport Communication & Media Relations	3 crs.
HIS 348 History of American Sport	3 crs.
SOC 309 Sociology of Sport	3 crs.
SOC 100 Principles of Sociology	3 crs.
SPT 200 Introduction to Sport Management	3 crs.
SPT 299 Practica in Sport Management	3 crs.
SPT 301 Psychology of Sport	3 crs.
SPT 302 Ethics in Sport Management	3 crs.
SPT 303 Sport Marketing	3 crs.
SPT 304 Facility & Event Management	3 crs.
SPT 400 Legal Aspects of Sport	3 crs.
SPT 401 Organization & Administration of Sport	3 crs.
SPT 402 Governance in Sport	3 crs.
SPT 403 Sport Finance	3 crs.
SPT 404 Economics of Sport	3 crs.
SPT 405 Sport Management Senior Seminar	3 crs.
SPT 499 Internship in Sport Management	12 crs.

Electives (11-14 credits)

Associate Of Applied Science In Physical Therapist Assistant

Admission to the Physical Therapist Assistant Program

California University requires the completion of 65 credits for graduation. Of these, 44 are taken in the area of concentration, and 21 are taken in general education. Admission to the PTA Program is competitive, and a limited number of qualified students are selected into the professional phase of the program. A student will begin in the pre-professional phase of the program consisting of PTA 100, PSY 100, UNI 100, COM 101, ENG 101, HSC 110. Applications for the PTA Program are accepted after the completion of the pre-professional phase during the fall semester. Criteria for section to the professional phase of the program is a minimum of 2.50 GPA, 20 to 40 volunteer hours within a physical therapy clinic, and a letter of recommendation from a licensed PT or PTA, and an interview with the PTA Advisory Committee.

The Physical Therapist Assistant Program is seeking accreditation with the Commission on Accreditation in Physical Therapy Education (CAPTE) of the American Physical Therapy Association (APTA)

General Education (21 credits)

COM 101 Oral Communication	3 crs.
ENG 101 English Composition I	3 crs.
HSC 110 Human Anatomy and Physiology I	4 crs.
HSC 120 Human Anatomy and Physiology II w/Laboratory	4 crs.
PSY 100 General Psychology	3 crs.
SOC 110 Principles of Sociology	3 crs.
UNI 100 First Year Seminar	1 cr.

Major (44 credits)

Required Courses (29 credits)

PTA 100 Introduction to PTA	3 crs.
PTA 101 Basic Physical Theory Procedures	1 cr.
PTA 110 Introduction to Pathology	2 crs.
PTA 200 Professional Issues in PT	2 crs.
PTA 205 Cardiopulmonary Rehabilitation	2 crs.
PTA 210 Neurological Rehabilitation	4 crs.
PTA 215 Pediatric Rehabilitation	2 crs.
PTA 220 Geriatric Rehabilitation	2 crs.
PTA 225 Orthopedic Rehabilitation	4 crs.
HSC 275 Functional Kinesiology	3 crs.
HSC 290 Therapeutic Modalities	4 crs.

Required Field Experience (15 credits)

PTA 150 PT Clinical Internship I	3 crs.
PTA 250 PT Clinical Internship II	12 crs.

Associate Of Applied Science In Occupational Therapy Assistant

Admission to the Occupational Therapy Assistant Program

California University requires the completion of 77 credits for graduation. Of these, 44 are taken in the area of concentration and 33 are taken in general education. Admission to the university does not guarantee program admission. Students must complete program requirements during the pre-professional phase and then apply for admission to the professional phase of the program. Only a limited number of qualified students are admitted to the professional phase of the program each year. Criteria for selection are available from the chairperson, Department of Health Science and Sport Studies or the program director, Occupational Therapy Assistant program.

The Occupational Therapy Assistant Program is seeking accreditation with the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, PO Box 31220, Bethesda, MD 20824-1220. Their phone number is 301-652-AOTA.

General Education (33 credits)

COM 101 Oral Communication	3 crs.
CSC 101 Microcomputers & Appl. Software	3 crs.
ENG 101 English Composition I	3 crs.
HSC 110 Human Anatomy and Physiology I	4 crs.
HSC 120 Human Anatomy and Physiology II with Laboratory	4 crs.
PSY 100 General Psychology	3 crs.
PSY 207 Developmental Psychology	3 crs.
SOC 100 Principles of Sociology	3 crs.
ANT 100 Introduction to Anthropology	3 crs.
UNI 100 First Year Seminar	1 cr.

Major (44 credits)

Professional Core (22 credits)

OTA 100 Introduction to Occupational Therapy	3 crs.
OTA 110 Personal and Group Dynamics in OT	3 crs.
OTA 200 Psychosocial Dimensions of Health/lab	4 crs.
OTA 210 Physical Dimensions of Health/lab	4 crs.
OTA 240 Professional Issues in Occupational Therapy	2 crs.
HSC 275 Functional Kinesiology	3 crs.
PTA 110 Introduction to Pathology	3 crs.

Required Field Courses (22 credits)

OTA 115 Directer Practice I	2 crs.
OTA 125 Directed Practice II	2 crs.
OTA 205 Directed Practice III	2 crs.
OTA 215 Directed Practice IV	4 crs.
OTA 220 Level II Fieldwork	12 crs.

Bachelor of Science in Athletic Training

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester — 14-17 credits

ENG 101 English Composition I	3 crs.
BIO 230 Anatomy & Physiology I	4 crs.
PSY 100 General Psychology	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	3-6 crs.

Second Semester — 16 credits

ATE 150 Introduction to Athletic Training	3 crs.
ENG 102 English Composition II	3 crs.
HPE 105 Current Health Issues	3 crs.
BIO 260 Anatomy and Physiology II	4 crs.
General Education Course	3 crs.

Sophomore Year

Third Semester — 17-18 credits

ATE 225 Evaluative Techniques I with Laboratory	4 crs.
HPE 500 Emergency Medical Technician	4 crs.
HSC 270 Physiology of Exercise	3 crs.
ATE 300 Practicum Athletic Training III	3 crs.
General Education or Elective Courses	3-4 crs.

Fourth Semester — 17-18 credits

ATE 265 Evaluative Techniques II with Laboratory	4 crs.
HSC 275 Functional Kinesiology	3 crs.
HSC 290 Therapeutic Modalities with Laboratory	4 crs.
General Education or Elective Courses	6-7 crs.

Junior Year

Fifth Semester — 16-18 credits

ATE 330 Therapeutic Exercise with Laboratory	4 crs.
ATE 405 Sports Medicine Practicum	1 cr.
General Education or Elective Courses	11-13 crs.

Sixth Semester — 16-18 credits

ATE 115 Foundations of Weight Training & Conditioning	2 crs.
ATE 340 Sports Nutrition	3 crs.
ATE 405 Sports Medicine Practicum	1 cr.
General Education or Elective Courses	10-12 crs.

Senior Year

Seventh Semester — 16-17 credits

ATE 405 Sports Medicine Practicum	1 cr.
ATE 425 Administrative Strategies in Athletic Training	2 crs.
ATE 460 Sports Medicine Research	3 crs.
ATE 500 Pharmacology	2 crs.
General Education or Elective Courses	8-10 crs.

Eighth Semester — 16-18 credits

ATE 405 Sports Medicine Practicum	1 cr.
General Education or Elective Courses	15-17 crs.

Bachelor of Science in Sports Management

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ENG 101 English Composition I	3 crs.
SPT 200 Introduction to Sport Management	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	9 crs.

Second Semester	15-18 credits
ENG 102 English Composition II	3 crs.
SOC 100 Principles of Sociology	3 crs.
SPT 299 Practica in Sport Management	3 crs.
General Education Courses	6-9 crs.

Sophomore Year

Third Semester	15-18 credits
SPT 302 Ethics in Sport Management	3 crs.
COM 203 Intro to PR	3 crs.
General Education or Elective Courses	9-12crs.

Fourth Semester	18-21 credits
SPT 301 Psychology of Sport	3 crs.
SOC 309 Sociology of Sport	3 crs.
General Education or Elective Courses	12-15 crs.

Junior Year

Fifth Semester	15-18 credits
SPT 303 Sport Marketing	3 crs.
SPT 304 Facility & Event Management	3 crs.
HIS 348 History of American Sport	3 crs.
General Education or Elective Courses	6-9 crs.

Sixth Semester	15-18 credits
COM 363 Sport Communication & Media Relations	3 crs.
SPT 400 Legal Aspects of Sport	3 crs.
SPT 401 Organization & Administration of Sport	3 crs.
SPT 402 Governance in Sport	3 crs.
General Education or Elective Courses	3-6 crs.

Senior Year

Seventh Semester	15-18 credits
SPT 403 Sport Finance	3 crs.
SPT 404 Economics of Sport	3 crs.
SPT 405 Sport Management Senior Seminar	3 crs.
General Education or Elective Courses	6-9 crs.

Eighth Semester	12 credits
SPT 499 Internship in Sport Management	12 crs.

History and Political Science

Purpose

The recording and explanation of the events that constitute social, organizational, or personal existence comprise the discipline of history. History, with its special concern for what is unique in human events, is an integrative discipline. Its narratives and explanations are contextual. As such, historians take cognizance of the works of artists, philosophers, and social scientists.
For example, social historians utilize the methods of the social scientist. This integrative aspect of historical narrative and explanation continues to make it a primary part of a Liberal Arts education. In as much as it reveals every person's past, it makes possible greater personal freedom and creativity.

Programs

The department offers a Bachelor of Arts degree and a minor in history and a Bachelor of Arts degree and a minor in political science. The history major is general in nature, providing students with the opportunity to select areas of topical interest. In relation to the major, the department, in conjunction with the College of Education and Human Services, provides requisite courses for social science certification for teaching in secondary schools. Students interested in teacher certification can secure further information from the College of Education and Human Services office at 938-4125.

The minor in history allows students in other majors to expand their educational opportunity.

Political science is a highly prescribed discipline. It limits its interests to the political aspects of human behavior, both national and international, including the study of power and organizations.

Political science offers thre concentrations: general political science, public administration, and pre-law. The public administration concentration is an interdisciplinary field of study with courses offered through the programs in business and economics, as well as poltical science.

Under the international studies program, political science advises the international studies: political science concentration. This course of study is interdisciplinary.

Political science students are placed in governmental agencies, law firms and office of public administrators and elected officials where they can observe and practice what they have learned in the classroom.

Honor Society

Students who meet the academic requirements are eligible for membership in Phi Alpha Theta, the International Honor Society. Information can be obtained from faculty advisors and the department office.

Awards

The History Faculty Award for Academic Excellence is given annually to the History major who has demonstrated outstanding achievement.

The Edward McNall Burns Scholarship Award is given annually to a qualified atudent majoring in anthropology, sociology, political science, economics, or history. See the department office for further information.

The George S. Hart Award for Academic Excellence is given annually to the graduating senior with the highest GPA in the social sciences area.

Careers

Teacher, archivist and museum curator are professions directly related to the history major. Careers in law, religion, foreign service, both corporate and government, and diplomacy have a great reliance on historical knowledge. In addition, history majors are employed in the marketing field, in the communications industry and the insurance industry. The history major prepares students to succeed in a wide range of occupations. History continues to be ranked among the top undergraduate majors of Fortune 400 CEOs.

Students with an undergraduate degree in political science are prepared with advanced study to enter careers in law and public administration.

Bachelor of Arts in History

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (42 credits)

Required Western History (15 credits):

HIS 101 History of the United States to 1877	3 crs.
HIS 102 History of the United States since 1877	3 crs.
HIS 104 History of Western Society to 1740	3 crs.
HIS 106 History of Western Society since 1740	3 crs.
HIS 495 Seminar in U. S. History	3 crs.

Non-Western History (6 credits)
Students should complete two courses from the following:

HIS 111 Development of Major World Civilizations	3 crs.
HIS 112 Major World Civilizations in Transition	3 crs.
HIS 147 History of the Middle East	3 crs.

History Electives (21 credits)
Students should complete 21 credits of History (HIS) courses.

Electives and/or Minor (32-35 credits)

Minor in History - 21 credits

Required Courses (12 credits)

HIS 101 History of the US to 1877	3 crs.
HIS 102 History of the US since 1877	3 crs.
HIS 104 History of Western Society to 1740	3 crs.
HIS 106 History of Western Society since 1740	3 crs.

History Electives (9 credits)
Students should complete any three HIS courses at the 300-level or higher.

Bachelor of Arts in Political Science—128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (36-42 credits)

Political Science Core (12 credits)

POS 100 Introduction to Political Science	3crs.
POS 105 American Government	3crs.
POS 301 Methods of Political Analysis	3crs.
POS 450 Seminar in American Politics	3crs.

Concentration (24-30 credits)

Students may select one of the following concentrations.

Political Science Concentration (24 credits)

Content Area Courses (12 credits)
Students should select one course from each of the following content areas:

American Politics

POS 205 Municipal Government	3 crs.
POS 218 Political Parties, Campaigns, And Elections	3 crs.
POS 219 The Mass Media And American Politics	3 crs.
POS 235 State And Local Government	3 crs.
POS 306 Congress	3 crs.
POS 310 The Presidency	3 crs.
POS 314 Constitutional Law: Governmental Powers	3 crs.
POS 315 Constitutional Law: Civil Liberties	3 crs.
POS 316 Judicial Process	3 crs.
POS 320 U S Foreign Policy	3 crs.
POS 329 Internship In Political Science	3 crs.

International Relations/Comparative Politics

POS 210 Politics Of Western Europe	3 crs.
POS 236 Introduction To International Relations	3 crs.
POS 237 International Organizations	3 crs.
POS 281 Politics Of Russia	3 crs.
POS 322 Politics Of The Middle East	3 crs.
POS 323 Politics Of Latin America	3 crs.
POS 325 Politics Of Asia	3 crs.
POS 326 Politics Of Africa	3 crs.

Political Theory

POS 228 Development Of Political Thought: Classical And Medieval	3 crs.
POS 229 Development Of Political Thought: Modern	3 crs.
POS 307 Revolution	3 crs.
POS 327 Contemporary Political Thought	3 crs.
POS 330 American Political Ideas	3 crs.

Public Administration/Public Policy

POS 220 Introduction To Public Administration	3 crs.
POS 222 The Administration Of Criminal Justice In The United States	3 crs.
POS 300 Introduction To Public Policy	3 crs.
POS 335 Administrative Law	3 crs.

Political Science electives with at least nine credits at the 300 level or above (12 credits)

Public Administration Concentration (30 credits)

Required Public Administration Courses (6 credits):

POS 220 Introduction to Public Administration	3 crs.
POS 300 Introduction to Public Policy	3 crs.

Public Administration Electives (9 credits)
Students should select three of the following courses:

POS 205 Municipal Government	3 crs.
POS 222 The Administration Of Criminal Justice In The United States	3 crs.
POS 235 State And Local Government	3 crs.
POS 237 International Organizations	3 crs.
POS 310 The Presidency	3 crs.
POS 314 Constitutional Law: Governmental Powers	3 crs.
POS 315 Constitutional Law: Civil Liberties	3 crs.
POS 316 Judicial Process	3 crs.
POS 329 Internship In Political Science	3 crs.
POS 335 Administrative Law	3 crs.

Economics & Management courses (15 credits)

ECO 201 Introduction to Microeconomics	3 crs.
ECO 202 Introduction to Macroeconomics	3 crs.
FIN 301 Financial Management	3 crs.
MGT 201 Principles of Management	3 crs.
MKT 341 Marketing for Non-Profit Organizations	3 crs.

Pre-Law Concentration (24 credits)

Content Area (15 credits)
Students should select one course from each of the following content areas:

American Politics

POS 205 Municipal Government	3 crs.
POS 218 Political Parties, Campaigns, And Elections	3 crs.
POS 219 The Mass Media And American Politics	3 crs.
POS 235 State And Local Government	3 crs.
POS 306 Congress	3 crs.
POS 310 The Presidency	3 crs.
POS 314 Constitutional Law: Governmental Powers	3 crs.
POS 315 Constitutional Law: Civil Liberties	3 crs.
POS 316 Judicial Process	3 crs.
POS 320 U S Foreign Policy	3 crs.
POS 329 Internship In Political Science	3 crs.

International Relations/Comparative Politics

POS 210 Politics Of Western Europe	3 crs.
POS 236 Introduction To International Relations	3 crs.
POS 237 International Organizations	3 crs.
POS 281 Politics Of Russia	3 crs.
POS 322 Politics Of The Middle East	3 crs.
POS 323 Politics Of Latin America	3 crs.
POS 325 Politics Of Asia	3 crs.
POS 326 Politics Of Africa	3 crs.

Political Theory

POS 228 Development Of Political Thought: Classical And Medieval	3 crs.
POS 229 Development Of Political Thought: Modern	3 crs.
POS 307 Revolution	3 crs.
POS 327 Contemporary Political Thought	3 crs.
POS 330 American Political Ideas	3 crs.

Public Administration/Public Policy

POS 220 Introduction To Public Administration	3 crs.
POS 222 The Administration Of Criminal Justice In The United States	3 crs.
POS 300 Introduction To Public Policy	3 crs.
POS 335 Administrative Law	3 crs.

Public Law

POS 222 The Administration Of Criminal Justice In The United States	3 crs.
POS 314 Constitutional Law: Governmental Powers	3 crs.
POS 315 Constitutional Law: Civil Liberties	3 crs.
POS 316 Judicial Process	3 crs.
POS 335 Administrative Law	3 crs.

Political Science electives at the 300 level or above (9 credits)

Electives and/or Minor (32-40 credits)

Bachelor of Arts in International Studies: Political Science Concentration

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (42 Credits)

Political Science (21 credits)

POS 210 Politics of Western Europe	3 crs.
POS 236 Introduction to International Relations	3 crs.
POS 237 International Organizations	3 crs.
POS 281 Politics of Russia	3 crs.
POS 322 Politics Of The Middle East	3 crs.
POS 323 Politics Of Latin America	3 crs.
POS 325 Politics of Asia OR POS 326 Politics of Africa	3 crs.

Language (21 credits)
Select courses from either FRE or SPN:

203 Intermediate I	3 crs.
204 Intermediate II	3 crs.
311 Conversation, Composition and Phonetics I	3 crs.
312 Conversation, Composition and Phonetics II	3 crs.
Culture & Civilization Elective	3 crs.
Language Elective (400 level)	3 crs.
Language Elective (400 level)	3 crs.

Electives and/or Minor (32-35 credits)

Minor in Political Science - 21 credits

Select one of the following concentrations:

Political Science Concentration

Required (6 credits)

POS 100 Intro to Political Science	3 crs.
POS 105 American Government	3 crs.

Electives (15 credits)
Select two: 200-level Political Science (POS) course
Select three: 300-level Political Science (POS) courses

Public Administration Concentration

Required (9 credits)

POS 100 Introduction to Political Science	3 crs.
POS 105 American Government	3 crs.
POS 220 Introduction to Public Administration	3 crs.

Electives (12 credits)
Select four of the following:
POS 205 Municipal Government OR

POS 235 State and Local Government	3 crs.
POS 300 Introduction to Public Policy	3 crs.
POS 310 The Presidency	3 crs.
POS 314 Constitutional Law: Government Powers	3 crs.
POS 315 Constitutional Law: Civil Liberties	3 crs.
POS 316 Judicial Process	3 crs.

Bachelor of Arts in History

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
HIS 101 History of the United States to 1877	3 crs.
UNI 100 First Year Seminar	1 cr.
ENG 101 English Composition I	3 crs.
General Education courses	9 crs.

Second Semester	15 credits
HIS 102 History of the United States since 1877	3 crs.
History course	3 crs.
ENG 102 English Composition II	3 crs.
General Education Courses	6 credits

Sophomore Year

Third Semester	15-18 credits
HIS 104 History of Western Society to 1740	3 crs.
History course	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Fourth Semester	15-18 credits
HIS 106 History of Western Society since 1740	3 crs.
History course	3 crs.
History course	3 crs.
General Education, Minor, or Elective Courses	6-9 crs.

Junior Year

Fifth Semester	15-18 credits
History course	3 crs.
General Education, Minor or Elective Courses	12-15 crs.

Sixth Semester	15-18 credits
HIS 495 Seminar in U. S. History or History elective	3 crs.
History course	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Senior Year

Seventh Semester	15-18 credits
History course	3 crs.
History course	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Eighth Semester	15-18 credits
HIS 495 Seminar in U. S. History or History elective	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Bachelor of Arts in Political Science: Political Science Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
POS 100 Introduction to Political Science	3crs.
UNI 100 First Year Seminar	1 cr.
ENG 101 English Composition I	3 crs.
General Education Courses	9 crs.

Second Semester	15 credits
POS 105 American Government	3crs.
ENG 102 English Composition II	3 crs.
General Education Courses	9 crs.

Sophomore Year

Third Semester	15-18 credits
Political Science Course	3 crs.
General Education, Minor or Elective Courses	12-15 crs.

Fourth Semester	15-18 credits
Political Science Course	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Junior Year

Fifth Semester	15-18 credits
POS 301 Methods of Political Analysis	3crs.
Political Science Course	3 crs.
Political Science Course	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Sixth Semester	15-18 credits
Political Science Course	3 crs.
Political Science Course	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Senior Year

Seventh Semester	15-18 credits
Political Science Course	3 crs.
Political Science Course	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Eighth Semester	15-18 credits
POS 450 Seminar in American Politics	3crs.
General Education, Minor, or Elective Courses	12-15 crs.

Bachelor of Arts in Political Science: Public Administration Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
POS 100 Introduction to Political Science	3crs.
UNI 100 First Year Seminar	1 cr.
ENG 101 English Composition I	3 crs.
General Education Courses	9 crs.

Second Semester	15 credits
POS 105 American Government	3crs.
ENG 102 English Composition II	3 crs.
General Education Courses	9 crs.

Sophomore Year

Third Semester	15-18 credits
POS 220 Introduction to Public Administration	3 crs.
General Education, Minor or Elective Courses	12-15 crs.

Fourth Semester	15-18 credits
POS 300 Introduction to Public Policy	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Junior Year

Fifth Semester	15-18 credits
POS 301 Methods of Political Analysis	3crs.
ECO 201 Introduction to Microeconomics	3 crs.
MGT 201 Principles of Management	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Sixth Semester	15-18 credits
Political Science Course	3 crs.
ECO 202 Introduction to Macroeconomics	3 crs.
FIN 301 Financial Management	3 crs.
MKT 341 Marketing for Non-Profit Organizations	3 crs.
General Education, Minor, or Elective Courses	3-6 crs.

Senior Year

Seventh Semester	15-18 credits
Political Science Course	3 crs.
Political Science Course	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Eighth Semester	15-18 credits
POS 450 Seminar in American Politics	3crs.
General Education, Minor, or Elective Courses	12-15 crs.

Bachelor of Arts in Political Science: Pre-Law Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
POS 100 Introduction to Political Science	3crs.
UNI 100 First Year Seminar	1 cr.
ENG 101 English Composition I	3 crs.
General Education courses	9 crs.

Second Semester	15 credits
POS 105 American Government	3crs.
ENG 102 English Composition II	3 crs.
General Education Courses	9 credits

Sophomore Year

Third Semester	15-18 credits
Political Science Course	3 crs.
General Education, Minor or Elective Courses	12-15 crs.

Fourth Semester	15-18 credits
Political Science Course	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Junior Year

Fifth Semester	15-18 credits
POS 301 Methods of Political Analysis	3crs.
Political Science Course	3 crs.
Political Science Course	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Sixth Semester	15-18 credits
Political Science Course	3 crs.
Political Science Course	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Senior Year

Seventh Semester	15-18 credits
Political Science Course	3 crs.
Political Science Course	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Eighth Semester	15-18 credits
POS 450 Seminar in American Politics	3crs.
General Education, Minor, or Elective Courses	12-15 crs.

Honors Program

Honors Advisory Board: Professor Edward J. Chute (English), Director. Professor Jesse A. Cignetti (Chemistry), Leonard Colleli, Dean of Eberly College of Science and Technology, Professor Gregg Gould (Physical Science), Richard Helldobler, Dean of Liberal Arts (Acting), Geraldine Jones, Dean of Education and Human Services (Acting), Associate Professor J. Drew McGukin (Communications), Professor Beverly J. Melenyzer (Elementary Education), Mollie Manley (Honors Program Student), Associate Professor Marsha L. Nolf (Library Services), Professor Michael J. Slavin (Theatre), Assistant Professor Gary A. Smith (Philosophy), Professor Carole A.Waterhouse (English), Professor James Wood (Social Science)

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; 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 participate in the Honors Program.

Programs

Each summer (since 1985) two Honors Program students receive scholarships to participate in the SSHE Summer Honors Program. This program is noted for its academic quality and its opportunity, typically, to study abroad in such places as Russia (1995), Austria (1996), England (1997), Italy (1998), and Renaissance and Reformation Europe (1999), Edinburgh, Scotland (2000) and South Africa (2001). Honors Program students have the opportunity to participate in the Honors Program Residence Hall, which includes specialty housing in Johnson Hall as well as educational, social, and recreational programming. The Honors Program maintains a small, but high quality, computer facility in Johnson Hall reserved for the exclusive use of its students and faculty. Each spring semester, the Honors Program conducts and coordinates a special grouping of courses and faculty for its students which focuses on a particular area, rotating in a three year cycle from Social Science (2002), through Science (2003), to Arts and Humanities (2004). 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

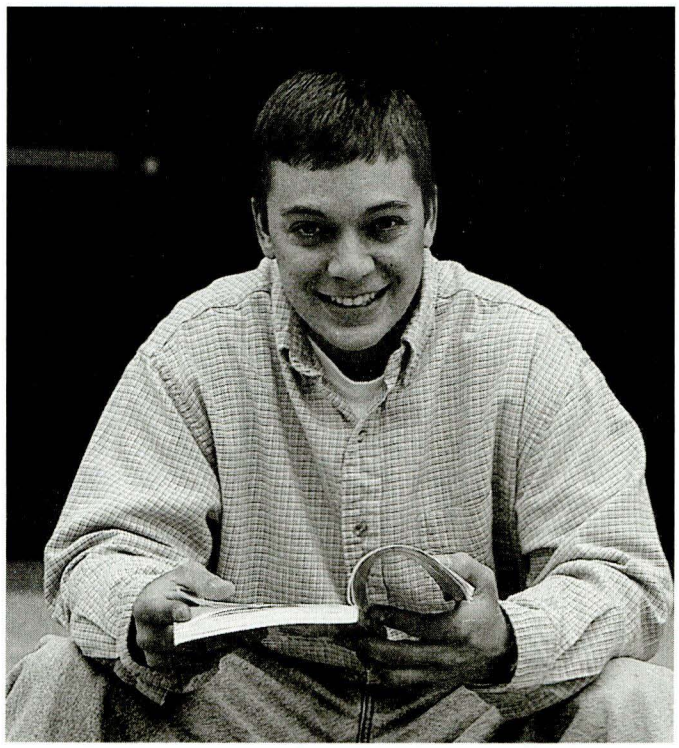
Currently, the Honors Program annually presents the following awards: Senior Thesis Project Award and the Outstanding Honors Program Graduating Senior Award.

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 Director of 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, California University of Pennsylvania, California, PA 15419-1394, 724-938-4535.



Humanities

Purpose

Humanities are most often considered a curricular area or category in which a number of majors coexist interdependently. For example, Foreign Languages, Art and English are program areas under the Humanities heading. However, California University has a separate Humanities program, which works particularly well for those students who find that their goals lie somewhere between two or three different Humanities areas.

The Humanities program is designed to allow greater freedom in shaping an integrated university program responsive to the students' unique interests and permit the greatest breadth for studying the interrelationships between disciplines. This program stresses breadth of knowledge and interdisciplinary awareness. Students have the opportunity, as well as the responsibility, to develop unique, integrated and personalized programs combining courses from Humanities areas.

Additional information on the Humanities program can be obtained from the College of Liberal Arts or from the Office of Lifelong Learning for its Evening & Weekend College program.

Bachelor of Arts in Humanities—128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (42 credits)

Introductory Courses (21 credits maximum)
Students should complete courses from at least three of the following disciplines: Art (ART), Communication Studies (COM), English (ENG), French (FRE), German (GER) Literature (LIT), Music (MUS), Philosophy (PHI), Spanish (SPN), and Theatre (THE). Introductory courses are usually designated as 100 or 200 level.

Advanced Courses (21 credits minimum)
Students should complete courses from at least three of the following disciplines: Art (ART), Communication Studies (COM), English (ENG), French (FRE), German (GER) Literature (LIT), Music (MUS), Philosophy (PHI), Spanish (SPN), and Theatre (THE). Advanced courses are usually designated as 300 or 400 level. Students should consult with their faculty advisor in the selection of courses.

Electives and/or Minor (34 credits)

Justice Studies

Purpose

The criminal justice program at California University of Pennsylvania serves two primary purposes: 1) To allow for serious and esoteric study of the functions and processes of the American justice system; and 2) To prepare students for professional careers in the justice system, whether in policing, law, corrections, investigations or human service positions. The program's curricular and programmatic philosophy is primarily professional, though students are exposed to a wide array of intellectual disciplines across the University. The program's wide-ranging course offerings reflect its interdisciplinary approach and its dedication to preparing its graduates for a multitude of opportunities in the criminal and civil justice systems.

The program's course offerings reflect diverse classroom experiences from traditional lecture to applied field exercises. Criminal justice studies is an eclectic undertaking with continuous encouragement to branch out in other intellectual traditions, such as the study of language, science, accounting, political science or sociological and psychological theory. The program also affords independent study opportunities for serious individualized scholarship, specialized topics and courses of instruction on timely issues in the justice system, and the ability to travel abroad for foreign study in law and justice. Internship opportunities are readily available to criminal justice majors.

Anthropology is the most comprehensive offering, since there is no aspect of human development or behavior that it does not study, although it traditionally has focused on pre-industrial societies. Anthropology includes such diverse subject areas as ethnology, medical and psychological anthropology, archaeology, and human evolution. Field experiences are available in archaeology. An archaeology field school runs during the summer session. Students participate in the excavation of a site.

Programs

Criminal Justice is both a professional and a liberal arts program. Specifically, the criminal justice major consists of FIVE components: the CORE, in which students learn about the fundamental systems inherent in the justice model; and specialized studies in four tracks - ***Police and Law Enforcement, Law and Legal Process, Crime and Criminology, and Criminal Justice Electives.*** Within each of these components are course offerings from other academic disciplines at the University, particularly sociology, accounting, political science and philosophy. The program's intent is to permit some interdisciplinary analysis of the justice system from other perspectives and encourages its majors to look beyond the career orientation to the broader vision that resides in the liberal arts. The Program's suggested plan of study, over the typical four year cycle further buttresses this ideology by recommending General Education courses that are compatible with the major's programmatic design, but diverse enough that students in the justice studies program appreciate the system from diverse viewpoints. Hence in General Education, the major strongly endorses the study of languages, psychology, sociology, sciences, philosophy and political science.

Students must earn a minimum of 63 credits of course work in the major to complete the degree in Criminal Justice, or 76 credits for the degree in Anthropology, plus the General Education requirements promulgated by California University of Pennsylvania. To earn the degree, students must successfully complete between 128 and 130 credit hours depending upon major course of study. Transfer students with an associate's degree, depending upon institutional agreement, generally are required to complete 30-36 hours of coursework in the Criminal Justice major.

The program has designed course requirements for completion in the third and fourth years of study. Advisors play a crucial role in the plan and completion of these degree requirements.

Internships

An internship is a form of field experience. Anthropology students do internships at the Carnegie Museum in Pittsburgh and various historical sites, such as Bushy Run and the Fort Necessity Historical Park. Internship opportunities are readily available to Criminal Justice majors in all fields of justice and law enforcement.

Honor Societies

Criminal Justice at California is dedicated to recognizing its best and brightest majors. The program participates in the *National Criminal Justice Honor Society* (Alpha Phi Sigma) and will soon have a recognized chapter.

In addition, the program invites its highest caliber students for possible membership in the *Order of Cicero* that is bestowed on those senior level students with the requisite GPA, after successful completion of an intense course of study.

Anthropology majors are eligible for membership in the Gamma Chapter of Lambda Alpha, the national honor society. Requirements are the completion of twelve credits of Anthropology course work and a 3.0 grade point average or higher in the major, as well as an overall 2.7 grade point average.

Special Program Offerings

Criminal justice faculty and students are vibrant members of the university community and involve themselves in numerous activities beyond the normal academic experience. The program sponsors a newsletter, *The Justice Chronicle*, which announces items of professional and academic interest to the college community.

It is also disseminated to justice professionals in the region. The program is an active participant in regional and national conferences where student research is highlighted and will be host to regional conferences.

Housed in the program's office are career services, such as a *Jobs Center*, where positions from state, local and federal agencies are announced. A permanent on-line computer station, which allows access to catalogued job opportunities and a Civil Service data center, is open to the majors.

Aside from careers, the program collects information on graduate and law school offerings throughout the nation. Students are welcome during all regular business hours. The program vitally supports the student organizations dedicated to criminal justice, assigning a faculty advisor and coordinating activities with professional staff. Membership information on these groups and associations is available in the director's office.

Finally, the program will sponsor social, academic and professional events throughout the academic year. Students play a critical part in the implementation of these programs.

Awards

The Joseph Lynn Marino Memorial Award is presented annually. For consideration an applicant must have a minimum grade point average of 3.5, be enrolled in the College of Liberal Arts and have successfully completed two courses in Anthropology.

Careers

The criminal justice major prepares students for careers in professional justice agencies. Careers in criminal justice are multi-faceted and include state and local police, correctional organizations for adult and juveniles and alternative dispositions, such as probation and parole, diversion, and the related institutions, as well as public and non-profit residential care. Major opportunities and career options also exist in federal law enforcement, government security organizations, private security and legal and judicial organizations.

Criminal justice graduates are qualified for numerous justice positions in agencies like the Pennsylvania, Ohio and West Virginia State Police, Pittsburgh and other municipal police departments, State Corrections Department, Children and Youth Services, County Prosecutor and Public Defender's Offices, Victim Assistance Units, court systems, and a variety of criminal justice agencies throughout the nation. Many serve in federal agencies such as the Central Intelligence Agency, the State Department, Secret Service, Drug Enforcement Agency, Federal Bureau of Investigation, U.S. Customs, Immigration and Naturalization, Department of Defense, and Federal Probation and Parole. Others are employed in the private security field with Fortune 500 companies as formidable as Alcoa, the Eastman Kodak Company, USAir and Pinkerton. Graduates will find security positions in area universities, hospitals and other non-profit facilities. Many graduates work for human service agencies that deal with juveniles, substance abuse, family trauma and other crisis intervention.

Other graduates continue post-baccalaureate education in law, criminal justice, counseling and public administration, making significant intellectual contributions to a dynamic and changing system.

Graduates can pursue numerous careers, including archaeologial excavation crew member, cultural resource management specialist, environmental impact reviewer, government foreign service, graduate study, museum curator and researcher. These careers are available in the private sector and with state and federal agencies. Some graduates move on to postbaccalaureate education in anthropology to obtain graduate degrees for teaching and for research.

Bachelor of Arts in Anthropology-128 crs.

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (42 credits)

Anthropology Core (21 credits)

ANT 100 Introduction to Anthropology	3crs.
ANT 101 Archaeology Field School	3crs.
ANT 255 World Ethnology	3crs.
ANT 290 Archaeology	3crs.
ANT 355 Prehistoric American Indians	3crs.
ANT 390 Human Origins	3crs.
ANT 421 Anthropological Thought	3crs.

Anthropology Electives (15 credits)

Related Courses (6 credits)

*PSY 225 Psychological Statistics	3 crs.
SOC 415 Social Science Research Methods	3 crs.

*MAT 181 is a prerequisite for PSY 225

Electives and/or Minor (34 credits)

Minor in Anthropology - 21 credits

Required (3 credits)

ANT 100 Introduction to Anthropology	3 crs.

Select three of the following (9 credits)

ANT 231 Medical Anthropology	3 crs.
ANT 250 Culture Change and Culture Shock	3 crs.
ANT 255 World Ethnology	3 crs.
ANT 280 Indians of North America	3 crs.
ANT 290 Archaeology	3 crs.

Select three of the following (9 credits)

ANT 300 Cultural Views of Women	3 crs.
ANT 355 Prehistoric American Indians	3 crs.
ANT 360 Historic Sites Archaeology	3 crs.
ANT 390 Human Origins	3 crs.

Bachelor of Science in Criminal Justice

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Concentration 1: Transfer Students with Associate Degree in Criminal Justice

Major (36 credits beyond Associate Degree major requirements)

Core Requirements (9 credits)

CRJ 375 Criminal Law	3 crs.
CRJ 455 Legal Traditions	3 crs.
CRJ 495 Legal and Justice Research Methods OR	
SOC 415 Social Science Research Methods	3 crs.

Police & Law Enforcement Electives (6 credits)

Select two courses from the following list:

CRJ 351 Civil Liability of Criminal Justice Personnel	3 crs.
CRJ 394 Problems in Policing	3 crs.
CRJ 465 Police Organization and Management	3 crs.

Crime & Criminology Electives (6 credits)

Select two courses from the following list:

CRJ 309 White Collar Crime	3 crs.
CRJ 429 Terrorism	3 crs.
CRJ 470 Crimes Against Children	3 crs.
SOC 260 Crime	3 crs.
SOC 285 Sociology of Substance Use and Abuse	3 crs.
SOC 300 Sociology of Deviance	3 crs.

Law & Legal Processes Electives (9 credits)
Select three courses from the following list:

CRJ 331 Juvenile Justice System	3 crs.
CRJ 335 Private Security Law	3 crs.
CRJ 361 Judicial Administration	3 crs.
CRJ 376 Criminal Procedure	3 crs.
CRJ 485 Forensic Law	3 crs.
CRJ 497 Law and Evidence	3 crs.
POS 315 Constitutional Law: Civil Liberties	3 crs.
POS 316 Judicial Process	3 crs.
POS 335 Administrative Law	3 crs.

Related Electives (6 credits)
Select courses from the following list:

CRJ 305 International Criminal Justice	3 crs.
CRJ 325 Law, Justice and Family	3 crs.
CRJ 345 Probation and Parole	3 crs.
CRJ 395 The Death Penalty	3 crs.
CRJ 399 Selected Topics in Law and Justice	3 crs.
CRJ 400 Foreign Study in Criminal Justice	Variable crs.
CRJ 490 Forensic Accounting	3 crs.
CRJ 498 Criminal Justice Internship	Variable crs.
CRJ 499 Independent Study in Law and Justice	3 crs.
PHI 220 Ethics	3 crs.
PHI 370 Philosophy of Law	3 crs.
POS 220 Introduction to Public Administration	3 crs.
SOW 265 Juvenile Delinquency	3 crs.

Concentration 2: First-Time Freshman & Transfer Students without an Associate Degree in Criminal Justice

Major (63 credits)

Core Requirements (15 credits)

CRJ 101 Introduction to Criminal Justice OR POS 222 The Administration of Criminal Justice in the United States	3 crs.
CRJ 103 Correctional Systems	3 crs.
CRJ 375 Criminal Law	3 crs.
CRJ 455 Legal Traditions	3 crs.
CRJ 495 Legal and Justice Research Methods OR SOC 415 Social Science Research Methods	3 crs.

Police & Law Enforcement Electives (12 credits)
Select four courses from the following list:

CRJ 102 American Policing	3 crs.
CRJ 104 Introduction to Security	3 crs.
CRJ 201 Criminal Investigation	3 crs.
CRJ 202 Industrial and Retail Security	3 crs.
CRJ 351 Civil Liability of Criminal Justice Personnel	3 crs.
CRJ 394 Problems in Policing	3 crs.
CRJ 465 Police Organization and Management	3 crs.

Crime & Criminology Electives (12 credits)
Select four courses from the following list:

CRJ 211 Organized Crime	3 crs.
CRJ 215 The Victim and the Justice System	3 crs.
CRJ 309 White Collar Crime	3 crs.
CRJ 429 Terrorism	3 crs.
CRJ 470 Crimes against Children	3 crs.
SOC 260 Crime	3 crs.
SOC 285 Sociology of Substance Use and Abuse	3 crs.
SOC 300 Sociology of Deviance	3 crs.
SOW 265 Juvenile Delinquency	3 crs.

Law & Legal Processes Electives (12 credits)
Select four courses from the following list:

CRJ 331 Juvenile Justice System	3 crs.
CRJ 335 Private Security Law	3 crs.
CRJ 361 Judicial Administration	3 crs.
CRJ 376 Criminal Procedure	3 crs.
CRJ 485 Forensic Law	3 crs.
CRJ 497 Law and Evidence	3 crs.
POS 315 Constitutional Law: Civil Liberties	3 crs.
POS 316 Judicial Process	3 crs.
POS 335 Administrative Law	3 crs.

Related Electives (12 credits)
Select courses from the following list:

CRJ 305 International Criminal Justice	3 crs.
CRJ 325 Law, Justice and Family	3 crs.
CRJ 345 Probation and Parole	3 crs.
CRJ 395 The Death Penalty	3 crs.
CRJ 399 Selected Topics in Law and Justice	3 crs.
CRJ 400 Foreign Study in Criminal Justice	Variable crs.
CRJ 490 Forensic Accounting	3 crs.
CRJ 498 Criminal Justice Internship	Variable crs.
CRJ 499 Independent Study in Law and Justice	3 crs.
PHI 220 Ethics	3 crs.
PHI 370 Philosophy of Law	3 crs.
POS 220 Introduction to Public Administration	3 crs.

Electives (11-14 credits)

Associate Degree in Criminal Justice – 62 credits

The Associate degree program is offered through a collaborative agreement with the Community College of Beaver County and is administered at California University through the Department of Social Science, 724-938-4042.

General Education (26 credits):

ENG 101 Composition I	3 crs.
ENG 102 Composition II	3 crs.
COM 101 Oral Communication	3 crs.
SOC 100 Principles of Sociology	3 crs.
PSY 100 General Psychology	3 crs.
Biology Laboratory Course	4 crs.
Computer Science or Social Science Elective	3 crs.
Humanities Elective	3 crs.
UNI 100 First Year Seminar	1 cr.

Major (36 credits)

XJJ 155 Administration of Criminal Justice	3 crs.
XJJ 156 Narcotics and Drug Abuse	3 crs.
XJJ 157 Correctional Administration	3 crs.
XJJ 160 Criminal Law I	3 crs.
XJJ 261 Interview and Interrogation	3 crs.
XJJ 262 Criminal Evidence	3 crs.
XJJ 270 Criminology	3 crs.
XJJ 282 Police Ethics and Problems	3 crs.
Criminal Justice electives	12 crs.

Bachelor of Arts in Anthropology

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ANT 100 Introduction to Anthropology	3 crs.
UNI 100 First Year Seminar	1 cr.
ENG 101 English Composition I	3 crs.
General Education Courses	9 crs.

Second Semester	15 credits
ANT 290 Archaeology	3 crs.
ENG 102 English Composition II	3 crs.
General Education Courses	9 crs.

Sophomore Year

Third Semester	15-18 credits
Anthropology Elective Courses	6 crs.
General Education, Minor or Elective Courses	9-12 crs.

Fourth Semester	15-18 credits
Anthropology Elective Course	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Junior Year

Fifth Semester	15-18 crdits
ANT 255 World Ethnology	3 crs.
ANT 355 Prehistoric American Indians	3 crs.
PSY 225 Psychological Statistics	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Sixth Semester	15-18 credits
ANT 390 Human Origins	3crs.
SOC 415 Social Science Research Methods	3 crs.
Anthropology Elective Course	3 crs.
General Education, Minor, or Elective Courses	6-9 crs.

Senior Year

Seventh Semester	15-18 credits
ANT 421 Anthropological Thought	3 crs.
Anthropology Elective Course	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Eighth Semester	15-18 credits
Anthropology Elective Course	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

NOTE:
ANT 101 Archaeology Field School is offered during the Summer sessions only. Students must complete three (3) credits of ANT 101 during the first three years of the program of study.

Associate of Science in Criminal Justice

Freshman Year

First Semester	16 credits
ENG 101 English Composition I	3 crs.
SOC 100 Principles of Sociology	3 crs.
XJJ 155 Administration of Criminal Justice	3 crs.
XJJ 160 Criminal Law I	3 crs.
XJJ 261 Interview and Interrogation	3 crs.
UNI 100 First Year Seminar	1 cr.

Second Semester	15 credits
ENG 102 English Composition II	3 crs.
PSY 100 General Psychology	3 crs.
XJJ 156 Narcotics and Drug Abuse	3 crs.
XJJ 157 Correctional Administration	3 crs.
Criminal Justice Electives	3 crs.

Sophomore Year

Third Semester	16 credits
Biology Laboratory Course	4 crs.
Criminal Justice electives	3 crs.
Humanities Elective	3 crs.
XJJ 270 Criminology	3 crs.
XJJ 282 Police Ethics and Problems	3 crs.

Fourth Semester	15 credits
COM 101 Oral Communication	3 crs.
Computer Science or Social Science Elective	3 crs.
Criminal Justice Electives	6 crs.
XJJ 262 Criminal Evidence	3 crs.

Bachelor of Science in Criminal Justice

For students with the Associate of Science in Criminal Justice

Junior Year

Fifth Semester	18 credits
CRJ 375 Criminal Law	3 crs.
Criminal Justice Elective	3 crs.
Police & Law Enforcement Elective	3 crs.
General Education or Elective Courses	9 crs.

Sixth Semester	18 credits
CRJ 495 Legal and Justice Research Methods OR SOC 415 Social Science Research Methods	3 crs.
Crime & Criminology Elective	3 crs.
Law & Legal Process Elective	3 crs.
General Education or Elective Courses	9 crs.

Senior Year

Seventh Semester	18 credits
CRJ 455 Legal Traditions	3 crs.
Crime & Criminology Elective	3 crs.
Criminal Justice Elective	3 crs.
Law & Legal Process Elective	3 crs.
General Education or Elective Courses	6 crs.

Eighth Semester	15-18 credits
Law & Legal Process Elective	3 crs.
Police & Law Enforcement Elective	3 crs.
General Education or Elective Courses	9-12 crs.

Liberal Studies

Purpose

The Liberal Studies degree is interdisciplinary/multidisciplinary in structure and is designed for students whose academic interests span traditional disciplinary boundaries within the College of Liberal Arts. This degree program provides for intellectual growth, self-improvement, general knowledge, and a search for truth and understanding and may provide for the required technical training to become successful in the world of work. In addition, this program provides a flexible completion program for students whose circumstances have precluded the traditional degree route.

Administration

The program is overseen by the Dean of Liberal Arts and an advisory committee, composed of faculty from diverse disciplines. The student in conjunction with an advisor will determine the student's "plan of study," and the advisory committee and the dean will approve the plan.

Bachelor of Arts in Liberal Studies - 128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (42 credits)

Courses from the following disciplines may be completed: Anthropology (ANT), Art (ART), Communication Studies (COM), Earth Science (EAS), English (ENG), French (FRE), Geography (GEO), German (GER), History (HIS), Literature (LIT), Music (MUS), Philosophy (PHI), Political Science (POS), Psychology (PSY), Sociology (SOC), Spanish (SPN), Theatre (THE).

No more than 24 credits of courses with the same course prefix should be included in the plan of study.
A minimum of 18 credits must be upper level, 300 or higher.

Electives and/or Minor (34 credits)

Internship Electives may be used with permission of the advisor.

Mathematics & Computer Science

Purpose and Programs

The Bachelor of Science in Computer & Information Science with a Concentration in Applied Computer Science is designed to provide the student with a strong computer science background supplemented with a substantial core of courses in a related academic discipline. The degree enables students to apply the Computer Science training to an academic area of their choice.

The Bachelor of Science in Computer & Information Science with a Concentration in Information Technology (formerly called Industrial Management: Management and Computer Science Concentration) is designed to prepare the student for continued study at the graduate level or for employment in business, industry, or government.

The Bachelor of Science in Mathematics and Computer Science is a careful blending of courses that offers the student both theory and applications in mathematics and computer science. It prepares students for positions in business, industry or government or to go on to graduate studies in Math or Computer Science.

The Bachelor of Science in Computer Engineering Technology program provides a strong foundation in the fundamentals of engineering, with a depth of coverage in computer science, electrical engineering, and computer engineering. Computer Engineering Technology deals with abstract and practical concepts from science, mathematics, computer science, engineering, and technology. Emphasis is placed on applying current technology to practical problems and situations. The curriculum was carefully designed to meet workforce needs as well as rigorous standards established by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC of ABET). Once the program is accredited, baccalaureate degree graduates of the program may sit for the Fundamentals of Engineering (FE) Examination. Successful completion of this examination and a four-year engineering-in-training residency will qualify graduates to sit for the Professional Engineering (PE) examination in their specific engineering technology field of expertise. Individuals who successfully complete the PE examination may refer to themselves as "Professional Engineers." Graduates of the baccalaureate degree program will provide technologist-related knowledge and technical expertise throughout the region, state, and nation. The graduates are qualified for positions that range from technician up through computer engineering technologist. Employment opportunities are diverse and plentiful and exist in the areas of software and systems design, development, testing, evaluation, and maintenance; computer interfacing; microprocessor/microcontroller circuit design; computer networking; and product sales and marketing. Graduates can be employed by a wide variety of industries including aerospace, semiconductor, control, utilities, manufacturing, software design/verification, computer, and governmental agencies.

The Bachelor of Arts in Mathematics is a sufficiently flexible program that permits the student to select courses that meet particular interests and needs. It allows for both depth and breadth of study in mathematics as well as study in the natural sciences. It is designed to provide the student with an excellent background for graduate studies in mathematics and for employment opportunities in business, industry, or government.

The Bachelor of Science in Education degree is a program designed for the student who wishes to pursue a career in secondary teaching of mathematics. It provides the prospective teacher the opportunity to acquire the knowledge, attitudes, skills, and understanding necessary to become an effective educator.

The Associate degree in Computer Science is a two-year program designed to provide the student with career-oriented computer science technology background. Though its emphasis is on training for job placement in the computer industry after a two-year curriculum, the program is designed to allow for transfer into a four- year computer science program.

The Associate in Computer Engineering Technology program provides a strong foundation in the fundamentals of engineering, with a depth of coverage in computer science, electrical engineering, and computer engineering. Computer Engineering Technology deals with abstract and practical concepts from science, mathematics, computer science, engineering, and technology. Emphasis is placed on applying current technology to practical problems and situations. Graduates of the associate degree program will provide technologist-related knowledge and technical expertise throughout the region, state, and nation. The graduates are qualified for technician positions. Employment opportunities exist in the areas of software, systems, microprocessor/microcontroller hardware, product sales and marketing. Graduates of the associate degree program can enter the third year of the baccalaureate Computer Engineering Technology program.

In addition to the degree programs, the department offers an 18-credit hour certificate program in personal computer applications. The program is designed to allow students to concentrate the courses in the area of Computer Information Systems and learn how to use computers in their daily lives. Minors in mathematics and in computer science are also offered to students in other majors who want to enhance their knowledge and their career potential.

Internships

Provision is made in several of the programs to accommodate student internships. The availability of these internships is dependent upon the needs of various governmental agencies and private employers, and they are not a guaranteed part of the program. If selected, the student may earn a salary as well as college credit and invaluable experience.

Student work-study assignments are available for those who desire and qualify for employment. Students may assist in the Mathematics Department, the Computer Center, the Computer Laboratory, or the Mathematics Laboratory. Hence, students learn while they earn.

Awards

To encourage and recognize academic achievement, the Department of Mathematics and Computer Science makes the following awards:

Computer Science Award: The computer science award is presented annually to a graduating student of the Mathematics and Computer Science Department who has achieved a high level of academic excellence in computer science courses.

Frederick E. Atkins Memorial Award: In honor of the contributions made by Frederick E. Atkins to the Mathematics Department and to the many students he taught, an award established in his name is presented to a graduating student of the Mathematics and Computer Science Department who has achieved a high level of academic excellence in Mathematics courses, in either the Mathematics and Computer Science program or the Bachelor of Arts in Mathematics program.

Bachelor of Science in Computer & Information Science: Applied Computer Science Concentration - 128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (48 credits)

Required Courses (30 credits)

CSC 333 Object-Oriented Programming	3 crs.
CSC 377 Information Structures	3 crs.
CSC 316 Logic & Switching Theory OR	
CSC 378 Computer Architecture	3 crs.
CSC 400 Operating Systems OR	
CSC 405 Data Communications	3 crs.
CSC 490 Senior Project I	3 crs.
CSC 492 Senior Project II	3 crs.
MAT 199 Pre-Calculus	3 crs.
MAT 215 Statistics	3 crs.
MAT 273 Basic Calculus	3 crs.
MAT 341 Linear Algebra I	3 crs.

Programming Language (3 credits)
Select one of the following:

CSC 202 Visual Programming	3 crs.
CSC 218 COBOL I	3 crs.
CSC 224 FORTRAN	3 crs.
CSC 323 Assembler Language Programming	3 crs.
CSC 410 LISP Programming	3 crs.
CSC 455 Structures of Programming Languages	3 crs.
CSC 485 Special Topics in Computer Science	3 crs.

Computer Science Electives (15 credits)
Select elective courses from the following list. A maximum of three (3) internship credits may be used as Computer Science Electives. A maximum of six (6) credits in programming languages may be used as Computer Science Electives.

CSC 316 Logic and Switching	3 crs.
CSC 318 COBOL II	3 crs.
CSC 323 Assembler Language Programming	3 crs.
CSC 324 Computer Graphics	3 crs.
CSC 375 Systems Analysis	3 crs.
CSC 378 Computer Architecture	3 crs.
CSC 400 Operating Systems	3 crs.
CSC 405 Data Communications	3 crs.
CSC 410 LISP Programming	3 crs.
CSC 419 Math & Computer Science Internship	3 crs. maximum
CSC 424 Numerical Analysis	3 crs.
CSC 455 Structures of Programming Language	3 crs.
CSC 456 Data Base Management Systems	3 crs.
CSC 460 Language Translation	3 crs.
CSC 475 Theory of Languages	3 crs.
CSC 485 Special Topics in Computer Science	3 crs.
CSC 496 Seminar in Computer Science	3 crs.

Minor (21 credits)

Students in this concentration must select a minor in a discipline other than mathematics or computer science. If a course in the selected minor is already part of the Applied Computer Science program, students should select substitution courses as specified by the major and minor advisors.

Electives (5-8 credits)

Bachelor of Science in Computer & Information Science: Information Technology Track - 128 credits

(Formerly, this program was called Industrial Management: Management & Computer Science Concentration)

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (64 credits)

Required Courses (49 credits)

CIS 150 Introduction to Database Applications	3 crs.
CIS 215 Telecommunications and Local Area Networks	3 crs.
CSC 201 DOS, Windows, and Internet	3 crs.
CSC 202 Visual Programming	3 crs.
CSC 223 C Programming	3 crs.
CSC 300 Computer Operations	3 crs.
CSC 333 Object-Oriented Programming	3 crs.
CSC 375 Systems Analysis	3 crs.
CSC 377 Information Structures	3 crs.
CSC 456 Data Base Management	3 crs.
EET 440 Computer Networking	4 crs.
IST 121 Principles of Information Technology	3 crs.
IST 311 Client Server Programming	3 crs.
IST 476 Physical Design & Implementation	3 crs.
MAT 215 Statistics or MAT 225 Business Statistics	3 crs.
MAT 272 Discrete Mathematics	3 crs.

Related Electives (15 credits)
Select elective courses from the following list

ACC 201 Accounting I	3 crs.
ACC 202 Accounting II	3 crs.
BUS 100 Introduction to Business	3 crs.
CSC 218 COBOL I	3 crs.
CSC 318 COBOL II	3 crs.
CSC 400 Operating Systems	3 crs.
CSC 405 Data Communications	3 crs.
CSC 419 Math & Computer Science Internship	3 crs. maximum
ENG 217 Scientific & Technical Writing	3 crs.
IST 475 Special Topics in Information Technology	3 crs.
MAT 199 Pre-Calculus	3 crs.
MAT 273 Basic Calculus	3 crs.
MGT 201 Principles of Management	3 crs.
PSY 209 Industrial Psychology	3 crs.

Electives (10-13 credits)

Bachelor of Science in Mathematics and Computer Science—128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Students in this major should complete:

MAT 272 Discrete Mathematics to satisfy the Mathematics Goal. Prerequisites for MAT 272 include MAT 181, MAT 182, MAT 199, or appropriate background in mathematics.

CHE 101 General Chemistry I OR PHY 101 College Physics I AND CHE 102 General Chemistry II OR PHY 202 College Physics II to complete the Natural Science Goal.

CSC 223 C Programming AND ENG 217 Scientific & Technical Writing to satisfy the Technological Literacy Goal. Students must pass the Problem Solving & Programming Constructs competence examine before scheduling CSC 223 or complete CSC 120 Problem Solving & Programming Constructs as a prerequisite.

If these courses are not completed as part of the student's general education, he or she should complete them within the Elective category.

Major (64 credits)

Required Courses

CSC 333 Object-Oriented Programming	3 crs.
CSC 377 Information Structures	3 crs.
CSC 316 Logic & Switching Theory OR	
CSC 378 Computer Architecture	3 crs.
CSC 400 Operating Systems OR	
CSC 405 Data Communications	3 crs.
CSC 424 Numerical Analysis OR	
CSC 475 Theory of Languages	3 crs.
CSC 490 Senior Project I	3 crs.
CSC 492 Senior Project II	3 crs.
MAT 281 Calculus I	3 crs.
MAT 282 Calculus II	3 crs.
MAT 341 Linear Algebra I	3 crs.
MAT 381 Calculus III	3 crs.
MAT 382 Calculus IV	3 crs.
MAT 461 Statistical Analysis I	3 crs.

Mathematics Electives (6 credits)
Select two of the following courses:

MAT 351 Abstract Algebra I	3 crs.
MAT 406 Differential Equations	3 crs.
MAT 441 Linear Algebra II	3 crs.
MAT 451 Abstract Algebra II	3 crs.
MAT 462 Statistical Analysis II	3 crs.
MAT 469 Honors Course in Mathematics	3 crs.
MAT 481 Advanced Calculus I	3 crs.
MAT 482 Advanced Calculus II	3 crs.
MAT 490 Topology	3 crs.
MAT 495 Seminar in Mathematics	3 crs.

Programming Language (3 credits)
Select one of the following courses:

CSC 202 Visual Programming	3 crs.
CSC 218 COBOL I	3 crs.
CSC 224 FORTRAN	3 crs.
CSC 323 Assembler Language Programming	3 crs.
CSC 410 LISP Programming	3 crs.
CSC 455 Structures of Programming Languages	3 crs.
CSC 485 Special Topics in Computer Science	3 crs.

Computer Science Electives (15 credits)
Select elective courses from the following list. A maximum of three (3) internship credits may be used as Computer Science Electives. A maximum of six (6) credits in programming languages may be used as Computer Science Electives.

CSC 316 Logic and Switching	3 crs.
CSC 318 COBOL II	3 crs.
CSC 323 Assembler Language Programming	3 crs.
CSC 324 Computer Graphics	3 crs.
CSC 375 Systems Analysis	3 crs.
CSC 378 Computer Architecture	3 crs.
CSC 400 Operating Systems	3 crs.
CSC 405 Data Communications	3 crs.
CSC 410 LISP Programming	3 crs.
CSC 419 Math & Computer Science Internship	3 crs. maximum
CSC 424 Numerical Analysis	3 crs.
CSC 455 Structures of Programming Language	3 crs.
CSC 456 Data Base Management Systems	3 crs.
CSC 460 Language Translation	3 crs.
CSC 475 Theory of Languages	3 crs.
CSC 485 Special Topics in Computer Science	3 crs.
CSC 496 Seminar in Computer Science	3 crs.

Electives (10-13 credits)

Bachelor of Science in Computer Engineering Technology—135 Credits

General Education (51 - 54 credits)

Building A Sense of Community	1 cr.
Critical Thinking Skills	3 crs.
Communication Skills	9 crs.
Mathematics	3 crs.
Natural Science	6-8 crs.
Social Science	6 crs.
Humanities and Fine Arts	9 crs.
Multicultural Awareness	3 crs.
Values	3 crs.
Technological Literacy	6 crs.
Health and Wellness	2-3 crs.

Students in this major should complete:

MAT 181 College Algebra to satisfy the Mathematics Goal.

CHE 101 General Chemistry I and PHY 101 College Physics I to satisfy the Natural Science Goal.

ECO 100 Intro to Economics to satisfy part of the Social Science Goal.

CSC 120 Problem Solving and Programming Constructs and ENG 217 Sci & Technology Writing to satisfy the Technological Literacy Goal.

Major (82 credits)

CET 490 Senior Project I: Software Engineering	3 crs.
CET 492 Senior Project II	3 crs.
CSC 223 C Programming	3 crs.
CSC 224 FORTRAN	3 crs.
CSC 333 Object Oriented Programming	3 crs.
CSC 377 Information Structures	3 crs.
CSC 400 Operating Systems	3 crs.
EET 110 DC Circuits	4 crs.
EET 160 AC Circuits	4 crs.
EET 170 Digital Electronics	3 crs.
EET 270 Introduction to Microprocessor Design	3 crs.
EET 335 Microprocessor Interfacing	4 crs.

EET 360 Microp Engineering	4 crs.
EET 440 Computer Networking	4 crs.
GET 101 Intro to Engr Tech	3 crs.
IND 215 CAD I	3 crs.
MAT 191 College Trigonometry	3 crs.
MAT 282 Calculus II	3 crs.
MAT 272 Discrete Mathematics	3 crs.
MAT 341 Linear Algebra	3 crs.
PHY 202 College Physics II	4 crs.

Technical Electives (10 Credits)
Select courses from the following list:

CSC 316 Logic and Switching Theory	3 crs.
CSC 323 Assembly Language	3 crs.
CSC 324 Computer Graphics	3 crs.
CSC 378 Computer Architecture	3 crs.
CSC 405 Data Communications	3 crs.
CSC 410 LISP	3 crs.
CSC 419 OR EET 495 Internship	Max 3 crs.
CSC 455 Structures of Prog Lang	3 crs.
CSC 460 Language Translation	**3 crs.**
CSC 475 Theory of Languages	3 crs.
CSC 485 Special Topics	3 crs.
EET 210 Linear Electronics I	4 crs.
EET 460 Digital Signal Processing	4 crs.

Electives

Bachelor of Arts in Mathematics-128 crs.

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).
Students in this major should complete:
MAT 272 Discrete Mathematics to satisfy the Mathematics Goal. Prerequisites for MAT 272 include MAT 181, MAT 182, MAT 199, or appropriate background in mathematics.
CHE 101 General Chemistry I OR PHY 101 College Physics I AND CHE 102 General Chemistry II OR PHY 202 College Physics II to complete the Natural Science Goal.
TED 500 Technology for Mathematics and a Computer Science Programming Language Course from the following list to satisfy the Technological Literacy Goal.
CSC 105 Basic Programming Language; CSC 123 Introduction to Computer Science with PASCAL; CSC 218 COBOL I; CSC 223 C Programming; and CSC 224 FORTRAN
If these courses are not completed as part of the student's General Education, he or she should complete them within the Elective category.

Major (42 credits)

Required Courses (36 credits)

MAT 281 Calculus I	3 crs.
MAT 282 Calculus II	3 crs.
MAT 304 History of Mathematics	3 crs.
MAT 341 Linear Algebra I	3 crs.
MAT 351 Abstract Algebra I	3 crs.
MAT 381 Calculus III	3 crs.
MAT 382 Calculus IV	3 crs.
MAT 441 Linear Algebra II	3 crs.
MAT 461 Statistical Analysis I	3 crs.
CSC 424 Numerical Analysis OR	
MAT 406 Differential Equations	3 crs.
MAT 481 Advanced Calculus I	3 crs.
MAT 496 Senior Research Project	3 crs.

Mathematics Electives (6 credits)
Select from the following courses:

CSC 424 Numerical Analysis	3 crs.
MAT 303 Geometry	3 crs.
MAT 406 Differential Equations	3 crs.
MAT 451 Abstract Algebra II	3 crs.
MAT 462 Statistical Analysis II	3 crs.
MAT 469 Honors Course in Mathematics	3 crs.
MAT 482 Advanced Calculus II	3 crs.
MAT 490 Topology	3 crs.
MAT 495 Seminar in Mathematics	3 crs.

Electives and/or Minor (32-35 credits)

Bachelor of Science in Education Certification in Mathematics for Secondary Education

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Professional Education (41 credits)

EDF 290 Policy Studies in American Ed	3 crs.
EDF 301 Computers for Teachers	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDS 300 Problems of Secondary Education	3 crs.
EDS 430 Educational Tests & Measurements	3 crs.
EDS 461 Student Teaching & School Law	12 crs.
EDS 465 Developmental Reading in Secondary Schools	2 crs.
EDS 467 Teaching of Sciences OR EDS 445 Modern Methods in Secondary Schools with advisor's approval	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming the Exceptional Child	3 crs.
PSY 208 Educational Psychology	3 crs.

Professional Specialization (36 credits)

MAT 281 Calculus I	3 crs.
MAT 282 Calculus II	3 crs.
MAT 381 Calculus III	3 crs.
MAT 272 Discrete Mathematics	3 crs.
MAT 303 Geometry	3 crs.
MAT 351 Abstract Algebra I	3 crs.
MAT 461 Statistical Analysis I	3 crs.
MAT 341 Linear Algebra I	3 crs.
MAT 304 History of Mathematics	3 crs.
CSC 105 Basic Programming Language or CSC 123 Introduction to Computer Science with Pascal	3 crs.

Restricted Electives:
Choose one course from Group I and one course from Group II.
Group I:

MAT 382 Calculus IV	3 crs.
MAT 406 Differential Equations	3 crs.
MAT 451 Abstract Algebra II	3 crs.
MAT 462 Statistical Analysis II	3 crs.
MAT 441 Linear Algebra II	3 crs.

MAT 469 Honors Course in Mathematics	3 crs.
MAT 305 Theory of Equations	3 crs.
MAT 495 Seminar in Mathematics	3 crs.

Group II:

CSC 105 Basic Program Language	3 crs.
CSC 123 Introduction to Computer Science with Pascal	3 crs.
CSC 223 C Programming	3 crs.
CSC 323 Assembler Language Programming	3 crs.
CSC 377 Information Structures	3 crs.
CSC 375 Systems Analysis	3 crs.

Students must have a 2.5 QPA in the Area of Professional Specialization before being accepted to student teach.
Students must also achieve a satisfactory score on the Praxis II examination to obtain Pennsylvania certification

Associate of Science in Computer Science Technology - 66 credits

All credits earned in this program are transferable to the four year Bachelor's degree in Industrial Management: Management and Computer Science Concentration.

General Education (27 credits)

ENG 101 English Composition I	3 crs.
ENG 217 Scientific and Technical Writing	3 crs.
CSC 120 Problem Solving and Programming Constructs	3 crs.
MAT 181 College Algebra OR	
MAT 182 Technical Mathematics I	3 crs.
PHI 247 Science, Technology, and Society	3 crs.
Humanities (3 credits)	
Social Sciences (3 credits)	
Natural Sciences (3 credits)	
Free Electives (3 credits)	

Major (39 credits)

MAT 171 Mathematics of Finance I	3 crs.
MAT 215 Statistics or MAT 225 Business Statistics	3 crs.
MAT 272 Discrete Mathematics	3 crs.
CSC 101 Microcomputer and Application Software	3 crs.
CSC 218 COBOL I	3 crs.
CSC 223 C Programming	3 crs.
CSC 300 Computer Operations	3 crs.
CSC 357 Hypermedia and CAI	3 crs.
CSC 377 Information Structures	3 crs.
Mathematics or Computer Science courses at the 200 level or higher (12 credits)	

Associate of Science in Computer Engineering Technology - 66 Credits

General Education (25 credits)

Building A Sense of Community	1 cr.
Communication Skills	6 crs.
Mathematics	3 crs.
Natural Science	4 crs.
Technological Literacy	3 crs.
Additional General Education Credits	8 crs.
Critical Thinking	
Social Science	
Humanities and Fine Arts	
Multicultural Awareness	
Values	
Health and Wellness	

Students in this major should complete:
MAT 181 College Algebra to satisfy the Mathematics Goal.
PHY 101 College Physics I to satisfy the Natural Science Goal.
CSC 120 Problem Solving and Programming Constructs to satisfy the Technological Literacy Goal.

Major (41 credits)

CSC 223 C	3 crs.
CSC 333 Object Oriented Programming	3 crs.
CSC 377 Information Structures	3 crs.
EET 110 DC Circuits	4 crs.
EET 170 Digital Electronics	3 crs.
EET 270 Introduction to Microprocessor Design	3 crs.
GET 101 Intro to Engr Tech	3 crs.
IND 215 CAD I	3 crs.
MAT 191 College Trigonometry	**3 crs.**
MAT 281 Calculus I	3 crs.
MAT 282 Calculus II	3 crs.
MAT 272 Discrete Mathematics	3 crs.

Certificate in Personal Computer Application - 18 credits

Computer Programming (6 credits):

CSC 120 Problem Solving and Programming Constructs	3 crs.
CSC 202 Visual Programming	3 crs.

Application Software (12 credits):

CSC 101 Microcomputer and Application Software	3 crs.
CIS 150 Introduction to Data Base Applications Software	3 crs.
CIS 215 Introduction to Telecommunications and Local Area Networks	3 crs.
CSC 201 DOS, Windows and the Internet	3 crs.

Minor in Mathematics - 21 credits

Required: (15 credits):

MAT 272 Discrete Mathematics	3 crs.
MAT 281 Calculus I	3 crs.
MAT 282 Calculus II	3 crs.
MAT 341 Linear Algebra I	3 crs.
MAT 381 Calculus III	3 crs.

Electives (6 credits)
Select any two of the following courses:

MAT 201 Mathematical Modeling	3 crs.
MAT 303 Geometry	3 crs.
MAT 351 Abstract Algebra I	3 crs.
MAT 382 Calculus IV	3 crs.
MAT 406 Differential Equations	3 crs.
MAT 441 Linear Algebra II	3 crs.
MAT 461 Statistical Analysis I	3 crs.

Minors in Computer Science - 21 credits

Computer Science Concentration

Required (15 credits)

MAT 272 Discrete Mathematics	3 crs.
CSC 120 Problem Solving and Programming Constructs	3 crs.
CSC 233 C Programming	3 crs.
CSC 316 Logic and Switching Theory	3 crs.
CSC 377 Information Structures	3 crs.

Electives (6 credits)
Select any two of the following courses:

CSC 202 Visual Programming	3 crs.
CSC 218 COBOL I	3 crs.
CSC 224 FORTRAN	3 crs.
CSC 333 Object Oriented Programming	3 crs.
CSC 375 COBOL II	3 crs.
CSC 419 Computer Science Internship	3 crs.

Information Systems Concentration

Required (15 credits)

CSC 101 Microcomputer and Application Software	3 crs.
CSC 120 Problem Solving and Programming Constructs	3 crs.
CSC 201 DOS Windows and Internet	3 crs.
CIS 150 Introduction to Data Base Applications	3 crs.
CIS 215 Introduction to Local Area Networks and Telecommunications	3 crs.

Electives (6 credits)
Select any two of the following:

CSC 223 C Programming	3 crs.
CSC 300 Computer Operations	3 crs.
CSC 309 Survey of Operations Research	3 crs.
CSC 357 Hypermedia and CAI	3 crs.
CSC 419 Computer Science Internship	3 crs.

Bachelor of Science in Computer & Information Science: Applied Computer Science Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
CSC 223 C Programming	3 crs.
ENG 101 English Composition I	3 crs.
MAT 272 Discrete Mathematics	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	6 crs.

Second Semester	15-18 credits
CSC 333 Object-Oriented Programming	3 crs.
ENG 102 English Composition II	3 crs.
MAT 199 Pre-Calculus	3 crs.
General Education Courses	6-9 crs.

Sophomore Year

Third Semester	15-18 credits
CSC 377 Information Structure	3 crs.
ENG 217 Scientific & Technical Writing	3 crs.
MAT 273 Basic Calculus	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Fourth Semester	15-18 credits
CSC 316 Logic & Switching Theory OR CSC 378 Computer Architecture	3 crs.
MAT 341 Linear Algebra I	3 crs.
Computer Science Elective	3 crs.
General Education, Minor, or Elective Courses	6-9 crs.

Junior Year

Fifth Semester	15-18 credits
CSC 400 Operating Systems OR CSC 405 Data Communications	3 crs.
Computer Science Elective	3 crs.
MAT 215 Statistics	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Sixth Semester	15-18 credits
Programming Language Elective	3 crs.
Computer Science Elective	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Senior Year

Seventh Semester	15-18 credits
CSC 490 Senior Project I	3 crs.
Computer Science Elective	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Eighth Semester	15-18 credits
CSC 492 Senior Project II	3 crs.
Computer Science Elective	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Bachelor of Science in Computer & Information Science: Information Technology Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
CSC 201 DOS, Windows, and Internet	3 crs.
IST 121 Principles of Information Technology	3 crs.
ENG 101 English Composition I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	6 crs.

Second Semester	15-18 credits
CIS 150 Introduction to Database Applications	3 crs.
CSC 223 C Programming	3 crs.
ENG 102 English Composition II	3 crs.
General Education Courses	6-9 crs.

Sophomore Year

Third Semester	15-18 credits
CIS 215 Telecommunications and Local Area Networks	3 crs.
CSC 202 Visual Programming	3 crs.
CSC 333 Object-Oriented Programming	3 crs.
MAT 272 Discrete Mathematics	3 crs.
General Education, Minor or Elective Courses	3-6 crs.

Fourth Semester	15-18 credits
IST 311 Client Server Programming	3 crs.
CSC 377 Information Structure	3 crs.
Related Elective	3 crs.
General Education, Minor, or Elective Courses	6-9 crs.

Junior Year

Fifth Semester	15-18 crs.
CSC 375 Systems Analysis	3 crs.
CSC 456 Data Base Management	3 crs.
MAT 215 Statistics	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Sixth Semester	15-18 credits
CSC 300 Computer Operations	3 crs.
Related Elective	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Senior Year

Seventh Semester	16 crs.
EET 440 Computer Networking	4 crs.
IST 476 Physical Design & Implementation	3 crs.
Related Elective	3 crs.
General Education, Minor or Elective Courses	6 crs.

Eighth Semester	15-18 credits
Related Electives	6 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Bachelor of Science in Mathematics & Computer Science

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
CSC 223 C Programming	3 crs.
ENG 101 English Composition I	3 crs.
MAT 281 Calculus I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	6 crs.

Second Semester	15-18 credits
CSC 333 Object-Oriented Programming	3 crs.
ENG 102 English Composition II	3 crs.
MAT 272 Discrete Mathematics 3 crs.	
MAT 282 Calculus II	3 crs.
General Education Courses	3-6 crs.

Sophomore Year

Third Semester	15-18 credits
CSC 377 Information Structure	3 crs.
ENG 217 Scientific & Technical Writing	3 crs.
MAT 381 Calculus III	3 crs.
Computer Science Elective	3 crs.
General Education, Minor or Elective Courses	3-6 crs.

Fourth Semester	15-18 credits
CSC 316 Logic & Switching Theory OR CSC 378 Computer Architecture	3 crs.
MAT 341 Linear Algebra I	3 crs.
MAT 382 Calculus IV	3 crs.
General Education, Minor, or Elective Courses	6-9 crs.

Junior Year

Fifth Semester	15-18 credits
CSC 400 Operating Systems OR CSC 405 Data Communications	3 crs.
CSC 424 Numerical Analysis OR CSC 475 Theory of Languages	3 crs.
MAT 461 Statistical Analysis I	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Sixth Semester	15-18 credits
Programming Language Elective	3 crs.
Computer Science Electives	3-6 crs.
General Education, Minor, or Elective Courses	6-9 crs.

Senior Year

Seventh Semester	15-18 credits
CSC 490 Senior Project I	3 crs.
Computer Science Elective	3 crs.
Mathematics Elective	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Eighth Semester	15-18 credits
CSC 492 Senior Project II	3 crs.
Computer Science Elective	6 crs.
Mathematics Elective	3 crs.
General Education, Minor, or Elective Courses	3-6 crs.

Bachelor of Science in Computer Engineering Technology

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	17 credits
UNI 100 First Year Seminar	1 cr.
CSC 120 Prob. Solv./Prog. Cons.	3 crs.
EET 110 DC Circuit Analysis	4 crs.
ENG 101 English Composition I	3 crs.
GET 101 Intro. To Engr. Tech.	3 crs.
MAT 181College Algebra	3 crs.

Bachelor of Arts in Mathematics

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ENG 101 English Composition I	3 crs.
MAT 272 Discrete Mathematics 3 crs.	
MAT 281 Calculus I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	6 crs.

Second Semester	15-18 credits
ENG 102 English Composition II	3 crs.
MAT 282 Calculus II	3 crs.
General Education Courses	9-12 crs.

Sophomore Year

Third Semester	15-18 credits
MAT 381 Calculus III	3 crs.
General Education, Minor or Elective Courses	12-15 crs.

Fourth Semester	15-18 credits
MAT 341 Linear Algebra I	3 crs.
MAT 382 Calculus IV	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Junior Year

Fifth Semester	15-18 credits
CSC 424 Numerical Analysis OR	
MAT 406 Differential Equations	3 crs.
MAT 441 Linear Algebra II	3 crs.
MAT 481 Advanced Calculus I	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Sixth Semester	15-18 credits
MAT 304 History of Mathematics	3 crs.
MAT 351 Abstract Algebra I	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Senior Year

Seventh Semester	15-18 credits
MAT 461 Statistical Analysis I	3 crs.
MAT 500 Technology for Mathematics	3 crs.
Mathematics Elective	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Eighth Semester	15-18 credits
MAT 496 Senior Research Project	3 crs.
Mathematics Elective	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Bachelor of Science in Education in Mathematics: Cert. for Secondary Ed.

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ENG 101 English Composition I	3 crs.
MAT 272 Discrete Mathematics	3 crs.
MAT 281 Calculus I	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	6 crs.

Second Semester	15-18 credits
CSC 105 Basic Programming Language or	
CSC 123 Intro to Computer Science with Pascal	3 crs.
ENG 102 English Composition II	3 crs.
MAT 282 Calculus II	3 crs.
General Education Courses	6-9 crs.

Sophomore Year

Third Semester	15-18 credits
MAT 381 Calculus III	3 crs.
PSY 208 Educational Psychology	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Fourth Semester	15-18 credits
EDF 290 Policy Studies in American Education	3 crs.
EDF 301 Computers for Teachers	3 crs.
MAT 341 Linear Algebra I	3 crs.
MAT 303 Geometry	3 crs.
General Education, Minor, or Elective Courses	3-6 crs.

Junior Year

Fifth Semester	15-18 credits
CSC Elective	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDS 300 Problems of Secondary Education	3 crs.
EDS 430 Educational Tests and Measurements	3 crs.
General Education, Minor or Elective Courses	3-6 crs.

Sixth Semester	15-18 credits
EDU 210 Teaching in a Multicultural Society	3 crs.
EDS 460 Teaching Mathematics in Secondary Schools	3 crs.
MAT 304 History of Mathematics	3 crs.
MAT 351 Abstract Algebra I	3 crs.
General Education, Minor, or Elective Courses	3-6 crs.

Senior Year

Seventh Semester	14-17 credits
MAT 461 Statistical Analysis I	3 crs.
EDU 340 Mainstreaming Exceptional Learners	3 crs.
EDS 465 Developmental Reading in the Secondary School	2EDS 460 crs.
Mathematics Elective	3 crs.
General Education, Minor or Elective Courses	3-6 crs.

Eighth Semester	12 credits
Student Teaching	12 crs.

Music

Purpose

Did you ever meet anyone who did not like some type of music? Well, neither did we. Music is an important form of expression and enjoyment. To fully appreciate music, you have to understand it. At California University we provide the opportunity to experience this art form completely as a listener, performer and student.

Program

Though the university has no major in music, we do offer a minor. The attainment of the Music Minor may be especially valuable to those who seek to enhance their chosen field.

The curriculum serves the Humanities and Fine Arts goals of the General Education program. The Music Department offers courses in basic musicianship, theory, music history, education, applied electives and ensemble performance. These offerings provide students with the opportunity and flexibility to structure a course of study that fits individual needs.

Minor in Music – 24 credits

Nine of the 24 credits for the Minor must be at 300 and/or 400 level. To achieve the minor in 24 credits, any student who begins private instruction at the 100 or 200 level must take their 300 level courses from the History, Theory and Education Elective List.

Required Courses (9 credits)

MUS 100 Introduction to Music	3 crs.
MUS 115 Fundamentals of Music	3 crs.
MUS 200 Sight Singing & Ear Training	3 crs.

History, Theory and Education Electives (9 credits min.)

MUS 202 North American Music	3 crs.
MUS 204 History of the American Musical	3 crs.
MUS 300 Jazz: History, Form & Analysis	3 crs.
MUS 301 20th Century Music: History, Form & Analysis	3 crs.
MUS 303 Music Materials & Methods for the Classroom Teacher, Grades K-8	3 crs.
MUS 306 The Opera: History, Form & Analysis	3 crs.
MUS 308, The Symphony: History, Form & Analysis	3 crs.

Applied Electives (3 credits min.).

MUS 104 Voice Class I	3 crs.
MUS 210 Voice Class II	3 crs.
MUS 211 Keyboard I	3 crs.
MUS 312 Keyboard II	3 crs.

Private Instruction courses are available to Music Minors.
The following courses are repeatable to a maximum of 4 crs. ea.):

MUS 109-409 Private Instruction - Brass	1 cr.
MUS 119-419 Private Instruction - Piano	1 cr.
MUS 129-429 Private Instruction - Percussion	1 cr.
MUS 149-449 Private Instruction Woodwind	1 cr.
MUS 159-459 Private Instruction - Voice	1 cr.

Performance Electives (3 credits min.)
The following courses are repeatable to a maximum of 4 credits):

MUS 191 University Choir	1 cr.
MUS 192 California Singers	1 cr.
MUS 196 Jazz Ensemble	1 cr.
MUS 198 University Marching Band	1 cr.
MUS 199 University Concert Band	1 cr.

Nursing BSN Program

Purpose

California University's Nursing Department offers an upper-division program leading to a Bachelor of Science in Nursing for registered nurses from associate degree and diploma programs. The program is accredited by the National League for Nursing Accreditation Commission (www.NLNAC.org or 212-363-5555) and the Commission on Collegiate Nursing Education.

The RN/BSN program is designed to provide the graduate with an educational foundation in the arts and sciences as well as nursing, to serve as a basis for graduate education and as a commitment for lifelong learning. Additionally, the program assists the RN with the synthesis of theories and research findings into the role of the professional nurse, and builds upon the RN's competencies in nursing by providing increasingly complex experiences in a variety of settings.

Requirements

Eligibility to register for upper-division nursing courses requires that students be graduates of an NLNAC accredited associate degree or diploma program, have current licensure as an RN in the Commonwealth of Pennsylvania, and complete the Entry Level Portfolio. Specific information concerning these requirements is available in the Nursing Department. All of the graduation requirements of the university apply to the Nursing program. In addition, a minimum grade of "C" is required in each upper-division nursing course.

Students may complete the BSN program on the California University campus, at the Southpointe Center, or at the Community College of Allegheny County- South Campus.

Bachelor of Science in Nursing—128 cr.

General Education (57 credits)

The Academic Passport recognizes 30 credits of general education from the basic nursing program (if academic credits were awarded). Students with more than 30 credits may transfer the additional coursework as appropriate to meet program requirements. Students with fewer than 30 credits of general education must meet with an academic advisor to determine courses needed for graduation. Fifteen additional credits will be awarded through the student's portfolio evaluation.
In addition, each student must complete the following if these are not included in his or her transfer credits:

Computer Science Course from a General Education menu	3 crs.
MAT 215 Statistics OR MAT 225 Business Statistics	3 crs.
Public Speaking Course from the General Education menu	3 crs.
PHI 100 Perspectives in Philosophy OR PHI 220 Ethics OR PHI 307 Medical Ethics	3 crs.

Major (66 credits)

Basic Nursing Program Transfer Credits	30 crs.
MGT 201 Principles of Management	3 crs.
NUR 330 Philosophy of Professional Nursing	3 crs.
NUR 350 Health Assessment	3 crs.
NUR 370 Methods of Nursing Research	3 crs.
NUR 375 Leadership & Change in Nursing	6 crs.

NUR 410 Research Utilization in Nursing	2 crs.
NUR 450 Trends & Issues in Nursing	3 crs.
NUR 470 Family Health Nursing	6 crs.
NUR 475 Community Health Nursing	6 crs.
NUR 485 Professional Development	1 crs.

Electives (5-6 credits)

School Nurse Certification

The School Nurse Certification program is offered jointly through the College of Education and Human Services and the Department of Nursing. The registered nurse who completes the School Nurse Certification program will have the ability to apply the knowledge and skills obtained in the BSN program in meeting the health care needs of children in elementary and secondary school settings. Students who successfully complete the program are eligible to apply for the School Nurse Certificate (Education Specialist I) issued by the Pennsylvania Department of Education.

RN/BSN students may complete the 13 required credits for certification as electives within the BSN major. Registered nurses who have previously earned a BSN must complete a minimum of the 13 required credits.

In order to participate in the school nurse practicum experience, the student must provide evidence of: current licensure as a

registered nurse in Pennsylvania, current CPR certification, first aid certification (advanced certification preferred), physical exam including tuberculin testing or chest X-ray, attendance at OSHA inservice on universal precautions, professional liability insurance, and Child Abuse and Criminal Clearance forms.

Certification Requirements (13 credits)

EDF 290 Policy Studies in American Education	3 crs.
ESP 501 Introduction to the Exceptional Child	3 crs.
NUR 406 School Health Nursing	4 crs.
PSY 208 Educational Psychology	3 crs.

Bachelor of Science in Nursing

Freshman Year & Sophomore Year

Associate or Diploma program in Nursing

Junior Year

Fifth Semester — 12 credits

NUR 350 Health Assessment	3 crs.
Public Speaking General Education Course	3 crs.
Philosophy General Education	3 crs.

Sixth Semester — 15 credits

Computer Science Course from a General Education menu	3 crs.
MGT 201 Principles of Management	3 crs.
NUR 370 Methods of Nursing Research	3 crs.
NUR 375 Leadership & Change in Nursing	6 crs.

Senior Year

Seventh Semester — 14-17 credits

MAT 215 Statistics OR MAT 225 Business Statistics	3 crs.
NUR 410 Research Utilization in Nursing	2 crs.
NUR 470 Family Health Nursing	6 crs.
General Education or Elective Courses	3-6 crs.

Eighth Semester — 13-16 credits

NUR 450 Trends & Issues in Nursing	3 crs.
NUR 475 Community Health Nursing	6 crs.
NUR 485 Professional Development	1 crs.
General Education or Elective Courses	3-6 crs.

Nursing Associate Degree Program

Program

The cooperative nursing program offered by the Community College of Allegheny County and California University of PA affords students the opportunity to complete the requirements for an associate degree in nursing on the campus of California University of PA. Students may complete the non-nursing, general education requirements at California University of PA, while completing nursing courses offered by CCAC on the California campus. Upon successful completion of the program, students are awarded an associate degree in nursing from Community College of Allegheny County, and are eligible to sit for the National Council Licensure Examination (NCLEX-RN). The program is accredited by the National League for Nursing Accreditation Commission.

Careers

Students who earn an associate degree are prepared for entry-level positions in nursing, and provide direct client care in a structured health care setting. Upon successful completion of both the associate degree program and the licensure examination (NCLEX), students may matriculate into the upper division Bachelor of Science in Nursing (BSN) program offered at California University. This degree prepares the student to practice in a wide variety of health care settings, expands career advancement opportunities for the RN, and provides a foundation for graduate education.

Associate of Science in Nursing - 69 crs.

General Education (16 credits)

ENG101 English Composition	3 crs.
ENG 102 English Composition II	3 crs.
PSY 100 General Psychology	3 crs.
Math Elective (100 level or above)	3 crs.
Computer Science Elective	1 cr.
Humanities Elective	3 crs.

Supportive Courses (15 credits)

BIO 230 Anatomy & Physiology I	4 crs.
BIO 260 Anatomy & Physiology II	4 crs.
BIO 226 Microbiology	4 crs.
PSY 207 Developmental Psychology	3 crs.

Nursing/CCAC Courses (38 credits)

NRN 101 Introduction to Nursing	8 crs.
NRN 102 Health Promotion/Illness Prevention in Age-Based Populations	8 crs.
NRN 201 Dimensions in Nursing	2 crs.
NRN 202 Health Promotion/Illness Prevention in Adult Populations	10 crs.
NRN 204 Populations in Crisis	7 crs.
NRN 205 Professional Challenges	3 crs.

Associate of Science in Nursing

The following schedule of courses provides a recommended framework for completing this program of study in two years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 13 and 18 credits each semester.

Prerequisite

Computer Science Elective	1 cr.

Freshman Year

First Semester (Spring)	18 credits
BIO 230 Anatomy & Physiology I	4 crs.
NRN 101 Introduction To Nursing	8 crs.
PSY 100 Introduction To Psychology	3 crs.
Math Elective (100 level or above)	3 crs.

Summer Session	4 credits
BIO 226 Microbiology	4 crs.

Second Semester (Fall)	18 credits
BIO 260 Anatomy & Physiology II	4 crs.
ENG 101 English Composition I	3 crs.
NRN 102 Health Promotion/Illness Prevention In Age-Based Populations	8 crs.
PSY 207 Developmental Psychology	3 crs.

Sophomore Year

Third Semester (Spring)	15 credits
ENG 102 English Composition II	3 crs.
NRN 201 Dimensions In Nursing	2 crs.
NRN 202 Health Promotion/Illness Prevention in Adult Populations	10 crs.

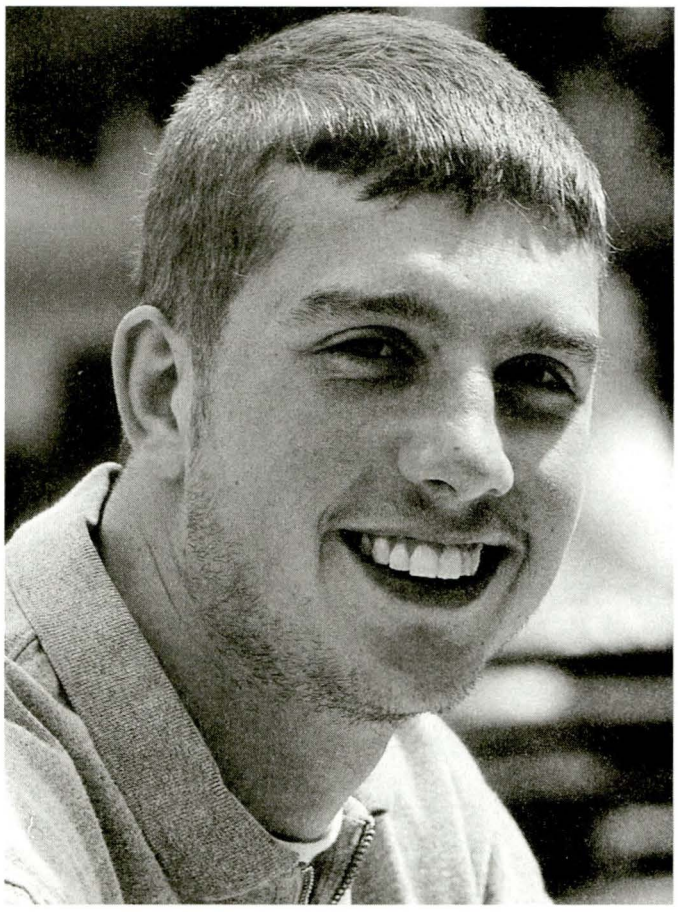
Fourth Semester (Fall)	13 credits
Humanities Elective	3 crs.
NRN 204 Populations in Crisis	7 crs.
NRN 205 Professional Challenges	3 crs.

Philosophy

Purpose

The word "philosophy" comes from two Greek words that mean love (phileo) and wisdom (sophia), and throughout much of history anyone who sought knowledge was called a philosopher. Socrates, though, was esteemed to be a good philosopher because he was aware of how little he knew. In knowing this, however, he was wiser than some "authorities" and "experts" whose unreflective confidence in their beliefs was mistaken. In this tradition, philosophy became the academic discipline which critically studies the justification of beliefs and attempts to put together different kinds of beliefs to form a workable view of reality as a whole. In brief, philosophy is the critical study of theories about truth, knowledge, reality, and values. Aristotle thought the study of philosophy was intrinsically rewarding, an end in itself, because it fulfilled a distinctively human potential, namely the ability to reason and to know. But if minimizing mistaken or dogmatic beliefs has practical value, then philosophy also serves pragmatic purposes.

Philosophy students study the historical development of theories about the nature of knowledge, reality, and values, and they learn how to assess such theories. Students develop abilities to think logically, to explore issues from different perspectives, and to present their ideas effectively in writing.



Programs

The philosophy major is a program of study covering the history of philosophy, logic, and issues in philosophy which might be grouped as ethical, epistemological, or metaphysical. In addition to the traditional philosophy major, the department also offers a Minor in Philosophy for students in other academic majors.

Activities

The Philosophy Department advises the Philosophy Club, which gives students informal social opportunities for discussions, debates, and lectures. The Department also hosts topical lectures and forums.

Careers

Philosophy majors go on to a variety of careers: law, ministry, teaching, civil service, management, to name a few. Indeed, the philosophy major is well suited for any career that values critical reasoning, logical problem solving, and an ability to look at issues from many perspectives. Increasingly the business world is looking for this kind of liberally educated person. Philosophy majors work closely with their advisors to choose major and non-major courses that will help them achieve their individual educational and career goals. The philosophy program at California University is designed to be flexible so that it can be tailored to a variety of needs and interests.

Bachelor of Arts in Philosophy

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (33 credits)

Required Courses: (21 credits)

PHI 115 Logic and Language OR PHI 211 Formal Logic I	3 crs.
PHI 201 History of Ancient Philosophy	3 crs.
PHI 206 16th to 18th Century Philosophy	3 crs.
PHI 225 Social and Political Philosophy OR	
PHI 370 Philosophy of Law	3 crs.
PHI 320 Ethical Theory	3 crs.
PHI 325 Philosophy of Science OR PHI 405 Epistemology	3 crs.
PHI 410 Metaphysics OR PHI 415 Philosophy of Mind	3 crs.

Philosophy Electives: (12 credits)

At least two courses must be at the 300 level or higher.

Electives and/or Minor (38-41 credits).

Minor in Philosophy - 21 credits

Required Courses (9 credits)

PHI 115 Logic and Language OR PHI 211 Formal Logic I	3 crs.
PHI 201 History of Ancient Philosophy	3 crs.
PHI 206 16th to 18th Century Philosophy	3 crs.

Philosophy Electives (12 credits)

Select Philosophy courses at the 300-400 level.

Bachelor of Arts in Philosophy

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
PHI 201 History of Ancient Philosophy	3 crs.
UNI 100 First Year Seminar	1 cr.
ENG 101 English Composition I	3 crs.
General Education courses	9 crs.

Second Semester	15 credits
PHI 115 Logic and Language or PHI 211 Formal Logic I	3 crs.
PHI 206 16th to 18th Century Philosophy	3 crs.
ENG 102 English Composition II	3 crs.
General Education Courses	6 credits

Sophomore Year

Third Semester	15-18 credits
Philosophy course	3 crs.
General Education, Minor or Elective Courses	12-15 crs.

Fourth Semester	15-18 credits
Philosophy course	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Junior Year

Fifth Semester	15-18 credits
Philosophy course	3 crs.
Philosophy course	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Sixth Semester	15-18 credits
Philosophy course	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Senior Year

Seventh Semester	15-18 credits
Philosophy course	3 crs.
Philosophy course	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Eighth Semester	15-18 credits
Philosophy course	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Psychology

Purpose

Psychology is one of the social/behavioral sciences engaged in the systematic study of behavior and mental processes. Psychology focuses on the study and explanation of patterns of individual behavior, thoughts and emotions. It does so from a variety of perspectives that emphasize intrapersonal and interpersonal, social and physiological factors. The field of psychology seeks to understand individual behavior and use that information to assist people in living more adjusted and fulfilling lives.

Programs

The department offer the Bachelor of Arts in Psychology with two concentrations: General Psychology and Industrial/Organizational Psychology. Within the General Psychology concentration there are options for students interested in counseling and mental health care careers, or educational, child, or developmental psychology. Industrial/Organizational Psychology is the research and applied specialty concerned with implementing the principles of psychology to business. It is the major for students interested in human resource management careers.

The department also offers certification for Psychology Technicians. Students interested in social service employment will be prepared by the certification program to obtain entry-level positions at a variety of social service agencies and/or seek further training in graduate programs. For more information on this certification, contact the Psychology Department.

The department makes available to its majors a publication entitled "The Success Manual," which states policies, procedures, course requirements, and other information of interest to majors.

Minors in Psychology and Industrial/Organizational Psychology are also offered to students in other programs.

Awards

The David W. Hambacher Memorial Fund Scholarship Award is given annually. Applicants must be Psychology majors with a 3.0 grade point average and have completed 96 credits. Information about the award is available in the departmental office. The award is given in the Spring semester.

An Outstanding Senior Award is given annually at the spring Psychology Club banquet.

Honor and Professional Societies

Qualified majors can join Psi Chi, the national honor society. The department also sponsors a Psychology Club which hosts guest speakers, organizes trips to conferences of professional interest, and provides career and employment information.

Careers

Traditionally, psychologists have been employed in universities, schools and clinics. Today, more than ever before, they can be found working in businesses, hospitals, private practice, courtrooms, sports competitions, police departments, government agencies, private laboratories, the military and other settings.

A student with a concentration in Industrial/Organizational Psychology can find employment in personnel resource management. Students will be prepared to do personnel recruitment, training, testing, and supervision. Other career opportunities in psychology, however, require an advanced degree.

Bachelor of Arts in Psychology - 128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (42 credits)

Required Psychology Courses (18 credits)

PSY 100 General Psychology	3crs.
PSY 225 Psychological Statistics	3crs.
PSY 340 Psychological Testing	3crs.
PSY 345 History and Systems of Psychology	3crs.
PSY 360 Experimental Psychology	3crs.
MAT 181 College Algebra	3crs.

Concentration (24 credits)

Students should select a concentration in either Psychology or Industrial/Organizational Psychology

Psychology Concentration

Content Areas (12 credits)

Students must select one course from each of the following content areas:

Cognitive/Experimental

PSY 235 Psychology of Learning	3 crs.
PSY 365 Methods of Research	3 crs.
PSY 425 Senior Thesis	3 crs.
PSY 430 Physiological Psychology	3 crs.

Clinical

PSY 222 Psychology of Stress Management	3 crs.
PSY 305 Psychology of Personality	3 crs.
PSY 310 Mental Health/Psychology of Adjustment	3 crs.
PSY 311 Psychology of Gender Roles	3 crs.
PSY 350 Principles of Behavior Modification	3 crs.
PSY 375 Psychopathological Disorders of Childhood	3 crs.
PSY 400 Abnormal Psychology	3 crs.
PSY 410 Clinical Child Psychology	3 crs.
PSY 421 Clinical Methods in Psychology	3 crs.
PSY 422 Clinical Skills in Psychology	3 crs.

Educational

PSY 205 Child Psychology	3 crs.
PSY 206 Adolescent Psychology	3 crs.
PSY 207 Developmental Psychology	3 crs.
PSY 208 Educational Psychology	3 crs.
PSY 215 Psychology of Exceptional Children	3 crs.
PSY 420 School Psychology	3 crs.

Industrial/Organizational

PSY 209 Industrial Psychology	3 crs.
PSY 211 Social Psychology	3 crs.
PSY 370 Interviewing Skills	3 crs.
PSY 428 Advanced Industrial Psychology	3 crs.

Content Concentration
Students must take 12 additional credits within one of the content areas or select a combination of 12 credits in PSY courses including PSY 469 Psychology Internships in consultation with their advisor.

Industrial/Organizational Psychology Concentration

Required Industrial/Organizational Psychology Courses (21 credits)

PSY 209 Industrial Psychology	3 crs.
PSY 211 Social Psychology	3 crs.
PSY 370 Interviewing Skills	3 crs.
PSY 428 Advanced Industrial Psychology	3 crs.
MGT 352 Human Resource Management	3 crs.
MGT 353 Compensation Management	3 crs.
MGT 362 Labor Relations	3 crs.

Related Elective (3 credits)
Select one course from the following list:

BUS 100 Introduction to Business	3 crs.
BUS 242 Business Law I	3 crs.
COM 250 Oral Communication: Management	3 crs.
ECO 100 Elements of Economics	3 crs.
ENG 211 Business Writing I	3 crs.

Electives and/or Minor (34 credits)

Minor in Psychology - 21 credits

Psychology Concentration

Required: (9 credits):

PSY 100 General Psychology	3 crs.
PSY 225 Psychological Statistics	3 crs.
PSY 305 Psychology of Personality OR	
PSY 360 Experimental Psychology	3 crs.

Electives: (6 credits):
Select one:

PSY 205 Child Psychology	3 crs.
PSY 206 Adolescent Psychology	3 crs.
PSY 207 Developmental Psychology	3 crs.

Select one:

PSY 208 Educational Psychology	3 crs.
PSY 209 Industrial Psychology	3 crs.
PSY 211 Social Psychology	3 crs.
PSY 235 Psychology of Learning	3 crs.

Select two 300- or 400-level Psychology Electives: (6 credits)

Industrial Organizational Psychology Concentration

Required: (21 credits)

PSY 100 General Psychology	3 crs.
PSY 209 Industrial Psychology	3 crs.
PSY 370 Interviewing Skills	3 crs.
PSY 428 Advanced Industrial Psychology	3 crs.
MGT 352 Human Resource Management	3 crs.
MGT 353 Compensation Management	3 crs.
MGT 362 Labor Relations	3 crs.
Statistics course (not limited to psychological statistics)	3 crs.

Bachelor of Arts in Psychology: Psychology Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 to 18 credits each semester.

Freshman Year

First Semester — 16 credits

PSY 100 General Psychology	3crs.
MAT 181 College Algebra	3crs.
UNI 100 First Year Seminar	1 cr.
ENG 101 English Composition I	3 crs.
General Education courses	6 crs.

Second Semester — 15 credits

PSY 225 Psychological Statistics	3crs.
Psychology Course	3 crs.
ENG 102 English Composition II	3 crs.
General Education Courses	6 credits

Sophomore Year

Third Semester — 15-18 credits

Psychology Course	3 crs.
General Education, Minor or Elective Courses	12-15 crs.

Fourth Semester — 15-18 credits

PSY 345 History and Systems of Psychology	3crs.
Psychology Course	3 crs.
Psychology Course	3 crs.
General Education, Minor, or Elective Courses	6-9 crs.

Junior Year

Fifth Semester — 15-18 credits

PSY 340 Psychological Testing	3crs.
Psychology Course	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Sixth Semester — 15-18 credits

PSY 360 Experimental Psychology	3crs.

Psychology Course	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Senior Year

Seventh Semester	15-18 crs.
Psychology Course	3 crs.
General Education, Minor or Elective Courses	12-15 crs.

Eighth Semester	15-18 credits
Psychology Course	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Bachelor of Arts in Psychology: Industrial/Organizational Psychology Concentration

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
PSY 100 General Psychology	3crs.
MAT 181 College Algebra	3crs.
UNI 100 First Year Seminar	1 cr.
ENG 101 English Composition I	3 crs.
General Education courses	6 crs.

Second Semester	15 credits
PSY 225 Psychological Statistics	3crs.
PSY 209 Industrial Psychology	3crs.
ENG 102 English Composition II	3 crs.
General Education Courses	6 crs.

Sophomore Year

Third Semester	15-18 credits
PSY 211 Social Psychology	3crs.
General Education, Minor or Elective Courses	12-15 crs.

Fourth Semester	15-18 credits
PSY 345 History and Systems of Psychology	3crs.
MGT 352 Human Resource Management	3crs.
General Education, Minor, or Elective Courses	9-12 crs.

Junior Year

Fifth Semester	15-18 credits
PSY 340 Psychological Testing	3crs.
PSY 370 Interviewing Skills	3crs.
General Education, Minor or Elective Courses	9-12 crs.

Sixth Semester	15-18 credits
PSY 360 Experimental Psychology	3crs.
MGT 353 Compensation Management	3crs.
MGT 362 Labor Relations	3crs.
PSY 428 Advanced Industrial Psychology	3crs.
General Education, Minor, or Elective Courses	3-6 crs.

Senior Year

Seventh Semester	15-18 credits
General Education, Minor or Elective Courses	15-18 crs.

Eighth Semester	15-18 credits
General Education, Minor, or Elective Courses	15-18 crs.

Social Science/Sociology

Purpose

Common to the degree programs offered by the Department of Social Science/Sociology is the study of people interacting with one another. Their common approach is scientific, that is, they study patterns of human behavior by objective, measurable methodologies.

Sociology is the systematic study of all features of group life, beginning with the family and ending with global arrangements. Because it is a multi-paradigm science, students are educated to appreciate a wide range of theoretical perspectives and research methods. The Sociology Program offers course work in the structures and processes of social interaction. The place of sociology in interdisciplinary studies also is emphasized.

The Social Science Area major is general and interdisciplinary in nature. It presents an overview, as well as the interrelationships, of all the social science disciplines. Along with sociology, anthropology and political science, it includes psychology, history, geography and economics.

Programs

The department, in conjunction with the College of Education and Human Services, provides a teacher certification program for those interested in teaching the social sciences in secondary schools.

Internships

Sociology majors are placed in police departments, private investigation agencies, and governmental and private agencies serving the homeless and juvenile offenders.

Honor Societies

Students in the social sciences are eligible for membership in Pi Gamma Mu, the social science honor society. Students must have completed sixty-four university credits, including a minimum of twenty credits in social science course work, and have a 3.0 or higher grade point average.

Awards

The Joseph Lynn Marino Memorial Award is presented annually. For consideration an applicant must have a minimum grade point average of 3.5, be enrolled in the College of Liberal Arts and have successfully completed two courses in Anthropology.

The Edward McNall Burns Scholarship Award is given annually to a qualified student majoring in anthropology, sociology, or political science.

The George S. Hart Memorial Award for Academic Excellence is given annually to the graduating senior with the highest GPA in the Social Sciences Area.

Careers

Students with an undergraduate degree can secure work in entry level social service and personnel resource areas. Career opportunities, however, increase with the attainment of graduate course work and degrees. The social sciences as a whole prepare students to enter careers in law, public administration, the ministry, personnel resource management, education, social service professions and law enforcement.

Bachelor of Arts in Sociology—128 crs.

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (42 credits)

Sociology Core Courses (18 credits)

SOC 100 Principles of Sociology	3 crs.
SOC 210 Social Stratification	3 crs.
SOC 305 Symbolic Interactionism	3 crs.
SOC 410 Social Theory & Society	3 crs.
SOC 415 Social Science Research Methods	3 crs.
PSY 225 Psychological Statistics	3 crs.

Social Institution Electives (12 credits)
Students must complete four of the following courses:

SOC 216 Sociology of Work	3 crs.
SOC 220 The Family	3 crs.
SOC 240 Social Institutions	3 crs.
SOC 260 Crime	3 crs.
SOC 309 Sociology of Sport	3 crs.
SOC 330 Religion as a Social Phenomena	3 crs.

Sociology Electives (12 credits)
Students must complete four of the following courses

SOC 125 Men, Women and Work	3 crs.
SOC 155 Charismatic Leaders	3 crs.
SOC 165 Modern Freedom Movements	3 crs.
SOC 205 Contemporary Social Problems	3 crs.
SOC 225 Sociology of Aging	3 crs.
SOC 235 Urban Sociology	3 crs.
SOC 285 Substance Use and Abuse	3 crs.
SOC 300 Sociology of Deviance	3 crs.
SOC 310 Collective Behavior	3 crs.
SOC 315 Social Minorities	3 crs.
SOC 320 International Women's Movements	3 crs.

Electives and/or Minor (32-35 credits)

Bachelor of Arts in Social Sciences–128 crs.

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (42 credits)

Lower Division Courses (21 credits)
Students must complete a lower level (100-200) course from each of the following disciplines:
ANT, ECO, GEO, POS, PSY, HIS and SOC

Upper Division Courses (21 credits)
Students must complete an upper level (300-400) course from each of the following disciplines:
ANT, ECO, GEO, POS, PSY, HIS and SOC

Electives and/or Minor (32-35 credits)

Bachelor of Science in Education: Certification in Social Studies for Secondary Schools—128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Professional Education (41 credits)

EDF 290 Policy Studies in American Ed	3 crs.
EDF 301 Computers for Teachers	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDS 300 Problems of Secondary Education	3 crs.
EDS 430 Educational Tests & Measurements	3 crs.
EDS 461 Student Teaching & School Law	12 crs.
EDS 465 Developmental Reading in Secondary Schools	2 crs.
EDS 467 Teaching of Sciences OR EDS 445 Modern Methods in Secondary Schools with advisor's approval	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming the Exceptional Child	3 crs.
PSY 208 Educational Psychology	3 crs.

Professional Specialization (48 credits)

ANT 100 Introduction to Anthropology	3 crs.
EAS 160 Physical Geography	3 crs.
ECO 100 Elements of Economics	3 crs.
ECO 201 Introductory Microeconomics OR ECO 202 Introductory Macroeconomics	3 crs.
GEO 100 Introduction to Geography	3 crs.
GEO 110 Map Principles	3 crs.
GEO 340 Historical Geography	3 crs.
HIS 101 History of the United States to 1877	3 crs.
HIS 102 History of the United States since 1877	3 crs.
HIS 104 History of Western Civilization to 1740	3 crs.
HIS 106 History of Western Civilization since 1740	3 crs.
Non-western History course	3 crs.
POS 100 Introduction to Political Science	3 crs.
POS 105 American Government	3 crs.
SOC 100 Principles of Sociology	3 crs.
Sociology elective	3 crs.

Students must also achieve a satisfactory score on the Praxis II exam.

Minor in Sociology - 21 credits

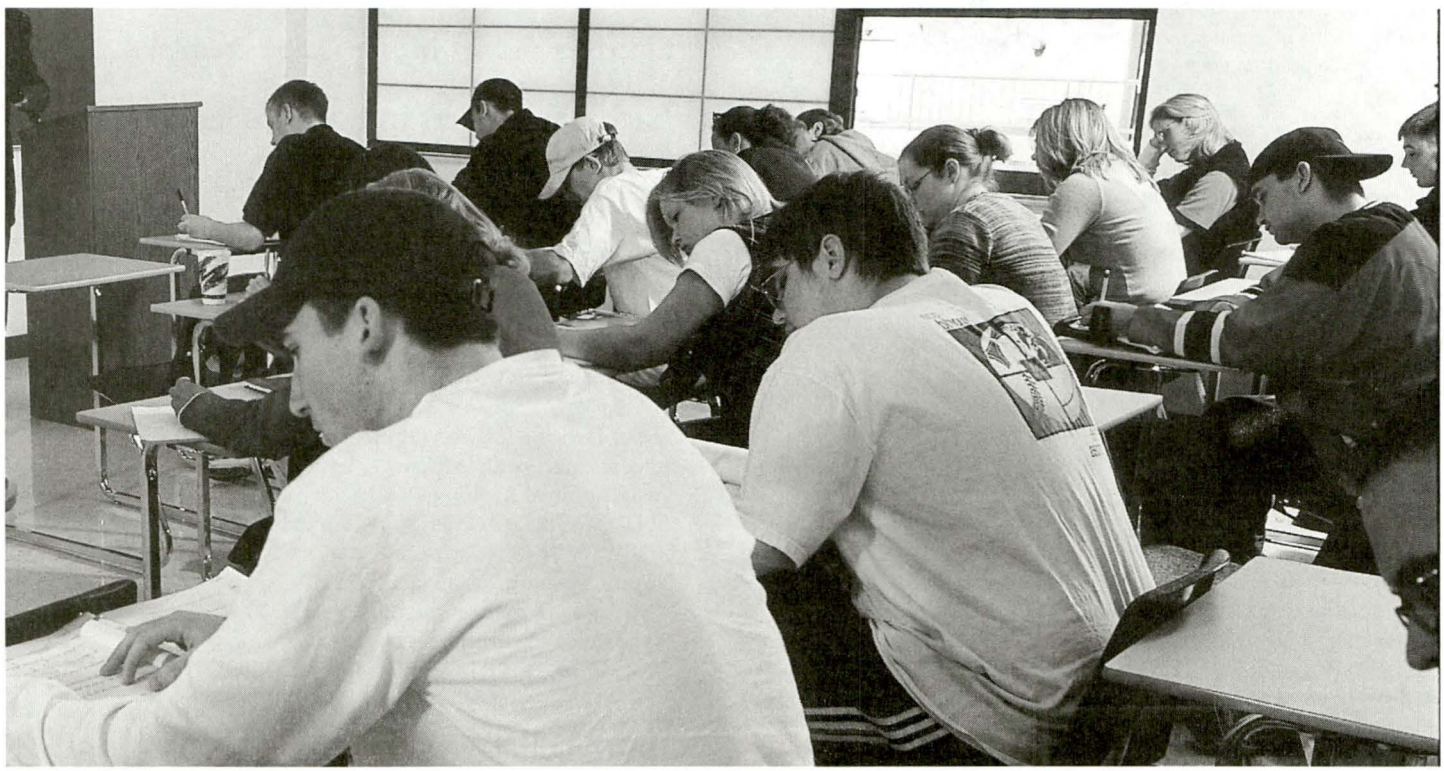
Required (12 credits)

SOC 100 Principles of Sociology	3 crs.
SOC 110 Ethnic, Racial, and Sexual Minorities OR SOC 210 Social Stratification	3 crs.
SOC 165 Modern Freedom Movements OR SOC 216 Sociology of Work OR SOC 225 Sociology of Aging	3 crs.
SOC 240 Social Institutions	3 crs.
SOC 415 Social Science Research Methods	3 crs.

Sociology Electives (9 credits)

Select three of the following:

SOC 305 Symbolic Interactionism	3 crs.
SOC 310 Collective Behavior	3 crs.
SOC 330 Religion as a Social Phenomenon	3 crs.
SOC 410 Social Theory & Society	3 crs.
SOC 495 Seminar in Sociology	3 crs.



Bachelor of Arts in Sociology

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
SOC 100 Principles of Sociology	3 crs.
UNI 100 First Year Seminar	1 cr.
ENG 101 English Composition I	3 crs.
General Education Courses	9 crs.

Second Semester	15 credits
SOC 210 Social Stratification	3 crs.
Sociology course	3 crs.
ENG 102 English Composition II	3 crs.
General Education Courses	6 crs.

Sophomore Year

Third Semester	15-18 credits
Sociology course	3 crs.
Social Institutions Course	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Fourth Semester	15-18 credits
Sociology course	3 crs.
Social Institutions Course	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Junior Year

Fifth Semester	15-18 credits
SOC 305 Symbolic Interactionism	3 crs.
Social Institutions Course	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Sixth Semester	15-18 credits
Social Institutions course	3 crs.
PSY 225 Psychological Statistics	3 crs.
General Education, Minor, or Elective Courses	9-12 crs.

Senior Year

Seventh Semester	15-18 credits
SOC 410 Social Theory & Society	3 crs.
SOC 415 Social Science Research Methods	3 crs.
General Education, Minor or Elective Courses	9-12 crs.

Eighth Semester	15-18 credits
Sociology Course	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Bachelor of Science in Education: Cert. in Social Studies for Secondary Schools

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ENG 101 English Composition I	3 crs.
SOC 100 Principles of Sociology	3 crs.
POS 100 Intro to Political Science	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	6 crs.

Second Semester	15 credits
ANT 100 Intro to Anthropology	3 crs.
ENG 102 English Composition II	3 crs.
GEO 100 Intro to Geography	3 crs.
General Education Courses	6 crs.

Sophomore Year

Third Semester	15-18 credits
EAS 160 Physical Geography	3 crs.
HIS 101 History of the US to 1877	3 crs.
POS 105 American Government	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Fourth Semester	18 credits
ECO 100 Elementas of Economics	3 crs.
GEO 110 Map Principles	3 crs.
HIS 102 History of the US since 1877	3 crs.
PSY 208 Educational Psychology	3 crs.
Sociology Elective	3 crs.
General Education, Minor, or Elective Course	3 crs.

Junior Year

Fifth Semester	18 credits
ECO 201 Intro to Microeconomics or ECO 202 Intro to Macroeconomics	3 crs.
EDF 290 Policy Studies in American Education	3 crs.
EDF 301 Computers for Teachers	3 crs.
GEO 340 Historical Geography	3 crs.
SOC 305 Symbolic Interactionism	3 crs.
HIS 104 History of Western Society to 1740	3 crs.
General Education, Minor or Elective Course	3 crs.

Sixth Semester	18 credits
EDS 300 Problems of Secondary Education	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDS 430 Educational Tests and Measurements	3 crs.
EDS 445 Teaching of Scoail Studies in Sec. Schools	3 crs.
HIS 106 History of Western Society since 1740	3 crs.
General Education, Minor, or Elective Course	3 crs.

Senior Year

Seventh Semester	17 credits
EDS 465 Developmental Reading in Secondary School	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mianstreaming Exceptional Learners	3 crs.
Non-Western History Course	3 crs.
General Education, Minor or Elective Courss	3 crs.

Eighth Semester	12 credits
Student Teaching	12 crs.

Social Work & Gerontology

The **Social Work Program** is accredited by the Council on Social Work Education. The program's objectives are
1) to provide the student with generalist skills for entry into beginning social work practice in a variety of agencies and human service settings;
2) to prepare students for entrance into graduate programs of social work and related professional schools;
3) to contribute to the general college education of non-social work majors by helping students understand social welfare needs, services, and issues relevant to a modern industrial democracy; and
4) to contribute to the provision of social welfare services and to the social work profession through service, research and continuing education.

The Social Work program does not gie credit for life experience or previous work experience in field practicum or professional foundation areas.

The **Gerontology Program** is dedicated to providing the student with a broad range of academic and practical experience that will enable the graduate to function in a variety of settings, such as, administration, planning, management, and delivery of services to older persons. Working with older adults is a projected employment growth area.

The objective of the gerontology program is to increase the number and competency of persons working with older adults, their families and their communities. The Center in the Woods provides supervision from gerontology faculty and a professional staff for a variety of student experiences. It is one of the few senior centers in the nation that has a working relationship with an academic program in gerontology.

The **Aging Specialist Certificate** is becoming recognized as the minimum credential of qualification in the field of aging. This Certificate in Gerontology is designed primarily for either undergraduates interested in working with older adults in relation to their undergraduate major (e.g., social work, psychology, nursing, communication disorders) or people who are currently working with or on behalf of older adults who have had practical experience in the field of aging but who have had little formal training. The Aging Specialist Certificate is 18 hours of course work in gerontology including a three-credit practicum experience.

Careers

Graduates of the Social Work Program are eligible for membership in the National Association of Social Workers and for advanced standing in accredited graduate social work programs. The program provides career opportunities in such areas as personal services (case management, family development, counseling), protective services, mental health, public welfare, and informational/advising services (education, crisis centers, consulting and public interest advocacy).

Bachelor of Science in Social Work

Admission to the Social Work Program

Full admission into the Social Work Program requires that the student apply to the major after completing several basic social work courses. Among other things, full admission requires a 2.0 QPA both overall and within the major. Continued good standing and graduation require achieving a 2.5 QPA in the major.

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (68 credits)

Foundation (3 credits)

SOW 150 Introduction to Social Work	3 crs.

Practice Interventions (12 credits)

SOW 256 Social Work Interviewing	3 crs.
SOW 302 Micro Practice Methods	3 crs.
SOW 348 Mezzo Practice Methods	3 crs.
SOW 349 Macro Practice Methods	3 crs.

Human Behavior/Social Environment (12 credits)

SOW 215 Human Growth and Behavior I	3 crs.
SOW 216 Human Growth and Behavior II	3 crs.
SOW 208 Minority Group Relations	3 crs.
SOW 303 Human Sexuality and Society	3 crs.

Social Welfare Policy and Services (9 credits)

SOW 295 History and Philosophy of Social Welfare	3 crs.
SOW 366 Policy Analysis/Service Delivery	3 crs.
SOW 370 Social Change	3 crs.

Research (3 credits)

SOW 405 Social Work Research Methods	3 crs.

Special Interest Electives (17 credits)
Select four courses from the following list

SOW 265 Juvenile Delinquency	3 crs.
SOW 270 Child Welfare	3 crs.
SOW 296 Poverty & Related Social Problems	3 crs.
SOW 306 Social Work in Rural Environment	3 crs.
SOW 350 Social Work with Aging	3 crs.
SOW 353 Psychopathology for Social Workers	3 crs.
SOW 495 Seminar in Social Work	Var. crs.

Field Work (12 credits)

SOW 419 Social Work Practicum I	6 crs.
SOW 420 Social Work Practicum II	6 crs.

Electives (6-9 credits)

Bachelor of Science in Gerontology

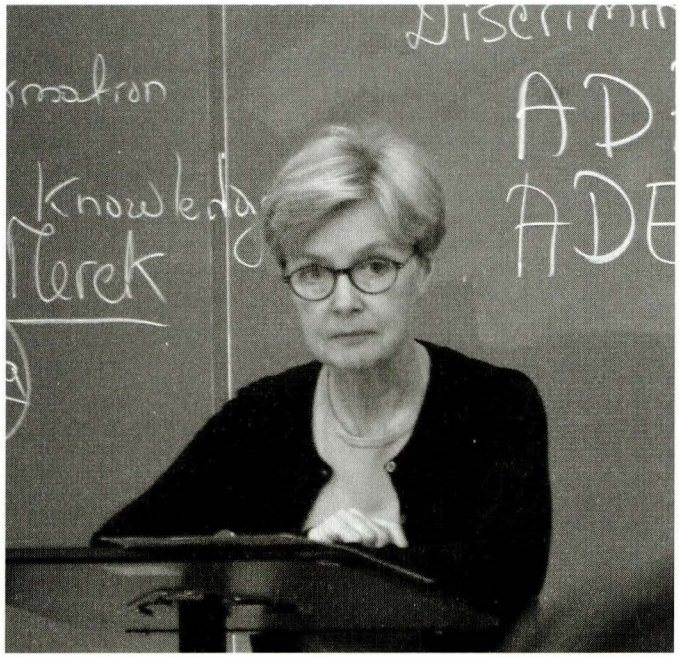
General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (57-64 credits)

Required Courses (27 credits)

XGE 101 Introduction to Gerontology	3 crs.
XGE 102 Aging in American Society	3 crs.



XGE 201 Aging Policies and Services	3 crs.
XGE 204 Biology of Aging	3 crs.
XGE 205 Media and Library Resources in Aging	3 crs.
XGE 349 Selected Topics: Grief & Bereavement	3 crs.
XGE 349 Selected Topics: Mental Health & Aging	3 crs.
XGE 380 Adult Development and Aging	3 crs.
XGE 439 Seminar in Gerontology	3 crs.

Major Electives (12 credits)
Select four courses from the following list:

XGE 202 Middle Years of Life	3 crs.
XGE 210 Group Work with Older Adults	3 crs.
XGE 249 Aging and the Family	3 crs.
XGE 289 Minority Aging/Institutionalization	3 crs.
XGE 300 Health and Safety in Aging	3 crs.
XGE 320 Counseling the Older Adult	3 crs.
XGE 340 Activities in Long-Term Care	3 crs.
XGE 350 Exercise for the Elderly	3 crs.
XGE 369 Rural Aging	3 crs.
XGE 370 Nursing Homes	3 crs.

Related Courses (12-13 credits)

SOW 150 Introduction to Social Work	3 crs.
HPE 314 First Aid and Personal Safety OR HPE 500 Emergency Medical Technician	3-4 crs.
SOW 350 Social Work with the Aging	3 crs.
Management (MGT) Elective	3 crs.
Marketing (MKT) Elective	3 crs.

Field Experience (6-12 credits)

XGE 449 Gerontology Practicum: Community Setting	Variable crs.
XGE 449 Gerontology Practicum: Institutional Setting	Variable crs.

Electives (10-20 credits)

Aging Specialist Certificate - 18 credits

XGE 101 Introduction to Gerontology	3 crs.
XGE 201 Aging Politics and Services	3 crs.
XGE 449 Gerontology Practicum	3 crs.

Gerontology courses chosen in consultation with program advisors (9 credits minimum)

Bachelor of Science in Social Work

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ENG 101 English Composition I	3 crs.
PSY 100 General Psychology	3 crs.
SOC 100 Principles of Sociology	3 crs.
UNI 100 First Year Seminar	1 cr.
Humanities Elective	3 crs.
Natural Science Elective	3 crs.

Second Semester	15 credits
ENG 102 English Composition II	3 crs.
BIO 103 Contemporary Issues in Biology	3 crs.
SOW 150 Intro to Social Work	3 crs.
Math Elective	3 crs.
Communication Elective	3 crs.

Sophomore Year

Third Semester	15 credits
SOW 215 Human Growth and Behavior I	3 crs.
SOW 256 Social Work Interviewing	3 crs.
Social Work Elective	3 crs.
Tech Literacy Elective	3 crs.
Critical Thinking Elective	3 crs.

Fourth Semester	15 credits
SOW 216 Human Growth and Behavior II	3 crs.
SOW 302 Micro Practice Methods	3 crs.
Technology Literacy Elective	3 crs.
Humanities Elective	3 crs.
Free Elective	3 crs.

Junior Year

Fifth Semester	18 credits
SOW 348 Mezzo Practice Methods	3 crs.
SOW 295 History and Philosphy of Social Welfare	3 crs.
SOW 405 Social Work Research Methods	3 crs.
Social Work Elective	3 crs.
Humanities Elective	3 crs.
Free Elective	3 crs.

Sixth Semester	18 credits
SOW 208 Minority Group Relations	3 crs.
SOW 349 Macro Practice Methods	3 crs.
SOW 303 Human Sexuality and Society	3 crs.
SOW 366 Policy Analysis/Service Delivery	3 crs.
Social Work Electives	6 crs.

Senior Year

Seventh Semester	15 credits
SOW 370 Social Change	3 crs.
Social Work Elective	3 crs.
Free Electives	9 crs.

Eighth Semester	15 credits
SOW 419 Social Work Practicum I	6 crs.
SOW 420 Social Work Practicum II	6 crs.
Social Work Elective	3 crs.

Bachelor of Science in Gerontology

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
ENG 101 English Composition I	3 crs.
XGE 101 Introduction to Gerontology	3 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	9 crs.

Second Semester	15-18 credits
ENG 102 English Composition II	3 crs.
XGE 102 Aging in American Society	3 crs.
SOW 150 Introduction to Social Work	3 crs.
General Education Courses	6-9 crs.

Sophomore Year

Third Semester	15-18 credits
XGE 204 ABiology of Aging	3 crs.
Gerontology Elective	3 crs.
General Education or Elective Courses	9-12 crs.

Fourth Semester	15-18 credits
XGE 205 Media and Library Resources in Aging	3 crs.
Gerontology Elective	3 crs.
Management (MGT) Elective	3 crs.
General Education or Elective Courses	3-6 crs.

Junior Year

Fifth Semester	15-22 credits
XGE 201 Aging Policies and Services	3 crs.
XGE 349 Selected Topics: Grief & Bereavement	3 crs.
HPE 314 First Aid and Personal Safety OR	
HPE 500 Emergency Medical Technician	3-4 crs.
SOW 350 Social Work with the Aging	3 crs.
General Education or Elective Courses	3-6 crs.

Sixth Semester	18-24 credits
XGE 349 Selected Topics: Mental Health & Aging	3 crs.
XGE 380 Adult Development and Aging	3 crs.
XGE 449 Gerontology Practicum	3-6 crs.
Gerontology Elective	3 crs.
Marketing (MKT) Elective	3 crs.
General Education or Elective Courses	3-6 crs.

Senior Year

Seventh Semester	6-12 credits
Gerontology Elective	3 crs.
General Education or Elective Courses	3-9 crs.

Eighth Semester	15-18 credits
XGE 439 Seminar in Gerontology	3 crs.
XGE 449 Gerontology Practicum	Variable crs.
General Education or Elective Courses	3-6 crs.

Special Education

Purpose

The Department of Special Education, accredited by the National Council for Accreditation of Teacher Education (NCATE), offers programs leading to the baccalaureate degree with a major in Special Education. Students in either Early Childhood or Elementary Education may dual major in Special Education. Graduates of these dual-major programs receive certification in both Early Childhood or Elementary Education and Special Education.

Special Education programs, leading to the Pennsylvania Instructional Level I certification, entitle the graduate to teach children with the following handicaps: mental retardation, learning disability, physical handicaps, emotional disturbance, and brain damage. The general objectives of the program are to demonstrate:
1. An understanding of the nature of handicapping conditions and the impact of these conditions on normal growth and development
2. An ability to effectively use alternative instructional strategies appropriate to the needs of exceptional children
3. The ability to identify the educationally relevant characteristics of various exceptional children and to effectively diagnose and prescribe appropriate educational experiences
4. The ability to function as a competent classroom manager in promoting learning among handicapped students
5. Competency to initiate instructional programs that facilitate appropriate career and vocational goals for the mentally and/or physically handicapped.

Special Education and Early Childhood or Elementary Education dual majors must demonstrate the competencies associated with each of the individual certificate programs. In addition, they must demonstrate the ability to:
1. Identify students who are in need of some special service
2. Work effectively with other teachers in cooperatively planning programs for children with special needs
3. Facilitate the social acceptance of children with handicaps by structuring classroom environments that reinforce positive interpersonal relationships
4. Complete educational assessment of the learning needs of students
5. Develop individual educational prescriptions based on assessment data
6. Effectively modify instructional strategies or materials to provide for the unique needs of students manifesting learning handicaps

Careers

The field of special education, both within Pennsylvania and nationally, continues to grow, providing excellent professional career opportunities. Recent federal legislation has mandated new services for handicapped youngsters and provided increased funding. The impetus should be toward an increased growth rate in special education programs, particularly for children with severe and/or profound handicaps. Graduates of the Special Education program are qualified to assume several professional roles including: special education classroom teacher, resource room teacher, homebound instruction teacher, hospital teacher, and a variety of roles in sheltered workshops and community-living arrangements for handicapped adults.

The growth of mainstream/inclusion programs for mildly handicapped youngsters has been rapid. It has been recognized that children with mild forms of handicaps typically attain higher levels of achievement in the regular class environment than in the special self-contained classroom. These children do, however, need special help and remedial instruction in some areas of the curriculum. Thus, the resource room is becoming an increasingly common means of addressing the needs of children while continuing to maintain their enrollment in regular classrooms. This process of integrating/including the handicapped child should be initiated early, preferably at the preschool level, or no later than the early elementary years. Teachers trained in Early Childhood or Special Education will be able to provide excellent resource services to both children and the other staff members of an elementary school. Graduates of this program are qualified to assume several professional roles, including regular early childhood classroom teacher (nursery-third grade), special education classroom teacher; mentally retarded, emotionally disturbed, physically handicapped, learning disabled, brain-damaged (nursery-twelfth grade), and resource room teacher.

Bachelor of Science in Education: Comprehensive Special Education - 128 credits

General Education (53-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Professional Education (33 credits)

EDF 290 Policy Studies in American Education	3 crs.
EDF 301 Computers for Teachers	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
ESP 461 Student Teaching Practicum and School Law	12 crs.
PSY 100 General Psychology	3 crs.
PSY 207 Developmental Psychology	3 crs.
PSY 208 Educational Psychology	3 crs.

Special Education Courses (36 credits)

ESP 101 Exceptional Child I	4 crs.
ESP 200 Exceptional Child II	4 crs.
ESP 301 Behavior Principles I	4 crs.
ESP 401 Behavior Principles II	4 crs.
ESP 502 Education of the Severely/Profoundly Handicapped	4 crs.
ESP 503 Diagnostic Testing/Prescriptive Teaching	4 crs.
ESP 504 Curriculum Planning & Methods I	4 crs.
ESP 505 Curriculum Planning & Methods II	4 crs.
ESP 506 Habilitation Training	4 crs.

Elementary Education or Early Childhood Education Electives (6 credits)

Select two of the following courses

ECE 304 Thematic Teaching in Early Childhood	3 crs.
EDE 211 Instructional Strategies	3 crs.
EDE 300 Language and Literacy I	3 crs.
EDE 305 Mathematics Content and Methods in the Elementary School	3 crs.

EDE 306 Teaching Social Studies Elementary Grades	3 crs.
EDE 307 Science for Elementary/Early Childhood	3 crs.
EDE 311 Children's Literature	3 crs.
EDE 330 Teaching in the Middle School	3 crs.
EDE 340 Language and Literacy II	3 crs.

Bachelor of Science in Education: Special Education & Early Childhood Education (Dual Major)—160-163 credits

General Education (64-67 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

To satisfy certification requirements, students in this teacher education program also need to complete:
Three additional credits in Mathematics,
Six additional credits in Social Science with courses in American History, Geography, Economics and Political Science, and
Three to four additional credits in Natural Science with courses in Physical Science, Life Science and Earth Science.

Professional Education (33 credits)

EDF 290 Policy Studies in American Education	3 crs.
EDF 301 Computers for Teachers	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
ESP 461 Student Teaching Practicum and School Law	12 crs.
PSY 100 General Psychology	3 crs.
PSY 205 Child Psychology	3 crs.
PSY 208 Educational Psychology	3 crs.

Early Childhood Courses (27 credits)

ECE 203 Field Experience Infant/Toddler/Day	3 crs.
ECE 302 Emerging Literacy	3 crs.
ECE 304 Thematic Teaching in Early Childhood	3 crs.
ECE 315 Mathematics Content in Early Childhood	3 crs.
ECE 319 Parent and Community Involvement	3 crs.
ECE 405 Early Childhood Seminar	3 crs.
EDE 211 Instructional Strategies	3 crs.
EDE 311 Children's Literature	3 crs.
EDE 321 Field Experience Elementary	3 crs.

Special Education Courses (36 credits)

ESP 101 Exceptional Child I	4 crs.
ESP 200 Exceptional Child II	4 crs.
ESP 301 Behavior Principles I	4 crs.
ESP 401 Behavior Principles II	4 crs.
ESP 502 Education of the Severely/Profoundly Handicapped	4 crs.
ESP 503 Diagnostic Testing/Prescriptive Teaching	4 crs.
ESP 504 Curriculum Planning & Methods I	4 crs.
ESP 505 Curriculum Planning & Methods II	4 crs.
ESP 506 Habilitation Training	4 crs.

Bachelor of Science in Education: Special Education & Elementary Education (Dual Major)—160-163 credits

General Education (64-67 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 40-45).
To satisfy certification requirements, students in this teacher education program also need to complete:
Three additional credits in Mathematics,
Six additional credits in Social Science with courses in American History, Geography, Economics and Political Science, and
Three to four additional credits in Natural Science with courses in Physical Science, Life Science and Earth Science.

Professional Education (33 credits)

EDF 290 Policy Studies in American Education	3 crs.
EDF 301 Computers for Teachers	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
ESP 461 Student Teaching Practicum and School Law	12 crs.
PSY 100 General Psychology	3 crs.
PSY 205 Child Psychology	3 crs.
PSY 208 Educational Psychology	3 crs.

Elementary Education Courses (27 credits)

ECE 319 Parent and Community Involvement.	3 crs.
EDE 211 Instructional Strategies	3 crs.
EDE 300 Language and Literacy I	3 crs.
EDE 305 Mathematics Content and Methods in the Elementary School	3 crs.
EDE 306 Teaching Social Studies Elementary Grades	3 crs.
EDE 307 Science for Elementary/Early Childhood	3 crs.
EDE 311 Children's Literature	3 crs.
EDE 321 Field Experience Elementary	3 crs.
EDE 340 Language and Literacy II	3 crs.

Special Education Courses (36 credits)

ESP 200 Exceptional Child II	4 crs.
ESP 101 Exceptional Child I	4 crs.
ESP 301 Behavior Principles I	4 crs.
ESP 401 Behavior Principles II	4 crs.
ESP 502 Education of the Severely/Profoundly Handicapped	4 crs.
ESP 503 Diagnostic Testing/Prescriptive Teaching	4 crs.
ESP 504 Curriculum Planning & Methods I	4 crs.
ESP 505 Curriculum Planning & Methods II	4 crs.
ESP 506 Habilitation Training	4 crs.

Bachelor of Science in Education: Comprehensive Special Education

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	18 credits
ENG 101 English Composition I	3 crs.
ESP 101 Exceptional Child I	4 crs.
ESP 301 Behavior Principles I	4 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	6 crs.

Second Semester	17 credits
ENG 102 English Composition II	3 crs.
ESP 200 Exceptional Child II	4 crs.
ESP 401 Behavior Principles II	4 crs.
PSY 100 General Psychology	3 crs.
General Education Courses	3 crs.

Sophomore Year

Third Semester	15-18 credits
PSY 207 Developmental Psychology	3 crs.
General Education or Elective Courses	12-15 crs.

Fourth Semester	15-18 credits
Elementary Education or Early Childhood Education Elective	3 crs.
PSY 208 Educational Psychology	3 crs.
General Education or Elective Courses	9-12 crs.

Junior Year

Fifth Semester	16 credits
EDF 301 Computers for Teachers	3 crs.
ESP 502 Education of the Severely/Profoundly Handicapped	4 crs.
Elementary Education or Early Childhood Education Elective	3 crs.
General Education or Elective Courses	6 crs.

Sixth Semester	16 credits
EDF 290 Policy Studies in American Education	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
ESP 503 Diagnostic Testing/Prescriptive Teaching	4 crs.
General Education or Elective Courses	3 crs.

Senior Year

Seventh Semester	15-18 credits
ESP 504 Curriculum Planning & Methods I	4 crs.
ESP 505 Curriculum Planning & Methods II	4 crs.
ESP 506 Habilitation Training	4 crs.
General Education or Elective Courses	3-6 crs.

Eighth Semester	12 credits
ESP 461 Student Teaching Practicum and School Law	12 crs.

Bachelor of Science in Education: Special Education & Early Childhood Education (Dual Major)

The dual major is a five year program that may be completed in four years by completing a minimum of nine credits each summer.

Freshman Year

First Semester	18 credits
ENG 101 English Composition I	3 crs.
ESP 101 Exceptional Child I	4 crs.
ESP 301 Behavior Principles I	4 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	6 crs.

Second Semester	17 credits
ENG 102 English Composition II	3 crs.
ESP 200 Exceptional Child II	4 crs.
ESP 401 Behavior Principles II	4 crs.
PSY 100 General Psychology	3 crs.
General Education Courses	3 crs.

Sophomore Year

Third Semester	15-18 credits
PSY 205 Child Psychology	3 crs.
General Education or Elective Courses	12-15 crs.

Fourth Semester	15-18 credits
PSY 208 Educational Psychology	3 crs.
ECE 302 Emerging Literacy	3 crs.
EDE 211 Instructional Strategies	3 crs.
General Education or Elective Courses	6-9 crs.

Junior Year

Fifth Semester	16 credits
ECE 315 Mathematics Content in Early Childhood	3 crs.
ECE 319 Parent and Community Involvement	3 crs.
EDF 290 Policy Studies in American Education	3 crs.
EDF 301 Computers for Teachers	3 crs.
ESP 502 Education of the Severely/Profoundly Handicapped	4 crs.

Sixth Semester	16 credits
ECE 405 Early Childhood Seminar	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
ESP 503 Diagnostic Testing/Prescriptive Teaching	4 crs.
General Education or Elective Courses	3 crs.

Senior Year

Seventh Semester	15-18 credits
ECE 203 Field Experience Infant/Toddler/Day	3 crs.
EDE 311 Children's Literature	3 crs.
General Education or Elective Courses	9-12 crs.

Eighth Semester	15-18 credits
ECE 304 Thematic Teaching in Early Childhood	3 crs.
EDE 321 Field Experience Elementary	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
General Education or Elective Courses	6-9 crs.

Fifth Year

Ninth Semester	12 crs.

ESP 504 Curriculum Planning & Methods I	4 crs.
ESP 505 Curriculum Planning & Methods II	4 crs.
ESP 506 Habilitation Training	4 crs.

Tenth Semester — 12 credits

ESP 461 Student Teaching Practicum and School Law	12 crs.

Bachelor of Science in Education: Special Education & Elementary Education (Dual Major)

The dual major is a five year program that may be completed in four years by completing a minimum of nine credits each summer.

Freshman Year

First Semester — 18 credits

ENG 101 English Composition I	3 crs.
ESP 101 Exceptional Child I	4 crs.
ESP 301 Behavior Principles I	4 crs.
UNI 100 First Year Seminar	1 cr.
General Education Courses	6 crs.

Second Semester — 17 credits

ENG 102 English Composition II	3 crs.
ESP 200 Exceptional Child II	4 crs.
ESP 401 Behavior Principles II	4 crs.
PSY 100 General Psychology	3 crs.
General Education Courses	3 crs.

Sophomore Year

Third Semester — 15-18 credits

PSY 205 Child Psychology	3 crs.
General Education or Elective Courses	12-15 crs.

Fourth Semester — 15-18 credits

EDE 211 Instructional Strategies	3 crs.
EDE 305 Mathematics Content and Methods in the Elementary School	3 crs.
PSY 208 Educational Psychology	3 crs.
General Education or Elective Courses	6-9 crs.

Junior Year

Fifth Semester — 16 credits

ECE 319 Parent and Community Involvement.	3 crs.
EDE 306 Teaching Social Studies Elementary Grades	3 crs.
EDF 301 Computers for Teachers	3 crs.
ESP 502 Education of the Severely/Profoundly Handicapped	4 crs.
General Education or Elective Courses	3 crs.

Sixth Semester — 16 credits

EDE 300 Language and Literacy I	3 crs.
EDE 307 Science for Elementary/Early Childhood	3 crs.
EDF 290 Policy Studies in American Education	3 crs.
ESP 503 Diagnostic Testing/Prescriptive Teaching	4 crs.
General Education or Elective Courses	3 crs.

Senior Year

Seventh Semester — 15-18 credits

EDF 302 Applied Instructional Technology	3 crs.
EDE 340 Language and Literacy II	3 crs.
General Education or Elective Courses	9-12 crs.

Eighth Semester — 15-18 credits

EDE 311 Children's Literature	3 crs.
EDE 321 Field Experience Elementary	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
General Education or Elective Courses	6-9 crs.

Fifth Year

Ninth Semester — 12 credits

ESP 504 Curriculum Planning & Methods I	4 crs.
ESP 505 Curriculum Planning & Methods II	4 crs.
ESP 506 Habilitation Training	4 crs.

Tenth Semester — 12 credits

ESP 461 Student Teaching Practicum and School Law	12 crs.

Theatre and Dance

Purpose

As one of the performing arts, theatre is a means of self-expression and social communication. Whether we study pure dramatic expression or musical dramatic expression, we seek to understand how speech, movement and other non-verbal aspects of production such as lighting, scenery, and costumes, communicate ideas and emotion and how they are used for entertainment, education, reform and other social purposes.

The study of the dramatic arts serves both Theatre majors and those students in other disciplines concerned with human interaction and symbolic expression (e.g., art, education, communication, political science, sociology, English and psychology). Students who are aware of the history and technology associated with theatre enhance their appreciation of this art form.

Programs

Theatre is an undergraduate degree program in the College of Liberal Arts and is included in the undergraduate degree Secondary Education Communication Certification program in the College of Education and Human Services.

Theatre serves a dual function. It provides occupational education and training for talented students pursuing careers in theatre, and it provides both educational and performance opportunities for all students on campus. Six dance courses, ranging from basic ballet to theatre dance, give the major a competitive advantage in professional preparation.

In cooperation with the Student Association, Incorporated, the Theatre and Dance Department sponsors five play-producing groups with membership open to all students: University Players, which produces Main Stage Productions; Children's Theatre, which annually performs before young audiences of more than 3,000; Stories 'n Things, which carries theatre directly to schools; Mon Valley Dance Council, producing dance productions; and Theatre Now, which presents experimental drama in innovative staging. These organizations either individually or in combination, annually present six on-campus play, dance, and musical productions. In addition, the department sponsors a pre-professional summer stock company which offers the opportunity for the student to work in a repertory environment.

Each student organization shares the facilities and faculty of the department. Steele Auditorium has a fully equipped 955-seat proscenium stage, and scenery, lighting, costume, property shops, storage space and classrooms. A state-of-the-art 16 channel sound mixer with multiple microphone and line inputs on-stage and in the theatre has recently been installed. A complete renovation and revision of the stage and building's lighting system is in progress.

The Theatre Department rewards creative excellence by offering opportunities for upper level students to produce shows, and to direct or design both major and minor (one-act plays) productions. Theatre majors are required to take practicum credits, which give students practical experience in various areas of theatrical production: technical production, dance, acting, design, management, directing, technical direction, touring theatre, and summer theatre. Students are encouraged to use the practicum experience to broaden and enlarge their experience in the field of theatre.

Honor Society

Since 1938, outstanding students have annually been elected to the University Players' Hall of Fame. Membership in Alpha Psi Omega, the national honorary Theatre fraternity, is achieved through active participation in theatre productions.

Careers

Graduates of California University work throughout the country in professional and semi-professional theatre, in film and television, in teaching, community and regional theatre, recreation, and in rehabilitation theatre, public relations, interior decoration, costuming, and arts management.

Bachelor of Arts in Theatre—128 credits

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 43-48).

Major (42 credits)

Required Courses (21 credits)

THE 100 Introduction to the Theatre	3 crs.
THE 131 Fundamentals of Acting	3 crs.
THE 132 Ballet Technique I	3 crs.
THE 141 Stagecraft I	3 crs.
THE 302 History of Theatre I	3 crs.
THE 312 History of Theatre II	3 crs.
THE 359 Theatre Practicum: Senior Thesis	3 crs.

Theatre Practicum Courses (6 credits)
THE 350-358 Theatre Practicum

Theatre Electives (15 credits)

Electives and/or Minor (32-35 credits)

Bachelor of Science in Education: Certification in Communication (Theatre Concentration) for Secondary Schools

General Education (51-54 credits)

Please consult the description of the General Education Program in this catalog for a list of General Education Goals and Objectives and the courses included on the menus for the various goals (pages 40-45).

Professional Education (41 credits)

EDF 290 Policy Studies in American Ed	3 crs.
EDF 301 Computers for Teachers	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDS 300 Problems of Secondary Education	3 crs.
EDS 430 Educational Tests & Measurements	3 crs.
EDS 461 Student Teaching & School Law	12 crs.
EDS 465 Developmental Reading in Secondary Schools	2 crs.
EDS 467 Teaching of Sciences OR EDS 445 Modern Methods in Secondary Schools with advisor's approval	3 crs.
EDU 210 Teaching in a Multicultural Society	3 crs.
EDU 340 Mainstreaming the Exceptional Child	3 crs.
PSY 208 Educational Psychology	3 crs.

Academic Specialization: Theatre Concentration (48 credits)

English (18 credits)

ENG 301 English Literature I	3 crs.
ENG 302 English Literature II	3 crs.
ENG 337 Survey of American Literature I	3 crs.
ENG 338 Survey of American Literature II	3 crs.
ENG 345 English Grammar and Usage	3 crs.
ENG 375 Advanced Writing	3 crs.

Select one of the following courses (3 credits):

ENG 425 Shakespeare	3 crs.
THE 305 Shakespeare in the Theatre	3 crs.

Theatre (21 credits)

THE 131 Fundamentals of Acting	3 crs.
THE 141 Stagecraft I	3 crs.
THE 320 Fundamentals of Directing	3 crs.
THE History OR	
THE Literature courses	6 crs.
THE Elective	3 crs.
THE 359 Theatre Practicum: Senior Thesis	3 crs.

Communication (6 credits)

COM 230 Argumentation and Debate	3 crs.
COM 490 Communication Theory	3 crs.

Minor in Theatre

Concentration in Theatre - 21 credits

Required courses (12 credits)

THE 100 Introduction to Theatre	3 crs.
THE 131 Fundamentals of Acting	3 crs.
THE 132 Ballet Technique I OR THE 133 Jazz Technique I	3 crs.
THE 141 Stagecraft I	3 crs.

Theatre Practicum (9 credits)

THE 350-358 Theatre Practicum courses

Concentration in Dance - 21 credits

Required courses (21 credits)

THE 131 Fundamentals of Acting	3 crs.
THE 132 Ballet Technique I	3 crs.
THE 133 Jazz Technique I	3 crs.
THE 232 Ballet Technique II	3 crs.
THE 233 Jazz Technique II	3 crs.
THE 300 Theatre Dance I	3 crs.
THE 301 Theatre Dance II	3 crs.

Concentration in Children's Drama—21 credits

Required Courses (13 credits)

THE 100 Introduction to Theatre	3 crs.
THE 240 Creative Dramatics	3 crs.
THE 245 Children's Theatre	3 crs.
THE 255 Puppetry	3 crs.
THE 357 Theatre Practicum: Tour Theatre	1 cr.

Theatre Practicum (8 credits)

THE 350-358 Theatre Practicum courses

Concentration in Theatre History/Literature - 21 credits

Required Courses (21 credits)

THE 100 Introduction to Theatre	3 crs.
THE 302 History of Theatre I	3 crs.
THE 312 History of Theatre II	3 crs.
THE 304 World Drama	3 crs.
THE 305 Shakespeare in the Theatre	3 crs.
THE 306 Modern Drama	3 crs.
THE 303 American Theatre History OR THE 352 Theatre Practicum: Directing (Dramaturgy)	3 crs.

Concentration in Technical Theatre/Design - 21 credits

Required Courses (6 credits)

THE 100 Introduction to Theatre	3 crs.
THE 141 Stagecraft I	3 crs.

Theatre Electives (9 credits)

Select three of the following courses:

THE 211 Lighting I	3 crs.
THE 311 Lighting II	3 crs.
THE 271 Scene Design I	3 crs.
THE 371 Scene Design II	3 crs.
THE 225 Costume Construction	3 crs.
THE 325 Costume Design	3 crs.
THE 328 Scene Painting	3 crs.
THE 341 Stagecraft I	3 crs.

Theatre Practicum (6 credits)

THE 350-358 Theatre Practicum courses

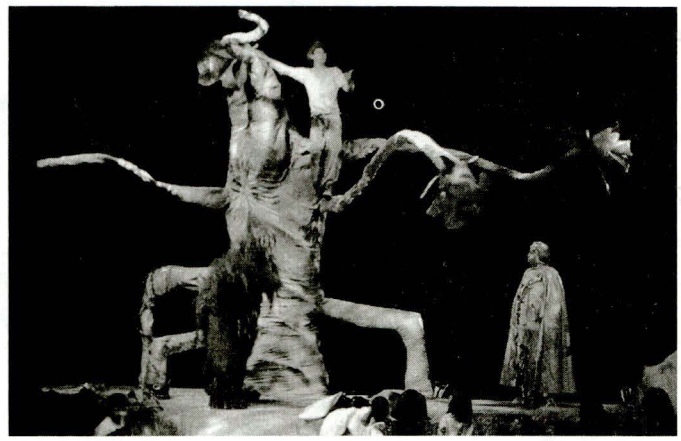
Concentration in Acting—21 credits

Required Courses (18 credits)

THE 101 Voice and Interpretation	3 crs.
THE 131 Fundamentals of Acting	3 crs.
THE 231 Intermediate Acting	3 crs.
THE 331 Advanced Acting	3 crs.
THE 132 Ballet Technique I	3 crs.
THE 133 Jazz Technique I	3 crs.

Theatre Electives (3 credits)

THE 231 Jazz Technique II	3 crs.
THE 233 Ballet Technique II	3 crs.
THE 309 Reader's Theatre	3 crs.
THE 350 Theatre Practicum: Acting	3 crs.



Bachelor of Arts in Theatre

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	17 credits
THE 100 Introduction to the Theatre	3 crs.
THE 131 Fundamentals of Acting	3 crs.
Theatre Practicum	1 cr.
UNI 100 First Year Seminar	1 cr.
ENG 101 English Composition I	3 crs.
General Education courses	6 crs.

Second Semester	16 credits
THE 132 Ballet Technique I	3 crs.
THE 141 Stagecraft I	3 crs.
Theatre Practicum	1 cr.
ENG 102 English Composition II	3 crs.
General Education Courses	6 credits

Sophomore Year

Third Semester	16-18 credits
THE 302 History of Theatre I	3 crs.
Theatre course	3 crs.
Theatre Practicum	1 cr.
General Education, Minor or Elective Courses	9-12 crs.

Fourth Semester	16-18 credits
THE 312 History of Theatre II	3 crs.
Theatre course	3 crs.
Theatre Practicum	1 cr.
General Education, Minor, or Elective Courses	9-12 crs.

Junior Year

Fifth Semester	16-18 credits
Theatre course	3 crs.
Theatre Practicum	1 cr.
General Education, Minor or Elective Courses	9-12 crs.

Sixth Semester	16-18 credits
Theatre course	3 crs.
Theatre Practicum	1 cr.
General Education, Minor, or Elective Courses	12-15 crs.

Senior Year

Seventh Semester	15-18 credits
Theatre course or THE 359 Theatre Practicum: Senior Thesis	3 crs.
General Education, Minor or Elective Courses	12-15 crs.

Eighth Semester	15-18 credits
Theatre course or THE 359 Theatre Practicum: Senior Thesis	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Bachelor of Science in Education: Cert. in Communication (Theatre Concentration) for Secondary Schools

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisor, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 15 and 18 credits each semester.

Freshman Year

First Semester	16 credits
THE 131 Fundamentals of Acting	3 crs.
UNI 100 First Year Seminar	1 cr.
ENG 101 English Composition I	3 crs.
General Education courses	6 crs.

Second Semester	15-18 credits
THE 141 Stagecraft I	3 crs.
ENG 102 English Composition II	3 crs.
General Education Courses	9-12 credits

Sophomore Year

Third Semester	15-18 credits
THE 302 History of Theatre I	3 crs.
ENG 301English Literature I	3 crs.
PSY 208 Educational Psychology	3 crs.
General Education, Minor or Elective Courses	6-9 crs.

Fourth Semester	18 credits
THE 300 Theatre Dance I	3 crs.
EDF 290 Policy Studies in American Education	3 crs.
EDF 301 Computers for Teachers	3 crs.
ENG 302 English Literature II	3 crs.
General Education, Minor, or Elective Course	3 crs.

Junior Year

Fifth Semester	18 credits
COM 230 Argumentation and Debate	3 crs.
ENG 337 Survey of American Literature I	3 crs.
ENG 345 English Grammar and Usage	3 crs.
EDF 302 Applied Instructional Technology	3 crs.
EDS 300 Problems of Secondary Education	3 crs.
General Education, Minor or Elective Course	3 crs.

Sixth Semester	16-18 credits
COM 490 Communications Theory	3 crs.
ENG 338 Survey of American Literature II	3 crs.
ENG 425 Shakespeare or The 305 Shakespeare in the Theatre	3 crs.
EDS 430 Educational Tests & Measurements	3 crs.
EDS 440 Teaching of English in Secondary Schools	3 crs.
General Education, Minor, or Elective Courses	12-15 crs.

Senior Year

Seventh Semester	18 credits
ENG 375 Advnaced Writing	3 crs.
EDS 465 Developmental Reading in the Secondary School	3 crs.
EDU 210 Teachng in A Multicultural Society	3 crs.
EDU 340 Mainstreaming Exceptional Learners	3 crs.
Theatre course or THE 359 Theatre Practicum: Senior Thesis	3 crs.
General Education, Minor or Elective Course	3 crs.

Eighth Semester	12 credits
Student Teaching	12 crs.

Women's Studies

Purpose

Women's Studies is an interdisciplinary field that examines the diverse experiences, contributions and perspectives of women and considers how ideas about gender have shaped human lives. Women's Studies views the world from the perspectives of women who differ widely in race, class, age, and many other ways. Because these perspectives have often been left out of traditional studies, interdisciplinary study of women and gender can provide a new and vital framework for approaching knowledge in other disciplines, posing questions that may not have been asked before.

Women and men in Women's Studies classes encounter intriguing questions and challenging information that may touch on personal identity, relations between men and women, contributions of women to their world, and the history and future of gender. Since traditional education has paid scant attention to gender or to the half of humanity that is female, Women's Studies helps to fill a major gap and provides the opportunity for individuals to become more well rounded and more aware.

The minor or certificate in Women's Studies is not a degree but is an undergraduate specialization. It makes an excellent complement for many majors, since virtually every field of study is affected in some way by gender.

Careers

More and more women are joining the work force outside the home, as well as continuing in important roles in homemaking and child rearing. With these rapid changes, it is becoming increasingly important to understand the social forces that influence how much power people have. The Women's Studies Certificate Program helps prepare both women and men to deal more effectively with gender relations in their professional and personal life. Whether the student's major field is in education, social services, business, communications, medicine, or science, any field of study will be enhanced by the approach to knowledge offered in this program.

Special Activities

In addition to course work, Women's Studies students may wish to participate in a variety of special activities. The Program sponsors guest speakers, luncheon discussion sessions, and other special events, as well as publishing its own newsletter, *The Tide*, which encourages student involvement.

Minor in Women's Studies - 21 credits

Required courses (6 credits)

WST 200 Introduction to Women's Studies	3 crs.
WST 400 Feminist Scholarship and Research: A Seminar	3 crs.

Restricted Elective (3 credits)
Select one of the following courses:

HIS 325 History of American Women	3 crs.
SOC 320 International Women's Movement	3 crs.

Related Electives (12 credits)
Select four courses from the list of Women's Studies electives.
Course must come from three different disciplines.

Certificate in Women's Studies—15-18 credits

Fifteen-credit Concentration

Required courses:

WST 200 Introduction to Women's Studies	3 crs.
WST 400 Feminist Scholarship and Research: A Seminar	3 crs.
WST 430 Internship in Women's Studies	3 crs.

Electives: (6 credits)
Select two courses from the list of Women's Studies electives.
Courses selected must come from two different disciplines.

Eighteen-credit Concentration

Required courses (6 credits)

WST 200 Introduction to Women's Studies	3 crs.
WST 400 Feminist Scholarship and Research: A Seminar	3 crs.

Elective Courses (12 credits)
Select four courses from the list of Women's Studies electives.
Courses must come from three different disciplines

Women's Studies Electives

ANT 300 Cultural Views of Women	3 crs.
ENG 315 Survey of American Women Writers	3 crs.
HIS 325 History of American Women	3 crs.
HIS 312 Women in Ancient & Medieval Europe	3 crs.
LIT 127 Woman as Hero	3 crs.
NUR 101 Women's Health Issues	3 crs.
PSY 311 Psychology of Gender Roles	3 crs.
SOC 110 Ethnic, Racial, & Sexual Minorities	3 crs.
SOC 125 Men, Women, & Work	3 crs.
SOC 320 International Women's Movement	3 crs.
SOW 303 Human Sexuality and Society	3 crs.
SOW 495 Seminar in Social Work: Sexual Assault Counseling	3 crs.
XGE 202 Middle Years of Life	3 crs.
WST 300 Selected Topics in Women's Studies	3 crs.
WST 430 Internship in Women's Studies	3 crs.

Inquiries may be made of the Director, Women's Studies Program, California University of Pennsylvania, California, PA 15419.

Course Descriptions

Accounting - ACC

ACC 200. 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. (3 crs.)

ACC 201. ACCOUNTING I. The fundamentals of debit and credit; the use of journals and ledgers; basic accounting procedures; adjusting and closing entries; completion of accounting cycle; preparation of pertinent financial statements. (3 crs.)

ACC 202. ACCOUNTING II. A continuation of basic accounting principles with an emphasis on partnership and corporate accounting. Prerequisite: ACC 201. (3 crs.)

ACC 218. FEDERAL INCOME TAX I. An introduction to individual federal income tax accounting. (3 crs.)

ACC 301. INTERMEDIATE ACCOUNTING I. In-depth treatment of basic accounting principles and concepts. A preparation for advanced courses in accounting and for the theory and practice sections of the uniform CPA examination. Prerequisite: ACC 202. (3 crs.)

ACC 302. 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. Prerequisite: ACC 301. (3 crs.)

ACC 318. FEDERAL INCOME TAX II. Advanced topics in federal taxation. Partnerships, decedents, estates, trusts, corporations, pension and profit sharing plans, foreign income, securities transactions, etc. Prerequisite: ACC 218. (3 crs.)

ACC 321. MANAGERIAL ACCOUNTING. For non-accounting 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. Prerequisite: ACC 202. (3 crs.)

ACC 331. COST ACCOUNTING I. An introduction to basic cost-accounting principles, cost-volume, profit analysis, standard costing, process and job order costing and departmental budgeting. Prerequisite: ACC 202. (3 crs.)

ACC 332. COST ACCOUNTING II. A survey of special topics in the field of manufacturing accounting. Prerequisites: ACC 331. (3 crs.)

ACC 341. NONPROFIT ACCOUNTING. An introduction to accounting for governmental and not-for-profit organizations, including analysis of current, plant, and other general and special funds. Emphasis will be given to planning, programming, and budgeting to achieve institutional objectives. Cost benefit analysis will also be developed within the framework of funds allocation to specific programs. (3 crs.)

ACC 401. ADVANCED FINANCIAL ACCOUNTING. Special topics in accounting. Mergers and acquisitions, consolidated financial reports, fiduciaries, etc. Prerequisite: ACC 202. (3 crs.)

ACC 418. TAX PLANNING AND CONCEPTS. This course deals with the broad recognition of the tax effect on business decisions, and a practical approach to tax planning for both the corporate and individual taxpayer. (3 crs.)

ACC 431. INTERNATIONAL ACCOUNTING. A study of the current state of International Accounting standards (IFAC's) and their relationship to the multinational corporation. Prerequisite: ACC 302. (3 crs.)

ACC 441. AUDITING. Internal control evaluation and financial compliance, professional ethics, auditing standards and procedures, statistical sampling and EDP auditing. Prerequisite: ACC 301. (3 crs.)

ACC 491. ACCOUNTING INTERNSHIP. Practicum with Public Accounting firms, government, or industry. Prerequisites: 18 credits in Accounting and permission of instructor. (Repeatable; Variable crs.; a maximum of 12 credits may be used towards a baccalaureate degree.)

ACC 495. SEMINAR IN ACCOUNTING THEORY. A review of the Accounting literature with special emphasis on those topics concerning contemporary issues in Accounting. Prerequisite: ACC 302. (3 crs.)

Anthropology - ANT

ANT 100. INTRODUCTION TO ANTHROPOLOGY. 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). (3 crs.)

ANT 101. ARCHAEOLOGY FIELD SCHOOL. An introduction to archaeological procedures by participation in the excavation of a site. Students will 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. (3-6 crs., summer only)

ANT 200. OLD WORLD PREHISTORY. A middle-level survey of the main archaeological focal points of the Old World, requiring a basic understanding of archaeological concepts, goals and techniques. (3 crs.)

ANT 210. PRIMITIVE INSTITUTIONS. Analysis and comparison of the social, political, and religious institutions of pre-literate and pre-industrial peoples. (3 crs.)

ANT 220. AZTECS, MAYAS, AND INCAS. An introduction to and survey of the ethnology and pre-conquest archaeology of the advanced American Indian cultures of Meso-America and the Andean Culture area. Inquiry into the problems of cultural precocity. Prerequisite: ANT 100. (3 crs.)

ANT 225. EIGHTEENTH AND NINETEENTH CENTURY FOLK CRAFTS AND TRADITIONS. Placing American folk crafts and traditions in cultural perspective by learning how to identify such crafts and traditions, determining how they have evolved through time, and identifying the role such practices held in the American family. Students learn the rudiments of a number of the crafts and traditions by observing them being performed and by doing them. They learn how to gather material folk cultural data by collecting data on a craft or folk tradition in Southwestern Pennsylvania. (3 crs.)

ANT 231. MEDICAL ANTHROPOLOGY. An introductory course that emphasizes the contributions from biological anthropology, archaeology, and cultural anthropology to the study of human sickness and health. Prerequisite: ANT 100. (3 crs.)

ANT 235. ENCULTURATION. A cross-cultural examination of the universal human problem of transforming a neonate into a functioning adult in a particular culture. (3 crs.)

ANT 250. CULTURE CHANGE AND CULTURE SHOCK. Conditions and factors which stimulate or retard cultural change are considered with reference to specific historical, ethnological and sociological data and theories. Emphasizes the impact of Western technology upon non-Western cultures while also treating of the primitivization of the Western world. Prerequisite: ANT 100. (3 crs.)

ANT 254. FORENSIC ANTHROPOLOGY. This course teaches the basic analysis of human remains for the medio-legal profession, covering the development of the field of forensic anthropology, how the biological profile of an individual is determined from the skeleton, how sketal trauma 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. (3 crs.)

ANT 255. WORLD ETHNOLOGY. An advanced course in cultural anthropology, in which comparative data from text and films about non-Western cultures are used to reveal cultural differences and similarities and the nature of the ethnographic enterprise. (3 crs.)

ANT 280. INDIANS OF NORTH AMERICA. Social anthropology and cultural ecology of American Indian cultures. (3 crs.)

ANT 281. SUB-SAHARAN AFRICA. The cultural anthropology of selected African groups, past and contemporary. (3 crs.)

ANT 290. ARCHAEOLOGY. A comprehensive survey of archaeology: history, theory and techniques. (3 crs.)

ANT 300. 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. (3 crs.)

ANT 325. CULTURAL RESOURCE MANAGEMENT: HISTORICAL PRESERVATION. The need for preservation of cultural resources (historic preservation), the legislation supporting such work, and the way the work is performed. Students learn what is meant by historic preservation and cultural resource study, what types of questions preservationists must seek answers to, how significant resources (historic and archaeological) are identified, how to determine whether a resource is considered significant, how to do architectural descriptions of historic structures, and how to complete the National Register of Historic Places nomination forms. Part of the course involves on-site study of resources. Prerequisite: ANT 100. (3 crs.)

ANT 329. 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. (Variable crs.)

ANT 355. PREHISTORIC AMERICAN INDIANS. The archaeology and reconstructed culture of Indians of the eastern United States. (3 crs.)

ANT 360. HISTORIC SITES ARCHAEOLOGY. Techniques, philosophy, work, and aims of that branch of history and anthropology that studies the American past from a cultural-archaeological point of view. The course includes study of military and community restorations based on historical archaeology, such as Colonial Williamsburg, Plymouth Plantation, Independence Square, Fort Michilimackinac, Fort Ligonier, and Fort Necessity. Some laboratory and field experiences included. Prerequisite: ANT 100. (3 crs.)

ANT 379. SPECIAL PROBLEMS IN ANTHROPOLOGY. (Variable crs.)

ANT 385. PRIMATE SOCIETIES AND BEHAVIOR. Advanced study of the non-human primates, including classification to the generic level. Prerequisite: ANT 285 or permission of the instructor. (3 crs.)

ANT 390. HUMAN ORIGINS. Contemporary biological anthropology, emphasizing the evolutionary theory, genetics, non-human primates, taxonomic classification, the evolution of human beings as part of the evolution of the primates, the importance of technology, and the emergence and development of culture. (3 crs.)

ANT 421. ANTHROPOLOGICAL THOUGHT. Within a seminar context, the history of anthropological thought is examined from the period of the Enlightenment until 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. Prerequisite: Junior or Senior Anthropology major, or permission of the instructor. (3 crs.)

Art - ART

ART 106. ART APPRECIATION. An introduction to the major movements in art which helped shape western civilization. This course is a survey of historical and contemporary approaches to painting, sculpture, and architecture. (3 crs.) Fall & spring.

ART 110. 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. (3 crs.) Fall & spring.

ART 113. CERAMICS I. An introductory exploration of clay through hand building techniques and the potter's wheel. Students examine the various forms and functions of the ceramic vessel. The course focuses on forming processes and the glazing and firing of pieces made in the studio. (3 crs.) Fall & spring.

ART 116. PAINTING I. An introduction to the fundamentals of painting. Emphasis is placed on fundamental techniques of rendering, including the study of light and shadow, color, intensity control and projection and recession of objects in space. Work and exercises are done primarily in oil paints. Work in watercolor or acrylic may be done with prior approval of the instructor. (3 crs.) Fall & spring.

ART 117. PRINTMAKING I. This course is designed to develop an interest and techniques in making woodcuts, lithographs, etchings, engravings, serigraphs, monoprints, and photo print processes. (3 crs.) Fall & spring.

ART 118. SCULPTURE I. 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. (3 crs.) Fall & spring.

ART 119. DESIGN 2-D. An examination of elements and principles used in two-dimensional visual composition. The student uses a variety of media to solve problems in the theory and practice of art fundamentals. (3 crs.) Fall & spring.

ART 120. DESIGN 3-D. 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. (3 crs.) Fall & spring.

ART 122. ART HISTORY: ANCIENT TO MEDIEVAL. 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. (3 crs.) Fall even.

ART 123. ART HISTORY: RENAISSANCE TO CONTEMPORARY. Introduces students to the historical unfolding of the significant ideas, images, events, artists and personalities involved with the visual arts in Europe between the 15th and 20th centuries. The textual focus is upon the visual arts from Europe, but will also include outstanding visual examples from other parts of the world. 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. (3 crs.) Spring odd.

ART 126. INTRODUCTION TO CRAFTS. Students will explore the principles of basic studio techniques using fiber arts, stained glass and jewelry. Design issues will be addressed through a variety of studio problems using each medium. Problem solving skills and craftsmanship will be stressed, as well as understanding the role of the craftsperson in society as a producer of objects within a specialized discipline. (3 crs.) As needed.

ART 127. INTRODUCTION TO GRAPHIC DESIGN. This course provides a foundation in visual communication, provides an understanding of the major concepts of graphic design and how design relates to advertis-

ing and marketing, and introduces the computer as a production tool. (3crs.) Fall & spring.

ART 213, 313, 413. CRAFT STUDIO. This studio concentration explores a large spectrum of contemporary textile, stained glass or jewelry techniques. Areas of investigation for the textile area, for example, include advanced loom work, textile treatment, innovative design of soft sculpture. In the jewelry concentration, the students could explore centrifugal or lost wax casting, enameling, found material. In the stained glass area, the students will experience slumping, fusing, beveling and sculptural forms. Emphasis is, at all times, on innovative design, imagination in the utilization of technique and material, as well as general craftsmanship. Prerequisite: Either Fiber Arts (ART 112), Stained Glass (ART 115), or Jewelry (ART 255). (3 crs. - Art 413 is repeatable to 18 crs.) As needed.

ART 227, 327, 427, 428. GRAPHIC DESIGN STUDIO. A progressive level of graphic design courses that will emphasize creative, visual problem solving, graphic design history, theory, and criticism, the creation of portfolio quality work, and client relationships and processional practices. Prerequisite: ART 127 & ART 119. (3 crs.) Fall & spring.

ART 293, 393, 493. CERAMIC STUDIO. Advanced courses in ceramic skills and techniques on the potter's wheel and in-hand forming methods. Considerable emphasis will be placed on glazing and firing a body of work completed through an in-depth study area in clay. Prerequisite: Ceramics I (ART 113). (3 crs. - ART 493 is repeatable to 18 crs.) Fall & spring.

ART 296, 396, 496. PAINTING STUDIO. A progressive level of painting studios developing proficiencies in painting techniques, rendering skills, and the visual analysis of forms. Students explore a variety of painting methods, subjects and themes towards the goal of having each student achieve a unique approach to form and content. Prerequisite: ART 116 Painting I. (3 crs. - ART 496 is repeatable to 18 crs.) Fall & spring.

ART 297, 397, 497. PRINTMAKING STUDIO. A successive-level studio course designed to enable students who wish to pursue in depth printmaking techniques and further develop their creativity in this area. Students will also be expected to demonstrate critical thinking and analysis of materials and the use of such in the various media. Prerequisite: ART 117 Printmaking I. (3 crs. - ART 497 is repeatable to 18 crs.) Fall & spring.

ART 298, 398, 498. SCULPTURE STUDIO. A successive-level studio course designed to enable students who are seriously interested in sculpture, the opportunity to experiment with many types of media and to investigate other seasonable materials which can be used as sculpture. They will be expected to impose on themselves problems which demonstrate critical thinking and analysis of materials. Prerequisite: ART 118 Sculpture I. (3 crs. - ART 498 is repeatable to 18 crs.) Fall & spring.

ART 305. NINETEENTH CENTURY ART. Examines the visual arts from roughly 1750 to 1900, surveying Neo-Classicism, Romanticism, Realism, Impressionism, and Post-Impressionism. Intellectual currents, political revolutions, and industrialization will be treated as they are reflected in art and as they affected its creation. A major sub-theme of the course is the development of the modern industrialized consciousness and how art expresses it. The goals of the course are to survey the major issues in 19th century art and culture and to develop skills required for visual literacy, critical thinking, and effective expression. Prerequisites: ART 106 Art Appreciation, ART 122 Art History: Ancient To Medieval, ART 123: Art History: Renaissance To Contemporary, or permission of the instructor. (3 crs.) Fall even.

ART 306. TWENTIETH CENTURY ART. Examines the visual arts from roughly 1880 to the present, surveying Fauvism, Cubism, German Expressionism, Revolutionary Art in Russia, Dadaism, Surrealism, Abstract Expressionism, Pop-Art, and Post-Modernism. Intellectual currents, political revolutions, ideology, and industrialization will be treated as they are reflected in art and affect its creation. The goals of the course are to treat the major issues in 20th century art and culture and to develop skills required for visual literacy, critical thinking, and effective expression. Prerequisites: ART 106 Art Appreciation, ART 122 Art History: Ancient To Medieval, ART 123: Art History: Renaissance To Contemporary, or permission of the instructor. (3 crs.) Spring odd.

ART 307. WOMEN ARTISTS. Examines the artistic production of women from the ancient world to today, focusing on the modern period. The course begins with an analysis of work by women in its social, political, cultural, and economic context. Then texts representative of critical trends in scholarship will be discussed and related to works by women. Prerequisites: ART 106 Art Appreciation, ART 122 Art History: Ancient To Medieval, ART 123: Art History: Renaissance To Contemporary, or permission of the instructor. (3 crs.) As needed.

ART 310. 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. Prerequisite: ART 110 Drawing I or equivalent. (3 crs. - repeatable to 18 crs.) Fall & spring.

ART 329. ART INTERNSHIP. Supervised experience providing the specific technical skills used in the art world outside the classroom and studio, e.g., mounting exhibits, techniques of art restoration, graphic arts production techniques, and promoting arts and cultural events. (Variable crs.) Fall & spring.

ART 460. SELECTED TOPICS. An exploration of material not covered in regular art studios or art history classes. It will provide faculty and students the opportunity to explore new ideas and techniques of selected topics in depth. (3 crs.) As needed.

Athletic Training - ATE

ATE 105. CURRENT ISSUES IN ATHLETICS. A comprehensive overview of life skills that provide educational experience and services in order to develop well balanced life styles for the student athletes and other interested students. The course examines decision making, planning and fulfillment of life goals, as well as contemporary issues, problems and controversies within the intercollegiate athletic setting. (3 crs.) Fall & spring.

ATE 115. FOUNDATIONS OF WEIGHT TRAINING AND CONDITIONING. To facilitate an understanding of strength training and conditioning concepts, the adaptation of strength training and conditioning on the human body, and the practical application of this knowledge in designing resistance training programs. (2 crs.) Spring.

ATE 150. INTRO TO ATHLETIC TRAINING. This course provides students associated with Cal U an opportunity to learn and understand common injury and illnesses associated with athletic participation. Additionally, the course introduces the student to rehabilitation and treatment approaches for athletic injuries. The course also addresses the prevention and implication of athletic injuries (3 crs.) Spring.

ATE 225. EVALUATIVE TECHNIQUES I WITH LABORATORY. 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. Prerequisites: Must be formally enrolled ATEP or by permission of the instructor. (4 crs.) Fall.

ATE 265. EVALUATIVE TECHNIQUES II WITH LABORATORY. 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. Prerequisites: Must be formally enrolled ATEP student or by permission of the instructor. (4 crs.) Spring.

ATE 300. PRACTICUM ATHLETIC TRAINING III. This course will provide the student with the understanding of advanced athletic training applications and techniques used in the prevention and rehabilitation of athletic injuries and other special clinical situations. (3 crs.) Fall.

ATE 330. THERAPEUTIC EXERCISE WITH LABORATORY. Lectures and laboratory exercises that explain the use and theory of therapeutic exercise and equipment used for rehabilitation in the sports medicine setting. Prerequisite: Must be formally enrolled ATEP student or by permission of the instructor. (4 crs.) Fall.

ATE 340. SPORTS NUTRITION. Nutrition and its applications to health and sports: designed to provide the student with a sound nutritional background so that sound decisions may be made concerning all aspects of nutrition. Additionally, specific nutritional techniques used to improve athletic performance are addressed. (3 crs.) Spring.

ATE 405. SPORTS MEDICINE PRACTICUM. The purpose of this course is to allow the undergraduate athletic training student to gain clinical and administrative skills through experience with intercollegiate or interscholastic teams. Prerequisite: Must be formally enrolled ATEP student and must be at least a junior in standing. (1 cr.) Fall & spring.

ATE 425. ADMINISTRATIVE STRATEGIES IN ATHLETIC TRAINING. Administrative functions, litigation, staff relationships, ethics, budget and supplies, inventory, facility design, maintenance, safety assessment, student trainer organization and résumé writing. Prerequisite: Must be formally enrolled ATEP student or by permission of the instructor. (2 cr.) Fall.

ATE 460. 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. Prerequisite: Must be formally enrolled ATEP student or by permission of the instructor. (3 crs.) Fall.

ATE 500. PHARMACOLOGY FOR THE 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. Prerequisite: Must have completed at least 96 credits or at the discretion of the instructor. (2 crs.) Fall.

Biology - BIO

BIO 103. 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. Three lecture hours weekly. For students not majoring in Biology. (3 crs.) Fall & spring.

BIO 108. BIOLOGICAL CONCEPTS. A one semester preparation course in biology for students who must take BIO 115 as part of their curriculum and who require additional training in the biological sciences. Topics are selected to deal with the fundamental concepts that are requisite to entrance into BIO 115. Three lecture hours weekly. (3 crs.) Fall & spring.

BIO 109. INTRODUCTION TO HUMAN ANATOMY AND PHYSIOLOGY. A general summary of basic biological concepts as hey relate to an understanding of human anatomy and physiology. The course is intended to prepare students for entry into the sequence of anatomy and physiology I and II. Topics include the chemical components of living organisms, the hierarchy of structural organization, homeostasus, cytology, histology, and basic anatomical terms of position and direction. The course is recommended for nursing students. (3 crs.) Fall.

BIO 112. BIOLOGY OF SEXUALLY TRANSMITTED DISEASES. A non-major Biology course pertaining to the causes and consequences of human sexually transmitted diseases. Descriptions of the microorganisms which cause STDs and the factors which are involved in their dissemination will be studied. Special emphasis will be directed towards human behavior patterns and mores which are conducive to contracting these venereal diseases. Viral STDs (Acquired Immune Deficiency Syndrome, Human Papilloma Disease, Herpes Simplex II and Hepatitis B) will be emphasized because they can cause severe diseases or even death in humans; however, the more common venereal diseases (syphilis, gonorrhea, lymphogranuloma, venereum, chancroid and candidiasis) will also be studied. Three lecture hours weekly. (3 crs.) Fall & spring.

BIO 115. PRINCIPLES OF BIOLOGY. Structures and functions common to all organisms; cell structure and function, the chemical aspects of biological systems, energy and materials balance in nature, developmental biology, principles of genetics, evolution, and ecology. Three lecture hours and three laboratory hours weekly. (4 crs.) Fall & spring.

BIO 120. GENERAL ZOOLOGY. A comprehensive phylogenetic survey of the animal kingdom, with emphasis on evolutionary changes and the interrelationships of animals with their environment. Laboratory studies of representative members of the major phyla. Prerequisite: BIO 115. Three lecture hours and three laboratory hours weekly. (4 crs.) Fall & spring.

BIO 125. GENERAL BOTANY. 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. Prerequisite: BIO 115. Three lecture hours and three laboratory hours weekly. (4 crs.) Fall & spring.

BIO 206. CONSERVATION OF BIOLOGICAL RESOURCES. A study of biological aspects relating to plants and animals directly associated with water, soil, and environmental changes. Numerous field trips are taken into areas of Western Pennsylvania to observe land reclamation, conservation practices, and basic problems confronting human populations. Prerequisites: BIO 115 & 125. Three lecture hours and three laboratory hours weekly. (4 crs.) Fall & spring.

BIO 226. BASIC MICROBIOLOGY. This course provides a survey of the prokaryotic and the medically important concepts of microbiology including microbial control, acquisition of disease, disease prevention and control. Prerequisites: This course is for students who are enrolled in a nursing program, or have obtained permission of the instructor. Three lecture hours and three laboratory hours weekly. (4 crs.) Summer.

BIO 228. BASIC PRINCIPLES OF NUTRITION. This course is designed to provide nursing professionals with the basic principles of normal and therapeutic nutrition which can be used as a basis for making sound nutritional decisions for dietary planning for their clients, their families, or themselves throughout the life cycle, in health or in illness. Prerequisites: This course is for students who are enrolled in a nursing program, or have obtained permission of the instructor. Three lecture hours weekly. (3 crs.)

BIO 230. ANATOMY AND PHYSIOLOGY I. A general survey of the basic anatomical terms of position and direction, the relevant scientific units, the chemical components of living organisms, animal cytology, histology, embryology, the integumentary system, the rudiments of neurology, the skeletal system, and the cardiovascular system. Prerequisites: This course is for students who are enrolled in a nursing program, or have obtained permission of the instructor. Three lecture hours and three laboratory hours weekly. (4 crs.) Spring.

BIO 260. ANATOMY AND PHYSIOLOGY II. 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, homeostasis, the reproductive system, human embryonic development, and metabolism. Prerequisite: BIO 230. Three lecture hours and three laboratory hours weekly. (4 crs.) Fall.

BIO 305. COMPARATIVE VERTEBRATE ANATOMY. A comparative study of the vertebrate organs and organ systems of animals in the phylum chordata, with emphasis on evolutionary changes. Prerequisites: BIO 115 & 120. Three lecture hours and three laboratory hours weekly. (4 crs.) Spring.

BIO 306. HUMAN ANATOMY. A study of the structure of the human body, including discussion of the eleven fundamental systems. Each system is described in terms of its gross anatomy, with some discussion of histology and physiology where appropriate. Prerequisites: BIO 115 & 120 or permission of the instructor. Three lecture hours and three laboratory hours weekly. (4 crs.) Fall.

BIO 307. PLANT ANATOMY. A detailed study of structural differentiations, especially in the higher plants: the structure of meristems and developmental changes in their derivatives. Prerequisites: BIO 115 & 125. Three lecture hours and three laboratory hours weekly. (4 crs.) Alternate falls.

BIO 310. ECOLOGY. Ecology presents the biology or environmental science student with a holistic approach to the study of the biological

environment. Emphasis is focused 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. Prerequisites: BIO 115, 120 and 125 or permission of the instructor. Three lecture hours and three laboratory hours weekly. (4 crs.) Fall & spring.

BIO 314. PLANT ECOLOGY. A consideration of the plant communities which are influenced by both biotic and physical factors. The emphasis is on the vegetation of Pennsylvania, especially in the area of the Appalachian Mountains. Laboratory work provides the student with the opportunity to become familiar with modern methods of vegetation analysis and community sampling. Prerequisites: BIO 115 and BIO 125. Three lecture hours and three laboratory hours weekly. (4 crs.)

BIO 317. EMBRYOLOGY. A study of oogenesis and spermatogenesis and resultant developments following fertilization: factors involved in morphogenetic determination; organology; sequences of changes in development. Special emphasis on the chick and comparative examples of development in other animals. Prerequisites: BIO 115 and BIO 120. Three lecture and three laboratory hours weekly. (4 crs.)

BIO 318. GENETICS. An introduction to molecular genetics and to the basic principles of inheritance. Gene interactions, multiple-factor inheritance, chromosome inheritance, chromosome mapping, chromosomal and extrachromosomal inheritance. The roles of mutation, selection, migration, and genetic drift are investigated to determine the genetic composition of different populations. Prerequisites: BIO 115, 120, and 125. Three lecture hours and three laboratory hours weekly. (4 crs.) Fall & spring.

BIO 325. ANIMAL HISTOLOGY. The study of cellular differentiations in tissue, tissue identification, and special functions, especially in the mammals. Prerequisites: BIO 115 and 120. Three lecture hours and three laboratory hours weekly. (4 crs.)

BIO 326. MICROBIOLOGY. A detailed study of bacteria and viruses, with less emphasis on fungi, algae, and protozoans. Special emphasis on medical aspects of bacteriology, immunology, and virology. The cytology, physiology, microbiology, and culture of microbes are pursued in the laboratory. Prerequisites: BIO 115 and BIO 125, CHE 101 and CHE 102, or permission of the instructor. Three lecture hours and three laboratory hours weekly. (4 crs.) Fall.

BIO 327. PARASITOLOGY. A study of the etiology, epidemiology, and biology of some common human and animal parasites. Prerequisites: BIO 115 and BIO 120. Three lecture hours and three laboratory hours weekly. (4 crs.) Alternate fall.

BIO 328. HUMAN PHYSIOLOGY. The functions of the human body. Basic physiological phenomena are studied with considerable emphasis upon clinical and practical application. Prerequisites: BIO 115 and BIO 120 or permission of the instructor. Three lecture hours and three laboratory hours weekly. (4 crs.) Alternate spring.

BIO 332. ECONOMIC BOTANY. A study of mankind's dependence and economic interest in plants. Topics include important metabolic reactions of plants, use of plants as a food source, use of plant cell walls, exudates and extractives as economic products. Prerequisites: BIO 115 and 125. Three lecture hours and three laboratory hours weekly. (4 crs.) Alternate fall.

BIO 334. SOIL SCIENCE. An edaphological approach is taken in the study of the soil, i.e., the soil as a natural habitat for plants. The various properties of the soil are considered as they relate to plant production. Since the clay and humus fractions are of tremendous importance, the course will incorporate a colloidal-biological basis. Prerequisites: CHE 101 and CHE 102. Three lecture hours and three laboratory hours weekly. (4 crs.)

BIO 335. PLANT PHYSIOLOGY. The physio-chemical foundations of plant functions are investigated, including such topics as water and salt absorption, photosynthesis, respiration, plant growth substances, photoperiodic responses, mineral metabolism, germination and the effects of air pollution on plants. Recent advances in the field of plant physiology are included. Prerequisites: BIO 115 and BIO 125, CHE 101 and CHE 102. Three lecture hours and three laboratory hours weekly. (4 crs.) Spring.

BIO 336. PLANT TAXONOMY. A study of relationships among the vascular plants, their classification and methods of identification. Plant families native to Western Pennsylvania are stressed. Prerequisites: BIO 115 and BIO 125. Three lecture hours and three laboratory hours weekly. (4 crs.) Alternate spring.

BIO 337. ORNITHOLOGY. The study of bird life. Classification, anatomy, behavior, and recognition of birds, with emphasis on local species and their relationships to people and the ecological balance with other organisms. Prerequisites: BIO 115 and BIO 120. Three lecture hours and three laboratory hours or field activity weekly. (4 crs.) Fall.

BIO 342. SCIENTIFIC PHOTOGRAPHY. A basic course in the life and environmental sciences which stresses the myriad ways in which photography can be applied to enhance the effectiveness of teaching and research endeavors of biologists and environmentalists. Special attention is given to photomicroscopy, macrophotography, and field photography. Various other illustrative materials are also prepared utilizing selective photographic equipment and/or procedures. Students can take this course twice for a maximum of 4 credits. Prerequisites: three Biological or Environmental courses with a minimum of one field-oriented course. (2-4 crs.)

BIO 400. MAMMALOGY. A study of the classification, distribution, and natural history of mammals, with emphasis on eastern North American species. Field studies and preparation of study specimens. Prerequisites: Can be taken with the permission of the instructor. Three lecture hours and three laboratory hours weekly. (4 crs.) Alternate fall.

BIO 405. HUMAN GENETICS. Chromosomal abnormalities, Mendel's Laws, and the effect of change of gene action on Mendelian ratios. Other topics include; sex-related inheritance, random mating, consanguinity, allelism, mutations, and maintenance of polymorphism. Prerequisites: BIO 115, 120, 125, and 318. Three lecture hours weekly. (3 crs.)

BIO 407. MYCOLOGY. An extensive examination of the fungi, with emphasis on the filamentous forms. The cytology, physiology, and morphology of the fungi are studied to determine their role in the scheme of nature. Laboratory techniques in isolating, culturing, enumerating, and identifying fungi. Prerequisites: BIO 115, 125, and 326. Three lecture hours and three laboratory hours weekly. (4 crs.)

BIO 418. BIOLOGICAL RESEARCH INVESTIGATIONS. A research program for advanced undergraduate students who wish to pursue careers in biological or medical areas. Emphasis is placed upon the use of various scientific instruments and biological procedures necessary for research investigations. The student works closely with one or more faculty members on a research project which is departmentally approved. Each research project is unique, and the data should ultimately be published in a prominent biological journal. The student normally participates in one aspect of an ongoing research study and may pursue work for one or more semesters. Students can take a maximum of 12 credits, 6 of which may be counted in the area of concentration. Prerequisites: BIO 115 and BIO 125 (or BIO 120), one Biology elective course, junior or senior standing, and a 3.0 QPA. (1-4 crs.)

BIO 426. CLINICAL MICROBIOLOGY. A survey of the indigenous and pathogenic microorganisms of man, general principles deduced from complexities involving biochemistry and physiology, host-parasite relationships, and laboratory procedures. Organisms studied include: bacteria, fungi, viruses, and ricksettsia. Prerequisites: BIO 115, 125 and 326; CHE 101 and 102. Three lecture hours and three laboratory hours weekly. (4 crs.) Alternate spring.

BIO 431. TECHNIQUES IN ELECTRON MICROSCOPY. Detailed training in the operation and care of the electron microscope: techniques of specimen preparation for electron microscope visualization including fixation, embedding, and ultrathin sectioning; special techniques such as replication and shadow casting. Prerequisites or concurrent courses: BIO 432, CHE 331, CHE 332, or permission of the instructor. Three lecture hours and three lab hours weekly. (4 crs.)

BIO 432. CELLULAR ULTRASTRUCTURE. A study of the generalized cell, the highly specialized cell, and tissues as seen by the electron microscope, with special emphasis on correlation of structure with function. An

additional aim is to enhance the student's ability to interpret electron micrographs. Prerequisites: BIO 115, BIO 120, and BIO 125, CHE 331 and CHE 332, a molecular biology course and/or permission of instructor. Three lecture hours weekly. (3 crs.)

BIO 433. HERPETOLOGY. A consideration of the Amphibia and Reptilia from taxonomical, morphological, evolutionary, behavioral, and physiological viewpoints with emphasis on ecological relationships. Prerequisites: BIO 115 and BIO 120. Three lecture hours and three laboratory hours weekly. (4 crs.)

BIO 435. ICHTHYOLOGY. An introduction to the morphology, taxonomy, ecology, and distribution of the major groups of freshwater fishes, with emphasis on the northeastern U.S. fauna. Prerequisites: BIO 115 and BIO 120. Three lecture hours and three laboratory hours weekly. (4 crs.) Alternate fall.

BIO 441. ETHOLOGY. Four principal approaches to ethology: ecology, physiology, genetics, and development are interpreted within the framework of evolutionary biology with emphasis on the patterns of behavioral similarities and differences among different kinds of animals. Prerequisites: BIO 115, BIO 120, BIO 308, BIO 316 or ENS 300. Need permission of the instructor. Three lecture hours and three laboratory hours weekly. (4 crs.) Alternate spring.

BIO 442. DENDROLOGY. A study of the tree species of the Kingdom Metaphyta: the importance of these organisms to other biota, especially man, and their prospects of continued survival in a rapidly changing biosphere. Emphasis on the forest communities and tree species of the mixed mesophytic forest regions of southwestern Pennsylvania. Prerequisites: BIO 115 and BIO 125. Three lecture hours weekly. (3 crs.)

BIO 445. ENTOMOLOGY. A specialized study of insects: identification and classification development phases, physiological characteristics, economic importance, disease vectors. Prerequisite: BIO 115 and BIO 120. Three lecture hours and three laboratory hours weekly. (4 crs.) Alternate fall.

BIO 449. BIOLOGY FOR MEDICAL TECHNOLOGY CLINICAL PRACTICUM I. Upon acceptance to a hospital school of Medical Technology, the student undertakes the clinical training experience required by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). Programs of instruction will vary from one hospital to another but usually include hematology, microbiology, parasitology, immunology, urinalysis, and biochemistry. This course is the first of two required terms. (15 crs.)

BIO 450. IMMUNOLOGY. A detailed study of the immune system of animals covering 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. Prerequisites: BIO 115, BIO 120 and BIO 318 or BIO 326. Three lecture hours weekly. (3 crs.) Fall.

BIO 459. BIOLOGY FOR MEDICAL TECHNOLOGY CLINICAL PRACTICUM II. A continuation of BIO 449. The second of two terms. (14 crs.)

BIO 466 BIOMETRY. The fundamental concepts underlying the application and interpretation of statistical methods to biological and ecological research. Practical experience in the development and analysis of laboratory and field projects. Prerequisites: MAT 215 and permission of instructor. Three lecture hours and three laboratory hours weekly. (4 crs.) Spring.

BIO 478. EVOLUTION. An advanced course pertaining to the mechanisms that are operative in the process of biological evolution. Life origins and development are investigated, with special emphasis placed upon the importance of genetic and metabolic systems diversity. The recurring and universal themes of mutation and natural selection are thoroughly discussed as the concept of evolution at the population level is developed. A detailed account of human origins and species diversity is also studied. Prerequisites: BIO 115, BIO 120, BIO 125, and BIO 318. Three lecture hours weekly. (3 crs.) Fall.

BIO 480. CELL BIOLOGY. 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. Prerequisites: BIO 115, BIO 120, BIO 125, and CHE 331. Three lecture hours and three laboratory hours weekly. (4 crs.) Spring.

BIO 486. COMPARATIVE ANIMAL PHYSIOLOGY. A comparative approach to the study of physiological systems in animals relative to environmental pressures and phylogenetic standing. Prerequisite: BIO 115 and BIO 125 . Three lecture hours and three laboratory hours weekly. (4 crs.) Fall.

BIO 492. 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. Advisor and department chairperson approval is required before course enrollment. A total of 6 credits may be applied towards graduation in the following manner: A maximum of 3 credits may be applied to an appropriate core area in the Biology curriculum. In the Environmental Studies and Pre-Professional programs, a maximum of 3 credits can be applied to the related electives area. In addition, a maximum of 3 credits may be applied to the free electives area in the general education requirement of any program. Prerequisite: Junior or Senior standing and permission of the department (Variable: 1-12 crs.)

BIO 520. NEUROBIOLOGY. An examination of the structure and function of nervous systems. The course is designed to develop a detailed understanding of nervous system structure and function from the molecular level to the level of complex circuits such as learning and memory. A central theme is the comparison of the neurological circuits across phyla to identify basic organizational principles. Prerequisites: BIO 115, BIO 120, BIO 306, BIO 328, or permission of the instructor. 3 hours of lecture weekly. (3 crs.)

BIO 575. WATER POLLUTION BIOLOGY. A survey of the impacts of various types of environmental pollutants on aquatic biological communities. Community responses are analyzed in a lecture/laboratory format with emphasis on collection in the field. Three lecture hours and three laboratory hours weekly. Prerequisites: BIO 115, BIO 120, BIO 125, CHE 101 & CHE 103. (4 crs.) Fall.

Business - BUS

BUS 100. INTRODUCTION TO BUSINESS. The internal and functional setting of business enterprise, its organization and control (3 crs.)

BUS 242. BUSINESS LAW I. A study of commercial law as it relates to contracts, agency and criminal and constitutional law pertaining to business. Prerequisites: ECO 100 and at least sophomore standing. (3 crs.)

BUS 243. BUSINESS LAW II. A continuation of Business Law I. Basic legal concepts of sales, commercial paper, secured transitions and related topics. Prerequisite: BUS 242. (3 crs.)

BUS 271. ANALYTICAL METHODS. This is a course designed to teach mathematical methods of solving business problems. This will be especially useful to anyone who has opted not to take any calculus. Prerequisite: MAT 181. (3 crs.)

BUS 342. BUSINESS, SOCIETY AND GOVERNMENT. A survey of the historical and contemporary relationship between government and business in the United States. Special emphasis is given to the developments of the past two decades. Prerequisite: ECO 100 or equivalent. (3 crs.)

BUS 343. CORPORATE SOCIAL RESPONSIBILITY. Incorporating the concept of social responsibility or corporate social responsiveness in the corporate business strategy; how to assess organizational performance on social issues and design information systems to monitor policies in a large complex organization; the identification of the stages of this process and the characteristic problems and tasks associated with each stage; the evolution and/or design of structures and procedures for handling social issues consistently with business strategies. (3 crs.)

BUS 379. SPECIAL PROBLEMS IN BUSINESS. (3 crs.)

BUS 492. BUSINESS INTERNSHIP. The student is placed with a business firm, a bank, a government agency, or a non-profit organization for on-the-job and/or counseling experience. It offers a practical training ground for students which supplements academic training by permitting them to address actual problems in a real business environment. Prerequisite: Senior standing or permission of instructor. (Repeatable; Variable crs.; a maximum of 12 credits may be used towards a baccalaureate degree.)

BUS 495. SEMINAR IN BUSINESS. An intensive examination of selected subjects from the general field of business. Prerequisite: Consent of instructor. This course is repeatable one time if the subject matter is different. (3 crs.)

Career Planning - XCP

XCP 194: 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 the Keirsey Temperament Sorter and the Strong Interest Inventory. 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. Prerequisite: enrollment in one of the programs in the Academic Development Services Department or permission of the instructor. (1 cr.)

Chemistry - CHE

CHE 100. INTRODUCTION TO CHEMISTRY. A preparatory course emphasizing the mathematical and reasoning skills needed to be successful in General Chemistry. There are no prerequisites, and the course satisfies requirements in the Natural Science area for non-science majors. This course is not an elective for Chemistry majors. Three class hours each week. (3 crs.) Spring and fall.

CHE 101. GENERAL CHEMISTRY I. An introductory course for majors and non-majors. Topics covered include atomic structure, bonding, stoichiometry, chemical reactions (including redox reactions), solutions, and the liquid state. Three class hours and three laboratory hours each week. (4 crs.) Every semester.

CHE 102. GENERAL CHEMISTRY II. A continuation of General Chemistry I. The gaseous state, solutions, thermodynamics, kinetics, acids and bases, gaseous and ionic equilibria. Three class and three laboratory hours each week. Prerequisite: CHE 101. (4 crs.) Every semester.

CHE 150. CHEMISTRY FOR THE HEALTH PROFESSIONS. The basic principles of general chemistry, organic chemistry, and biochemistry needed for the health sciences (specifically nursing chemistry). Three lecture hours and three laboratory hours each week. (4 crs.) Fall.

CHE 205. INORGANIC CHEMISTRY. A continuation of General Chemistry II. Descriptive chemistry of metals and nonmetals, electrochemistry, nuclear chemistry, solid state molecular orbitals, coordination chemistry. Laboratory: Equilibrium and qualitative chemistry of the elements. Three class and three laboratory hours each week. Prerequisite: CHE 102. (4 crs.) Spring.

CHE 261. ANALYTICAL CHEMISTRY. This is a traditional first course in quantitative analytical chemistry focusing on "wet" chemical analyses. The theory and application of gravimetric and a variety of titrimetric (neutralization, precipitation and complex-formation) methods of analysis are presented. Emphasis is also given to statistical evaluation of analytical data and study of complex aqueous equilibria. Laboratory activities for this course focus on experimental methods and procedures required for precise and accurate quantitative determination of composition of a variety of unknown samples. Three lecture hours and three laboratory hours each week. Prerequisites: CHE 101 & 102. (4 crs.) Fall

CHE 281. ENVIRONMENTAL CHEMISTRY. This course focuses on the chemical basis of environmental issues and the consequences of modern technology, with particular emphasis on air, water, and soil pollution. Topics include ozone depletion, photochemical smog, the greenhouse effect, pollution and toxicology of heavy metals and pesticides, and hazardous wastes. These topics will be developed through lectures, discussions, demonstrations, and laboratory experiments. Prerequisite: CHE 102. (4 crs.) Fall.

CHE 331. ORGANIC CHEMISTRY I. An introduction to the basic principles which govern the reactions of carbon compounds. Particular emphasis is placed on the structure and stereochemistry of organic molecules, acid-base theory, reaction mechanisms, and an introduction to the reactions and synthesis of alkanes, alkenes, alkynes, alicyclics, alkyl halides and aromatic compounds. Three hours lecture and three hours laboratory. Prerequisites: CHE 101 & CHE 102. (4 crs.) Summer & fall.

CHE 332. ORGANIC CHEMISTRY II. A continuation of the study of organic compounds. The student is introduced to the important functional groups present in such families as alcohols, ethers, carboxylic acids, esters, amides, aldehydes, ketones, amines, phenols, aryl halides, and reactions, and synthetic interconversion of these compounds. Three hours lecture and three hours laboratory. Prerequisites: CHE 331. (4 crs.) Summer & fall.

CHE 340. ORGANIC SPECTROSCOPIC INTERPRETATION. Introductory theory and interpretation of infrared spectroscopy, ultraviolet spectroscopy, nuclear magnetic resonance spectroscopy, and mass spectrometry. Three class hours each week. Prerequisites: CHE 101 & CHE 331. (3 crs.)

CHE 350. COMPUTER APPLICATIONS IN CHEMISTRY. This course engages the student in activities which focus on computer solution of chemical problems. Both software coding and usage, as well as interfacing of microcomputers to chemical instruments, are covered. Three class hours each week. Prerequisites: CHE 101, CHE 102 & CSC 105. (3 crs.)

CHE 361. INSTRUMENTAL METHODS. This course will expose the students to a number of important instrumental methods currently used for chemical analysis. The topics covered fit into three broad categories: 1) electrochemistry and electroanalytical methods, 2) spectroscopic methods and 3) analytical separations and chromatographic methods. Both the theory and the application of these analytical methods are emphasized with particular focus on the technical details of instrumentation, the methodology employed for precise and accurate analytical determinations of samples and the advantages and limitations of each method. An essential component is the incorporation of "hands-on" experience with many instruments in the laboratory portion of this course. Three lecture hours and three laboratory hours each week. Prerequisites: CHE 261. (4 crs) Spring

CHE 368. INDIVIDUAL WORK I. An opportunity for students specializing in chemistry to organize, investigate, and report on a specific problem of their own selection. (1 cr.) Spring, summer & fall.

CHE 410. CHEMISTRY INTERNSHIP. The student is provided an opportunity to work in an industrial or non-profit research laboratory. This practical training is intended to supplement the academic program. Prerequisite: Junior or Senior standing and permission of the department. (Variable: 1-12 crs.) Spring, summer & fall.

CHE 411. BIOCHEMISTRY I. A comprehensive survey of the properties, reactions, and structure of amino acids, proteins, enzymes, carbohydrates, fats and lipids, and nucleic acids. Three class hours each week. Prerequisites: CHE 331 & CHE 332. (3 crs.) Fall.

CHE 451. PHYSICAL CHEMISTRY I. Properties of gases, kinetic-molecular theory, molecular energies, classical and statistical development of thermodynamics, with applications to thermochemistry and chemical equilibria. Three lecture hours and three laboratory hours each week. Prerequisites: CHE 261 and mathematics through Integral Calculus. (4 crs.)

CHE 452. PHYSICAL CHEMISTRY II. Kinetics of chemical reactions, properties of liquids, phase equilibria, solutions, thermodynamics, properties of electrolytes in solution, and electrochemistry. Three lecture hours and three laboratory hours each week. Prerequisite: CHE 451. (4 crs.)

CHE 495. CHEMISTRY SEMINAR. Students may choose a particular topic in chemistry and, under the supervision of a faculty member, prepare and present a seminar report. The topics are to be on material not covered

in the undergraduate courses, or extensions of some particular aspect of chemistry included in less detail in an undergraduate course. (1 cr.) Spring & fall.

Communication Disorders - CMD

CMD 100. SURVEY OF SPEECH PATHOLOGY. This is the introductory course to communication disorders and the field of speech/language pathology. (3 crs.)

CMD 105. LANGUAGE AND SPEECH DEVELOPMENT. Emphasizes the normal development of speech, language, and communication. The form and function of language are considered, i.e., phonology, syntax, morphology, semantics, and pragmatics. (3 crs.)

CMD 108 NATURE OF LANGUAGE. This is a course about both the history and current use of language. A major focus of this course is to analyze the various components of language: phonetics, phonology, morphology, semantics, syntax and the written representation. The sociocultural influence (dialects, accents) of language is also discussed. A comparison is made between human and animal languages. Lastly, language function is compared with brain structure. (3 crs.)

CMD 203. 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. (3 crs.)

CMD 204. ANATOMY AND PHYSIOLOGY. The structure and normal function of the components of the human body participating in the production and reception of speech and language. Prerequisite: CMD 213. (3 crs.)

CMD 215. SPEECH SCIENCE. An introductory course in Speech Science: the study of the physical characteristics of speech, its perception and its production. (3 crs.)

CMD 216. 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. (3 crs.)

CMD 218. INTRODUCTION TO CLINICAL 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. (3 crs.)

CMD 220. COMMUNICATION ACROSS THE LIFESPAN. Through lecture, reading and direct observations, the student will learn about the normal development of language across the lifespan. He/she will also learn about the abnormalities that occur at specific stages of life, as well as those that occur at all ages. Registration in CMD 220 Laboratory is required and will provide the student with client observations both on and off-campus. (3 crs.)

CMD 300. SPEECH PATHOLOGY I. This course provides students with introductory knowledge of children with language and speech disorders. They will become aware of procedures and principles utilized by speech-language pathologists in the assessment and management of children with language and speech delays/disorders. Prerequisites: CMD 100, 203, 204 and 213. (3 crs.)

CMD 301. SPEECH PATHOLOGY II. Primary emphasis is placed on several of the major speech disorders, namely: fluency disorders, voice disorders, language disorders in adults, dysarthria, apraxia, and dysphagia. Prerequisites: CMD 203, CMD 204, CMD 213. (3 crs.)

CMD 305. INTRODUCTION 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. Prerequisites: CMD 204 and CMD 213. (3 crs.)

CMD 320. ASSESSMENT OF SPEECH AND LANGUAGE. The student learns to administer, score, and interpret speech and language tests and write diagnostic reports based upon the administration and results of such tests. (3 crs.)

CMD 400. CLINICAL PRACTICUM. Provides the student clinician with a variety of therapeutic and evaluation experiences with children or adults having speech, language or hearing disorders. Prerequisites: CMD 300, CMD 301 and a 3.0 in all CMD courses. (Variable crs.)

Communication Studies - COM

COM 100. PERSPECTIVES ON COMMUNICATION. An introductory course intended primarily for majors in Communication Studies. The course explains the many perspectives from which communication may be studied and serves as an introduction to the discipline. (3 crs.)

COM 101. ORAL COMMUNICATION. Designing, rehearsing, and delivering extemporaneous speeches to facilitate solving group and public problems; reporting and evaluating other speakers' intent, content, format, and delivery. (3 crs.)

COM 102. GROUP DISCUSSION: MANAGEMENT. Participation in, and analysis of, group decision-making processes to develop communication and listening skills in group situations, to develop understanding of the role of small group communication in business, to identify and develop styles and functions of group leadership. (3 crs.)

COM 105. SURVEY OF RADIO, TELEVISION, AND FILM. Introduction to communication in radio, television, and film; effects of mass media on the audience and the individual; role of mass media in news, documentaries, commercials, and entertainment broadcasting. (3 crs.)

COM 107. FUNDAMENTALS OF DISCUSSION. Introduction to group forms, techniques, participation, and chairmanship in informal and formal discussions of contemporary issues. (3 crs.)

COM 141. AUDIO PRODUCTION I. 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. (3 crs.)

COM 142. VIDEO PRODUCTION I. Fundamentals of television studio production, including the use of equipment. This course has both a lecture and a laboratory component. Students must register for both the lecture and laboratory components in the same term. (3 crs.)

COM 165. INTERPERSONAL COMMUNICATION. This course seeks to help the student develop an awareness of the nature and complexity of interpersonal communication, recognize how perception of the self affects the ability to relate to others, and gain an understanding of those elements that shape the interpersonal communication process. (3 crs.)

COM 201. INTERCOLLEGIATE FORENSIC ACTIVITIES. Instruction, practice, and performance of various forms of debate and competitive individual speaking and reading events. Participation in intercollegiate competition, largely on some weekends, is required. Open to students in any major. (3 crs.)

COM 203. 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. (3 crs.)

COM 210. VOICE AND ARTICULATION. Introduction to phonetics and to voice production and control, with exercises to develop adequate quality, loudness, pitch, rate, and articulation. (3 crs.)

COM 224. INTRODUCTION TO ORAL INTERPRETATION. Techniques of discovering denotative and connotative meanings in

literature for presentation to listeners; solo presentations of different literary forms. (3 crs.)

COM 230. ARGUMENTATION AND DEBATE. Logical advocacy: briefing and supporting logically adequate cases advocating propositions of policy, negative positions, exposing fallacious evidence and reasoning, refutation and rebuttal. Applications to intercollegiate and mass media topics. Prerequisite: COM 101 or COM 250 or permission of instructor. (3 crs.)

COM 235. PRESIDENTIAL RHETORIC, 1960 TO THE PRESENT. A study of the written texts, audio tapes, and video tapes of selected speeches by American presidents. The course explores the use of rhetoric in campaigns, in governance and in crises, by the presidents in order to illustrate contemporary political speaking and is an examination of how to understand and evaluate presidential speaking. (3 crs.)

COM 241. AUDIO PRODUCTION II. Students will build upon the knowledge and skills learned in Audio Production I, including creating, writing, producing and evaluating various types of more sophisticated production projects. Strong emphasis on theory and practice of field production, creating sound and special effects. Prerequisite: COM 141 or permission of instructor. (3 crs.)

COM 242. VIDEO PRODUCTION II. A course 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 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. Prerequisite: COM 142 or permission of instructor. (3 crs.)

COM 246. RADIO AND TELEVISION ANNOUNCING. Theories and practice of gathering, evaluating, writing, and delivering newscasts, sports, commercials, interviews, for radio and television audiences. Prerequisite: COM 141 or COM 142 or permission of instructor. (3 crs.)

COM 250. ORAL COMMUNICATION: MANAGEMENT. Develop an awareness of, and an appreciation for communication in the business world; preparing and presenting oral reports and speeches designed especially for persons who function in organizations, businesses, or industries. (3 crs.)

COM 303. 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. Prerequisite: COM 203. (3 crs.)

COM 315. LANGUAGE AND BEHAVIOR. Developing language habits that improve sensory and symbolic perception, inference-making, evaluation, and conflict management/resolution. Prerequisite: COM 165 or permission of instructor. (3 crs.)

COM 324. ADVANCED ORAL INTERPRETATION. Detailed analysis and evaluation of literary forms. Creative experimentation in adapting performing literature for solo and group presentations. Prerequisite: COM 224. (3 crs.)

COM 331. RADIO AND TELEVISION COMMERCIALS. The writing of commercial messages in varying lengths for both radio and television, including preparation of storyboards. Prerequisite: COM 141 or COM 142 or permission of instructor. (3 crs.)

COM 332. RADIO AND TELEVISION WRITING: NEWS. The writing of news, commentary and documentary scripts for radio and television; includes the press conference. Prerequisites: COM 141 or COM 142 or permission of instructor. (3 crs.)

COM 335. RADIO AND TELEVISION WRITING: DRAMA. Writing and analyzing teleplays, film and/or radio plays for understanding of dramatic composition and unique needs of specific writing genres and audiences. (3 crs.)

COM 336. BROADCAST REPORTING. A further exploration of the principles of reporting for the electronic media. Students will apply reporting techniques, ethical principles, and legal principles in actual field experiences. (3 crs.)

COM 341. AUDIO: AESTHETICS & APPLICATIONS. This course is designed as a discussion of various aesthetic principles in audio followed by application of these principles in student productions. Students must have mastered the mechanics of studio and field audio mixing, recording and editing prior to enrollment. Prerequisites: COM 141 & COM 241, or permission of instructor. (3 crs.)

COM 342. VIDEO: AESTHETICS & APPLICATIONS. This course is designed as a discussion of various aesthetic principles in video followed by application of these principles in student produced programming. Students must have mastered the mechanics of shooting and editing video tape prior to enrollment in this course. Prerequisites: COM 142 & COM 242. (3 crs.)

COM 350. 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. Preparation of persuasive speeches. Prerequisite: COM 101 or COM 250 or permission of instructor. (3 crs.)

COM 355. BROADCAST MANAGEMENT. Development of a working knowledge of the managerial structures of broadcast organization. Prerequisite: COM 141 or COM 142. (3 crs.)

COM 360. APPRECIATION OF FILM. Preparation for intelligent response to cinema. Discussion of the screen play, director, and actor. Critical evaluation of outstanding films of the past and present. (3 crs.)

COM 363. SPORT COMMUNICATION AND MEDIA RELATIONS. This course provides sport management training in sports public relations, publicity, and marketing. It includes writing for the media, managing media relationships, and using media to obtain marketing objectives. Prerequisite: COM 303 or permission of instructor. (3 crs.)

COM 370. 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 area 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. (3 crs.)

COM 401. INTERNATIONAL BROADCAST SYSTEMS. An overview of world broadcasting systems. It prepares the student to function as a person with a world view of the field of electronic mass communication. Prerequisites: COM 355, COM 105. (3 crs.)

COM 410. PROFESSIONAL VIDEO COMMUNICATIONS. The field of business and institutional video. The course prepares the student to function as a corporate writer, producer, director, and editor of desktop videos, video press releases, videoconferences, training tapes, and other business and institutional videos. Prerequisites: COM 100 & COM 105. (3 crs.)

COM 429. SPECIAL PROBLEMS IN COMMUNICATION. Independent study and reporting of topics of interest to the student but not available in scheduled courses. (Variable crs.)

COM 438. PUBLIC RELATIONS CAMPAIGN MANAGEMENT. Seeks to increase understanding of the management of public relations campaigns by integrating communications theory with professional practice. Special attention is given to techniques for designing, implementing and evaluating effective campaign strategies for clients. Prerequisites: COM 203, COM 303. (3 crs.)

COM 445. RADIO AND TELEVISION IN A FREE SOCIETY. A study of the rights and obligations of the mass media producer, purveyor, and audience. Prerequisite: COM 105 or permission of the instructor. (3 crs.)

COM 459. COMMUNICATION STUDIES INTERNSHIP. Opportunities for practical, professional communication work and field experiences in various off-campus settings. Internships are to be jointly administered by an on-site supervisor and the departmental internship supervisor. (Variable crs.)

COM 461. COMMUNICATION CRITICISM. The study and application of the methods and critical perspectives used in communication criticism. Students will critique a wide range of communication artifacts which may include speeches, advertisements, films, and the messages of public relations. (3 crs.)

COM 463. MEDIA CRITICISM. The study of critical approaches to audio, video and cinematic texts. Emphasis on the discussion and application of approaches that examine: the meaning of media texts, the author's role in producing media texts, the impact of media texts on audiences, and the impact of the social and cultural milieu on the creative and critical process. Prerequisites: COM 105. (3 crs.)

COM 481. COMMUNICATION RESEARCH TECHNIQUES. This course is intended to provide an introduction to and practice in the construction of research that is appropriate to the student's area of interest in Communication Studies. It seeks to provide basic research skills to those anticipating graduate studies, and to those anticipating employment in areas of Communication Studies. Prerequisites: Major, junior standing or permission of instructor. (3 crs.)

COM 484. PUBLIC RELATIONS CASES AND PROBLEMS. This is the capstone course for students in the public relations Concentration. It seeks to 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 the corporate conscience; 3. advocate for organizations; and 4. monitor of organizational policies and programs. Prerequisite: COM 438 or permission of instructor. (3 crs.)

COM 490. COMMUNICATION THEORY. A seminar in which the theories of human communication are analyzed, debated and evaluated. (3 crs.)

Computer Information Systems - CIS

CIS 150 INTRODUCTION TO DATABASE APPLICATION SOFTWARE. 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 will be presented. Laboratory assignments and projects will be used to combine database theory and database software to solve information management problems. (3 crs.)

CIS 215 TELECOMMUNICATIONS AND LOCAL AREA NETWORKS. This course is an introductory study of telecommunications and local area networks. The major topics include voice and data communication concepts and hardware, data transmission, link layer responsibilities, local area networks and network management. (3 crs.)

Computer Science - CSC

CSC 101. MICROCOMPUTER AND APPLICATION SOFTWARE. An introductory study of microcomputers and how to use them. The major topics include computer literacy, use of an MS-DOS microcomputer, and an introduction to and laboratory hands-on use of selected microcomputer applications software packages. (3 crs.)

CSC 105. BASIC PROGRAMMING LANGUAGE. This course will provide the student with the knowledge to write well structured, modular programs on a personal computer. It assumes no prior knowledge of computers or programming. The fundamentals of programming are taught in a style consistent with current thinking in the computing field. Prerequisites: High school algebra or equivalent. (3 crs.)

CSC 120. PROBLEM SOLVING AND PROGRAMMING CONSTRUCTS. Basic literacy of computers, introduce the operation of the VAX and DOS 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. Prerequisites: High school algebra or equivalent. (3 crs.)

CSC 123. INTRODUCTION TO COMPUTER SCIENCE WITH PASCAL. An introduction to computers, algorithms, and programs. Emphasis is on efficient program design using structured programming methods. Students are required to write and test programs on the main frame VAX system or on microcomputers. Prerequisites: One year of high school algebra or permission of instructor. (3 crs.)

CSC 199. FIELD EXPERIENCE IN COMPUTER SCIENCE. Designed for the Associate Degree person majoring in computer science, this course will enable the student to apply her/his 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 many aspects of computers in the work place and should enhance the student's job opportunities when the student graduates. Prerequisites: Students should have completed 32 credits with a good QPA plus sufficient background to meet the needs of the field experience in which they will be participating. (3 crs.)

CSC 201. DOS, WINDOWS, INTERNET. This primarily hands-on course will review computer system concepts, develop proficiency using Windows, introduce the student to all facets of the Internet, and develop a student's proficiency in web page design and publishing. Prerequisite: CSC 101 or permission of the instructor. (3 crs.)

CSC 202. VISUAL BASIC PROGRAMMING. This course uses a visual programming language for Windows and is designed for the beginning course in visual programming. It is an object-oriented/event-driven language, designed to teach programming concepts related to Windows skills and file management. (3 crs.)

CSC 218. COBOL I. An introduction to the essential elements of the COBOL language using well structured programming techniques. Students are required to write COBOL programs and run them on the university's mainframe VAX system. Students will write and execute report programs, control break programs, and data validation programs that implement tables. Good analysis, design and structure will be emphasized. Prerequisites: CSC 120 or a passing score on the computer programming placement exam. (3 crs.)

CSC 223. C PROGRAMMING. This course builds on CSC 120. It gives the student a thorough understanding of the C language so that the student will develop the ability to program well in the C language. Emphasis is placed on efficient software development using structured programming techniques. Students are required to run programs using an appropriate version of C. Prerequisite: CSC 120 or a passing score on the computer programming placement exam. (3 crs.)

CSC 224. 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. Prerequisites: CSC 120 or a passing score on the computer programming placement exam. (3 crs.)

CSC 300. COMPUTER OPERATIONS. This course is designed for the computer science major who is looking for a general overview of computers, how they operate, how they store and use information, and how peripheral equipment associated with the computer world operates. Students will be given "hands-on" experiences to enhance their knowledge of computers. Prerequisites: At least two computer science courses. (3 crs.)

CSC 309. SURVEY OF OPERATIONS RESEARCH. A survey of the operations research (also known as management science or quantitative analysis) tools that are available to help a manager make better decisions, this course encompasses a number of mathematically oriented techniques

that have been developed for/adapted to management problems in the areas of private industry, education, military, health care, and government applications. Mathematical modeling techniques will be studied in both lecture and microcomputer laboratory session formats. Prerequisite: CSC 101, MAT 181 or MAT 182, MAT 215 or MAT 225, & ECO 201, MAT 272 is recommended. (3 crs.)

CSC 316. LOGIC AND SWITCHING THEORY OF THE COMPUTER. An in-depth study of Boolean algebra and its application to switching and gating networks. Prerequisite: MAT 272. (3 crs.)

CSC 318. COBOL II. 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 combinational networks which form digital computers. Prerequisite: CSC 218. (3 crs.)

CSC 323. ASSEMBLER LANGUAGE PROGRAMMING. A study of the VAX Assembly language and some concepts related to the architecture and operations of the VAX computer. Programs will be written and implemented using the instructions in this assembly language. Constructs, such as selection, looping, and subprograms, will be implemented. Prerequisite: CSC 377. (3 crs.)

CSC 324. COMPUTER GRAPHICS. An introduction to "state of the art" computer graphics software. Lecture and laboratory sessions will use this software in the development of advanced graphics concepts. Hardware devices will also be discussed. Prerequisites: CSC 333. (3 crs.)

CSC 333. OBJECT-ORIENTED PROGRAMMING. An introduction to object-oriented programming. Object-oriented offers a natural method for designing software systems that build on the concepts of data abstraction, information hiding, and modularity. Prerequisites: CSC 223. (3 crs.)

CSC 357. HYPERMEDIA AND CAI. The design, development, and evaluation of instructional software. Students will learn two software authoring systems, HyperCard on the Macintosh and ToolBook on the IBM, in order to design CAI. Prerequisites: CSC 120 or a passing score on the computer programming placement exam. (3 crs.)

CSC 375. SYSTEMS ANALYSIS. This project course in systems analysis experientially introduces the student to some of the basic concepts and tools of system analysis, within the competitive American free-enterprise system. This course introduces the "real world" to future data processing professionals who must also be familiar with "system's concepts": how to analyze a business's additional data processing needs, and then how to design and implement an appropriate computer system (both hardware and software) at minimum cost and maximum information processing power. Prerequisites: CSC 377, ENG 217, and CSI 150 or CSC 456.(3 crs.)

CSC 377. INFORMATION STRUCTURES. The design, use, and programming of stacks, queues, linked lists, binary trees, and sorting and searching methods are discussed in this course. The analysis of algorithms will be considered as well as the applications of data structures. Prerequisites: CSC 333. (3 crs.)

CSC 378. COMPUTER ARCHITECTURE. An in-depth study of the organization of the central processing unit, control unit, instructions formats, and addressing schemes of digital computers. Extensive emphasis is placed on the translation of assembly language instructions into their microsequence operations within the control unit and the interconnections which form the central processing unit and the digital computer. Prerequisite: MAT 272 and CSC 377. (3 crs.)

CSC 400. OPERATING SYSTEMS. An introductory study of the main elements of an operating system-memory management, process management, device management, and file management. Prerequisite: CSC 377. (3 crs.)

CSC 405. DATA COMMUNICATIONS. A study of the theory, implementation procedures, and problems associated with data communications. Prerequisite: CSC 377. (3 crs.)

CSC 410. LISP PROGRAMMING. An introduction to LISP (List Processing) as a vehicle for encoding intelligence-exhibiting processes. Topics include a survey of lamda calculus and recursive function theory. Prerequisites: CSC 377. (3 crs.)

CSC 419. MATHEMATICS AND COMPUTER SCIENCE INTERNSHIP. This course is designed for the computer science major who is seeking work in the computer science area. This intern experience will enable the student to apply her/his knowledge of computers in the work place. The internship will provide the student with the valuable computer experience that should enhance the student's job opportunities upon graduation. Prerequisites: Students should have completed 64 credits with a good QPA plus have sufficient background to meet the needs of the particular internship in which they will be participating. (Variable crs.)

CSC 424. NUMERICAL ANALYSIS. In this course, various mathematical concepts relating to the computer are investigated. These concepts include: roundoff errors and computer arithmetic; numerical instability; error analysis and estimation; approximation; Gaussian elimination and pivoting strategies for linear systems; numerical integration and solution of differential equations. Prerequisites: CSC 377, MAT 273 & MAT 341. (3 crs.)

CSC 455. STRUCTURE OF PROGRAMMING LANGUAGES. In this course, the power and limitations of algebraic languages, string manipulation languages and interactive languages will be studied. Also, Object-oriented programming languages will be discussed. Prerequisites: CSC 377 and at least one programming language in addition to C. (3 crs.)

CSC 456. DATA BASE MANAGEMENT SYSTEMS. The design, motivation, implementation, and application of data base management systems. There is an intense study of the design of data bases including the normalization of the files of a data base. Techniques of updating and retrieving from data bases are learned using several commercially available data base management systems and hands-on experience is gained in at least one of them. Prerequisite: CIS 150 or equivalent database knowledge. (3 crs.)

CSC 460. 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. Prerequisites: CSC 377 and at least one programming language in addition to C. (3 crs.)

CSC 475. THEORY OF LANGUAGES. An introduction to abstract machine theory, combinational 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. Prerequisites: CSC 377 and MAT 272 (3 crs.)

CSC 485. 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, the interests of the students and the instructor. Prerequisite: Permission of instructor. (3 crs. May be repeated if a different topic is covered.)

CSC 490. SENIOR PROJECT I. This course introduces students to software engineering as they study software engineering history, terminology, requirements, specifications, and design. They will write a software definition, specification, and one or more papers on software engineering topics. Prerequisites: CSC 377 and ENG 217. (3 crs.)

CSC 492. SENIOR PROJECT II. This project course in systems analysis experientially introduces the student to some of the basic concepts and tools of systems analysis, within the context of a real-life business problem and the competitive free-enterprise system. This courses introduces the "real world" to future computer science professionals who must be knowledgeable about computer programming, and must also be familiar with "systems concepts:" how to analyze a business's current information system, how to determine the business's additional data needs, and how to design and

implement an appropriate system at minimum cost and maximum information processing power. Prerequisite: CSC 490. (3 crs.)

CSC 496. SEMINAR IN COMPUTER SCIENCE. For the highly motivated student wishing to develop certain topics in Computer Science found in current journals. Topics to be developed in this course are chosen by the student under the guidance of the instructor. This class does not meet regularly; it meets by arrangement between the student and the instructor. Prerequisites: Minimum of 21 hours in computer science course work and permission of the department chair and permission of the instructor. (1 to 3 crs.)

CSC 502. ADVANCED VISUAL PROGRAMMING. This course uses a visual programming language for Windows and is designed to teach advanced visual programming concepts. The course assumes that students have learned basic Windows skills, database skills, and have knowledge of an introductory course in visual programming. Prerequisites: CSC 202 and CIS 150 OR CSC 333 and either CSC 377 or CSC 456 OR permission of the instructor. (3 crs.)

Criminal Justice (Bachelor of Science Program) - CRJ

CRJ 101 INTRODUCTION TO CRIMINAL JUSTICE. 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. 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. (3 crs.)

CRJ 102 AMERICAN POLICING. An introduction to the police system in America, which is the gateway to the criminal justice process. Topics considered include 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. (3 crs.)

CRJ 103 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. Course provides a broad based 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. (3 crs.)

CRJ 104 INTRODUCTION TO SECURITY. A basic overview of private sector justice is the course's chief aim. Types of security operations and functions comprises much of the course coverage including perimeter and physical security, intelligence gathering, retail and industrial security, terrorism and executive protection as well as security in select business and industrial centers. Careers, regulation and licensure, the debate on professionalization are other areas of major intellectual concern. (3 crs.)

CRJ 201 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. (3 crs.)

CRJ 202 INDUSTRIAL AND RETAIL SECURITY. Course covers a wide array of issues relevant to the protection of industrial, retail and commercial interests, including administrative and managerial aspects of the security field in both the public and private sector; consideration of unique security management problems arising from labor disputes; demonstration, civil disorders, and riots; white collar and organized crime; and industrial espionage. Management issues peculiar to organizations which operate under constraints imposed by federal and state regulatory agencies is also dealt with. Tactical steps and strategies to combat the various forms of criminality in the commercial marketplace will be analyzed and discussed. (3 crs.)

CRJ 211 ORGANIZED CRIME. A complete examination of the dynamic referred to as "organized crime" commencing with its historical underpinnings. Specific crimes, like racketeering, extortion, bribery, official corruption, graft, drugs, prostitution and other illicit trafficking will be analyzed. Investigative techniques and prosecutorial strategies that relate to the identification and elimination of organized crime are a major component of the course content. (3 crs.)

CRJ 215 THE VICTIM AND THE JUSTICE SYSTEM. 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 programs, 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, Meghan's law, victim advisory and protection services, and other means in which the judicial system assures victim participation during the adjudicative phase. (3 crs.)

CRJ 305 INTERNATIONAL CRIMINAL JUSTICE. Compares and contrasts the criminal justice system of the United States with the systems of other countries on a substantive and procedural basis. A thorough examination of other cultural models of law and justice in order that differences in justice processing and definition become apparent. Some emphasis is placed on international policing and legal enforcement; whether through INTERPOL or treaty or other regulation. (3 crs.)

CRJ 309 WHITE COLLAR CRIME. This course considers crime committed by corporations as well as white collar criminals: how such crimes are defined; who commits or is victimized by it; which moral, ethical, legal and social contexts promote it 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 pre-trial processes, evidentiary questions, litigation strategies, and potential sanctions and other punishments. (3 crs.)

CRJ 325 LAW, JUSTICE AND FAMILY. A full-fledged review of the justice system's response to the establishment and maintenance of family in the American culture. How the family is defined, its heritage of rights and protections and the differentiated roles of parent and child are central considerations. Further review includes a look at family dissolution, divorce, custody and support disputes and the ongoing problems of visitation. The emerging problems of spousal and child abuse will be keenly analyzed and how the legal systems provides protection from these abuses will be closely scrutinized. (3 crs.)

CRJ 331 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. (3 crs.)

CRJ 335 PRIVATE 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. (3 crs.)

CRJ 345 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. (3 crs.)

CRJ 351 CIVIL LIABILITY OF CRIMINAL JUSTICE PERSONNEL. A comprehensive examination of civil law issues, often witnessed in a justice agency, brought about by justice personnel in the performance of their duties. Examples include civil rights violations; consequences of excessive force, assault and other tortuous conduct; negligent hiring, retention and entrustment; defamation and slander; and dereliction of duty. Course employs a series of actual litigations involving civil liability in police departments, tracing the original infliction of harm through the jury verdict. Defense strategies to citizen actions are provided. (3 crs.)

CRJ 361 JUDICIAL ADMINISTRATION. An examination of the American judicial system, highlighting state, local, and federal tribunals, including an assessment of their hierarchy, subject matter jurisdiction, and administration. Also reviewed will be 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. Typical case calendars and dockets will be examined throughout the course so that students may acquire a complete understanding of the litigation process. (3 crs.)

CRJ 375 CRIMINAL LAW. An introduction to substantive criminal law that reviews the social, philosophical, and legal foundations of criminal codification. 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. Lastly, the course captures criminal law from the defendant's perspective by reviewing the accused's mental states, potential defenses and uses of mitigation. (3 crs.)

CRJ 376 CRIMINAL PROCEDURE. A procedural law course which includes a review of the law of arrests, search, and seizure, the making of bail, adjudication, pre- and post-trial activities and the nature of plea bargaining. Substantial emphasis is given the constitutional protections afforded through the Bill of Rights, particularly the 1st, 4th, 5th, 6th, 8th, and 14th. Course deals extensively with case law applications of these principles and the role of judge and jurist in the crafting of criminal process standards. (3 crs.)

CRJ 394 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. (3 crs.)

CRJ 395 THE DEATH PENALTY. An examination of death penalty policies in the American justice system from a legal, ethical and jurisprudential perspective. An analysis of case and statutory law, the principles of due process and appellate rights are included. (3 crs.)

CRJ 399 SELECTED TOPICS IN LAW AND JUSTICE. A focused examination of an emerging and dynamic problem or issue 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, police use of force and women in criminal justice. (3 crs.)

CRJ 400 FOREIGN STUDY IN CRIMINAL JUSTICE. A semester or summer based experience in a foreign nation, e.g. Ireland, Hungary, London or Germany, by enrolling in actual classes at a foreign host institution for purposes of credit. Class instruction relates to the study of law and justice and affords a comparative critique of foreign justice models. The experience consists of not only study, but also visitations to justice agencies, research, travel to historical and cultural locations and social activities. Credits awarded will vary according to course offerings, time and length of experience. (Variable crs. to a maximum of 12 crs.)

CRJ 429 TERRORISM. 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 multi-faceted reactions to its many devious forms. Legislative efforts to curb the scourge of terrorism are also highlighted. (3 crs.)

CRJ 455 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? (3 crs.)

CRJ465 POLICE ORGANIZATION AND MANAGEMENT. The study of command-level problems and trends in police organizations and management. Principles of organization, control, planning and leadership relating to police agencies are freely assessed. Topics consist of personnel, budget, policy making, crime response tactics and measurements of some. (3 crs.)

CRJ 470 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. (3 crs.)

CRJ 485 FORENSIC LAW. An interdisciplinary course covering law, criminal justice, science and technological issues in the evidentiary arena Coverage in the course provides a broad-based assessment of expert witnesses, microanalysis, pathological evidence, admissibility and investigatory practice, ballistics, fingerprints, vascar/radar, and photographic techniques. Contrasted with criminalistics, subject matter of this course is primarily evidentiary. More particularly, the course will delve into the rules of evidence, which guide the admissibility of forensic evidence in a court of law. Examination includes threshold tests for reliability and admissibility, qualification of witnesses competent to testify, scientific rigor required for admission and case law determinations on the use and abuse of scientific evidence. (3 crs.)

CRJ 490 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. (3 crs.)

CRJ 495 LEGAL AND JUSTICE RESEARCH METHODS. A criminal justice exploration of the specialized methods and sources of legal and justice research in these areas: Justice publications and resources, case collections, computer-assisted research, constitutional materials, legal history, legal periodicals, legislative history, practice and procedure, and social science materials related to law. Application of legal research strategies will be required. (3 crs.)

CRJ 497 LAW AND EVIDENCE. A comprehensive review of evidentiary principles, both common law and statutory, and how evidentiary standards affect and govern both civil and criminal process. Topical coverage includes: Real and physical evidence, demonstrative substitution, hearsay and first-hand evidence, witness scope and qualification, as well as privilege principles. Both federal and state rules will be interpreted. Students will be required to advocate cases utilizing these evidentiary principles in a mock court environment and to research an area of emerging evidence law. (3 crs.)

CRJ 498 CRIMINAL JUSTICE INTERNSHIP. An on-site, experiential learning experience where 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. Attendance at internship seminars for the department is required. (Variable crs.)

CRJ 499 INDEPENDENT STUDY IN LAW AND JUSTICE. This course is independent in design, allowing students to act and engage in mature thought and academic review of topics of interest. The course requires a scholarly, yet practical completion of a large research project in conjunction with a faculty mentor. Projects must be approved in advance of registration and must be concerned with significant intellectual subject matter that involves the administration of law and justice. (3 crs.)

Criminal Justice (Associate Program) - XJJ
These courses are offered by faculty from the Community College of Beaver County as part of the Cooperative Criminal Justice Program with California University.

XJJ 132. INTRODUCTION TO SECURITY. The practical and legal basis of security, the role of the security agent in modern society, and the interaction with law enforcement are addressed. Basic goals of security and loss prevention, areas of specialization, and career opportunities are discussed. (3 crs.)

XJJ 134. COMMUNICATION SKILLS FOR SECURITY OFFICERS. The aim of this course is to develop effective and basic writing and communication strategies for security officers. (3 crs.)

XJJ 155. ADMINISTRATION OF CRIMINAL JUSTICE. An overview of the American criminal justice system dealing with the role of the police, courts, and correctional institutions. The course also covers constitutional limits of police power; the trial process; and sentencing structure; and the functions of the numerous agencies within the criminal justice system. (3 crs.)

XJJ 156. NARCOTICS & DRUG ABUSE. Study of narcotics, dangerous drugs, and the people who abuse them. Implementation, evaluation and coordination of drug control programs. Consideration of private treatment programs, civil commitment, procedures, public education programs, and medical treatment programs. (3 crs.)

XJJ 157. CORRECTIONAL ADMINISTRATION. Organization, objectives and functions of a correctional agency will be studied. Principles of Administration relating to the sound and efficient operation of correctional facilities will be discussed with emphasis on the special problems encountered in the field. (3 crs.)

XJJ 158. PROTECTIVE SECURITY LAW. The course acquaints the student with the basic legal issues facing the private security officer. An overview of legal powers, limitations, and general liabilities will be addressed. Major topics include the powers of detention, arrest, search and seizure, use of force, interrogation, and most importantly, probable cause. Special emphasis will be placed on criminal and civil penalties applicable to security agents concerning abusive powers or illegal activities. (3 crs.)

XJJ 160. CRIMINAL LAW I. The laws of arrest, use of force, interrogation, and evidence are studied. Pennsylvania law applicable to the law enforcement officer will be emphasized. (3 crs.)

XJJ 165. SECURITY OPERATIONS & PRINCIPLES OF LOSS PREVENTION. The course introduces the technical and applied practice of security. Emphasis will be on procedures and practices of security personnel, the theoretical use of alarm systems, locks, surveillance equipment, the application of safety practices and risk assessment. Uniform security standards, survey techniques will be discussed, Loss prevention programs related to internal employee theft, retail theft, and insurance considerations will be emphasized. Presents an overview of security investigative equipment, interview and interrogation skills and preparing investigative reports will be highlighted. (3 crs.)

XJJ 170. SUPERVISORY TECHNIQUES. This course is an introduction to the duties and responsibilities of the supervisor in all organizations. Topics to be covered are business tools and skills a supervisor utilizes as manager; interrelationships between the supervisor and other departments and techniques dealing with employee problems and groups. (3 crs.)

XJJ 175. FIRST AID & CPR/FIRST RESPONSE. Theory and practice of general first aid techniques are covered, including the treating of illness, wounds, shock, and emergency rescue. Also included will be Hazmat Response, identification and treatment of communicable diseases, and identification of local health organizations. (3 crs.)

XJJ 180. OCCUPATIONAL SAFETY & FIRE PREVENTION. The course provides an introduction and examines regulations regarding "Right To Know Laws, Material Safety Data Sheets (MSDS), basic Occupational Safety & Health Act (OSHA) requirements, hazardous materials identification and response. The course examines occupational hazards, injuries, diseases and relative prevention. (3 crs.)

XJJ 185. SPECIAL SECURITY ISSUES & PROBLEMS. This course is a study of requirements and specific problems in security such as substance abuse, organized labor awareness, domestic violence, and protection from abuse petitions, work place violence and employee escort. The course also examines typical improprieties of the industry, security officer negligence, stress management, and interactions with public law enforcement. (3 crs.)

XJJ 215. INVESTIGATIVE CONCEPTS. This course reveals fundamentals of investigative theory developing informational processes, principles of interviewing and question construction, instrumentation techniques, identification of persons and things, investigation, and current issues involving invasion of privacy are also considered. (3 crs.)

XJJ 249. DIRECTED STUDIES. This is a seminar for advanced criminal justice students who will study and analyze typical criminal justice problems. Extensive library work is required along with independent study of various problems. Special seminars may be considered for course credit at the discretion of the criminal justice coordinator. (3 crs.)

XJJ 256. PROBATION, PARDON & PAROLE. Probation, pardon and parole are examined as judicial process and an executive function. Emphasis is to be placed on the philosophical approach to probation, pardon and parole. Contemporary methods such as work release programs, halfway houses, and parole clinics are to be examined. (3 crs.)

XJJ 257. RULES OF CRIMINAL PROCEDURE. A study of criminal procedures which will examine the process by which the criminal law is brought to bear on individuals in society - as spelled out in the Pennsylvania rules. The course considers all aspects of the criminal processes from the filing of the complaint through the pretrial and trial stages and into the sentencing and pretrial or trial sentencing phases such as probation, parole, and post correctional proceedings as controlled by these rules. (3 crs.)

XJJ 261. INTERVIEW & INTERROGATION. Fundamentals of the interviewing process and interrogative technology, taking into consideration the nature, methods, and principles of interviewing with emphasis on role playing in interviews. (3 crs.)

XJJ 262. CRIMINAL EVIDENCE. A comprehensive analysis of the rules of evidence. Particular subjects include Judicial Notice Presumptions, the Nature of Real and Circumstantial Evidence, Burden of Proof, Province of Court and Jury, Documentary Evidence, Confessions, Admissions and Witnesses. The course will give particular emphasis to evidence in criminal cases. Prerequisites: XJJ 155. (3 crs.)

XJJ 270. CRIMINOLOGY. The nature and causation of crime. Approaches to the study of crime and its treatment and prevention. The sociology of criminal law and the nature of criminal behavior: theories and research. Prerequisite: HS155. (3 crs.)

XJJ 275. JUVENILE DELINQUENCY. Biological, psychological and sociological factors in juvenile delinquency. A survey of theories of juvenile delinquency. Modern trends in prevention and treatment. (3 crs.)

XJJ 281. ORGANIZED CRIME. This course is a study in the development, structure, and operation of organized crime in the United States today. Emphasized will be the major crime families, the extend and types of their criminal activities, as well as present efforts utilized to combat organized crime in both the public and private sectors. (3 crs.)

XJJ 282. POLICE ETHICS & PROBLEMS. Police Ethics and Problems introduces the student to the psychological and sociological factors effecting law enforcement and community response. Critical issues examined will include dissent and civil disobedience, discriminatory and selective law enforcement, police militancy, police ethics, and the effects of stress and job burnout in the criminal justice profession. (3 crs.)

XJJ 283. CRIMINAL JUSTICE INTERNSHIP. The Criminal Justice Internship affords second year students an opportunity to work with a local law enforcement or criminal justice agency. Cooperating agencies include the Sheriff's office, a local magistrate, a police department, Juvenile and Adult Probation, and Drug and Alcohol Services. (Variable crs.)

Earth Science - EAS

EAS 100. INTRODUCTION TO EARTH SCIENCE. This introductory course is designed to acquaint the student with the four general areas of earth science: astronomy, geology, meteorology, and oceanography. The course consists of two hours of lecture and one hour of lab work. (3 crs.)

EAS 131. INTRODUCTION TO ENVIRONMENTAL GEOLOGY. This course deals with the interaction between man and his geologic environment. Emphasis is placed on the understanding of basic geologic principles and case studies of some of the classic examples of environmental problems. Laboratory exercises and problems are an integral part of the course. This is intended as a survey course and a student needs only a limited background in geology. (3 crs.)

EAS 150. INTRODUCTION TO GEOLOGY. A survey course intended primarily for the non-science major. Topics considered include the make-up of the earth, internal and external processes that occur within or on the earth, rocks and minerals, fossils, earth's origin and evolution, and the origin and evolution of life on this planet. Laboratory work is an integral part of the course. (4 crs.)

EAS 160. PHYSICAL GEOGRAPHY. The study of the physical aspects of human environment including climate, soils, water, vegetation, and topography. Map reading and air photo interpretation are also treated. (3 crs.)

EAS 163. INTRODUCTION TO OCEANOGRAPHY. An introductory course 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). No preliminary studies required but previous course work in EAS 100 or EAS 150 recommended. (3 crs.)

EAS 166. GEOLOGY OF PENNSYLVANIA. A survey of the Commonwealth's geologic setting, geologic history, and mineral resources. There are no prerequisites. Students will be introduced to the necessary geologic concepts and terminology. Students are expected to participate in at least three of the four planned field trips. (3 crs.)

EAS 175. FIELD COURSE IN EARTH SCIENCE I. This course provides the student with opportunities to study meteorological, climatological, geological and oceanographic phenomena in situ, to apply the scientific method, to acquire critical thinking skills by examining earth features and processes and by examining anthropogenic effects on selected natural phenomena, to understand the value of selected earth processes and features and to quantify natural phenomena. Students will participate in an excursion. (3 crs.)

EAS 200. HISTORICAL GEOLOGY. A study of the geologic history of Earth and the succession of the major groups of plants and animals as based on the geologic interpretation of rock formations and fossils. Field trips are an integral part of the course. (4 crs.)

EAS 202. 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 sub-surface water. (3 crs.)

EAS 210. SOILS. The study of the distribution of the soils of the earth, their characteristics, and how they developed. Emphasis will be placed upon the relationship between man and the soils of a given environment. (3 crs.)

EAS 232. EARTH RESOURCES. An introductory course in metallic and nonmetallic resources with emphasis on the nature of minerals, the lithosphere, and economic uses of earth resources. (3 crs.)

EAS 241. METEOROLOGY. The physics of the atmosphere as influenced by the earth-atmosphere interaction. The effects of the physical controls as they alter the elements are emphasized. The construction and analysis of weather maps are an integral part of the course. (3 crs.)

EAS 242. CLIMATOLOGY. In this course the elements and controls of climate are analyzed in a systematic fashion. Various methods and techniques of classifying climates are presented. The climate of each continent is regionalized and the factors which produce the climatic patterns are investigated. (3 crs.)

EAS 264. SCENIC AREAS OF THE UNITED STATES. This course provides an analysis of the physical setting of some scenic areas in the United States. The focus is on differences in soils, vegetation, climates and landforms in scenic areas with special emphasis given to natural history. (3 crs.)

EAS 273. COMPUTER CARTOGRAPHY. This course provides an analysis of different methods and techniques of representing spatial data through the use of various computer-based technologies. The focus is centered upon the cartographic representation of surface data through the use of a personal-computer based program. (3 crs.)

EAS 331. MINERALOGY. 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. (3 crs.)

EAS 332. PETROLOGY. A complete survey of the major rock types (igneous, sedimentary, and metamorphic) forms the basis of this course. Consideration is given to their origin, description, and classification. Of particular importance is the relationship of the various rock types to the composition and historical development of the solid earth. Laboratory component emphasizes hand specimen identification, but some microscopic thin section work is also done. (3 crs.)

EAS 335. REMOTE SENSING: MAP AND AERIAL PHOTOGRAPHY INTERPRETATION. This course covers the composition and interpretation of aerial photographs and various types of maps. Students will learn how to interpret photos and maps for quantitative and qualitative information on natural and anthropogenic features. Some of the work requires independent and group interpretation of maps, photographic slides of satellite imagery, computer processed and enhanced images, and SLAR imagery. (3 crs.)

EAS 340. SYNOPTIC METEOROLOGY I. An examination of the development and structure of large-scale weather systems and fronts. Emphasis on the technique of analyzing and forecasting synoptic scale weather situations. (3 crs.)

EAS 343. 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 Earth's crust. (3 crs.)

EAS 345. SYNOPTIC METEOROLOGY II. Continuation of EAS 340. Emphasis is placed on the application of synoptic principles to specific types of atmospheric circulation systems and case studies of storm complexes. (3 crs.)

EAS 352. THERMODYNAMIC METEOROLOGY. An in-depth examination of the forces and laws that govern atmospheric flow. Topics investigated and analyzed include scale analyses, geostropic and gradient wind models, vorticity, vertical motion and boundary layer dynamics. (3 crs.)

EAS 353. STATISTICAL ATMOSPHERIC SCIENCE. A statistical and scientific writing course designed as a follow-up to basic meteorology. The course is concerned with the use of meteorological instruments to measure local weather conditions; analyzing and plotting and analyzing these conditions. Other weather problems and two research papers are part of the course. (3 crs.)

EAS 361. WEATHER ANALYSIS. Introduction to real-time weather information such as DIFAX charts, satellite and radar imagery, and text data, and its analysis. (3 crs.)

EAS 365. REMOTE SENSING: SATELLITE & RADAR INTERPRETATION. This course emphasizes the characteristics and scientific role of radar and satellite interpretation, as well as computer-assistedprocessing of spectral data acquired by satellites,as they relate to atmospheric analysis.(3 crs.)

EAS 371. WEATHER FORECASTING. Introduction to the process of creating and disseminating weather forecasts. Use of actual weather data in creating daily forecasts for the local area, including oral and written forecasts. (3 crs.)

EAS 372. FIELD MAPPING. This is a field-oriented course in which the student will learn proper use of measuring and mapping instruments and the techniques used in the construction of basic maps. (3 crs.)

EAS 373. STATISTICAL CARTOGRAPHY. The statistical approach to cartographic representation. Methods of data manipulation, problems of symbolization and techniques of presentation are emphasized. (3 crs.)

EAS 381. SEVERE WEATHER. An introduction to the various types of severe weather, atmospheric circulation patterns that are associated with them, and tropical atmospheric phenomena. Special attention is applied to tornadoes and hurricanes. (3 crs.)

EAS 385. HYDROMETEOROLOGY. An advanced class designed to provide an understanding of the interrelationships between the atmosphere and the hydrosphere, and their applications to problems in the physical environment. (3crs.)

EAS 402. GROUNDWATER HYDROLOGY. This course is designed as a follow-up course to Hydrology. It gives students the opportunity to study the principles governing the movement and occurrences of groundwater. (3 crs.)

EAS 421. SEDIMENTOLOGY. An advanced course that deals with the detailed analysis of sediments and sedimentary rocks. Both qualitative and quantitative techniques are utilized to derive the maximum information from rock samples. This information relates to the erosional, transportational and depositional history of rocks. To the greatest extent possible, the student works independently through a complete set of problems. (3 crs.)

EAS 422. STRATIGRAPHY. In this course a study is made of the basic principles governing the origin, interpretation, correlation, classification, and naming of stratified rock units. The gross stratigraphy of the United States is considered, with particular emphasis placed on the rocks of the Pennsylvanian System. (3 crs.)

EAS 425. STRUCTURAL GEOLOGY. The primary and secondary structures of rock masses and their formation are covered in this course. Actual structures are examined in the field. Geologic maps are utilized. (3 crs.)

EAS 430. OPTICAL MINERALOGY. An in-depth examination of the optical behavior of mineral crystals in polarized light with emphasis on identification. (3 crs.)

EAS 431. PRACTICUM IN BROADCAST METEOROLOGY I. Introduction to television weather broadcasts with emphasis on creating accurate forecasts and on the techniques of communicating weather information to the public. (3 crs.)

EAS 432. PRACTICUM IN BROADCAST METEOROLOGY II. Continuation of EAS 431. Emphasis is placed on studio performance of weather casts. (3 crs.)

EAS 436. FIELD METHODS IN EARTH SCIENCE. This is a course designed to provide majors with knowledge of problems encountered in field work and the techniques utilized to solve these problems. This course consists of planned trips. Lectures and discussions are used to supplement the trips. (3 crs.)

EAS 437. FIELD METHODS IN GEOLOGY. This is a course designed to provide students with a knowledge of geologic problems encountered in field work 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 to areas of geologic interest. Summary reports, field exercises, and laboratory problems constitute the students' work responsibility. (3 crs.)

EAS 463. SEMINAR IN OCEANOGRAPHY. This seminar is designed for those who wish to improve their scientific writing abilities and to learn more about the oceans. The course is built around an excursion to sites of oceanographic interest, library information and data collection, the writing of both short and long papers and the presentation of research. (3 crs.)

EAS 465. SEMINAR IN ATMOSPHERIC SCIENCE. A scientific writing and speaking course that covers recent and historical developments in the atmospheric sciences. Students are required to participate in group presentations, complete two written research projects, and produce a critique of classmates' research projects. (3 crs.)

EAS 491. FIELD COURSE IN EARTH SCIENCE. This course is designed for Earth Science students who desire to apply their classroom knowledge to specific sites and earth science field problems. Each semester will include trips to various sites at which geologic, meteorological, or oceanographic processes, principles, and phenomena can be studied. (Variable crs.)

EAS 492. FIELD COURSE IN GEOLOGY. This course provides advanced geology students with opportunities to study geology *in situ*. Field trips to classic and less well known sites will be incorporated with lectures, data collection, and scientific reporting. Laboratory exercises will reflect field experiences. (Variable crs.)

EAS 494. GEOLOGY WORKSHOP. Provides the student with a variety of geologic experiences. Included are lectures, laboratory exercises, field work, and problems. To the greatest extent possible, the course also is tailored to meet the needs of individual students. Prerequisite: Permission of the instructor. (Variable crs.)

EAS 495. SEMINAR IN EARTH SCIENCE. A scientific writing course in which the student pursues an earth science topic through library or field research. Students learn to define a problem, to obtain relevant literature, to gather data, and to write and defend a research paper. (3 crs.)

EAS 527. TECTONICS. To evaluate tectonic theories within a framework of worldwide historical geology, but special attention is given to the Appalachian and the North American Cordilleran orogenic events. (3 crs.)

EAS 538. COMPUTER APPLICATIONS IN WATER RESOURCES. An upper-level course designed to provide students opportunity to apply computer and mathematical procedures to the solution of hydrologic problems. Applications from other areas within the earth sciences may be considered. (3 crs.)

EAS 541. 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. Laboratory exercises, problems, and written reports are an integral part of the course. (3 crs.)

EAS 542. APPLIED CLIMATOLOGY. An advanced course that deals with the application of various analytical methods and classification systems in climatology. The Koppen classification of climates is stressed. The climate patterns of each continent and the factors which produce them are investigated. Prerequisite: EAS 242 or permission of the instructor. (3 crs.)

EAS 548. WATERSHED EVALUATION. The purpose of this course is to analyze in detail rocks which serve for the storage and ultimately for the production of petroleum. The characteristics of these rocks will be studied in hand specimen, in thin section, in cores, and on well logs. Laboratory work and problem solving are emphasized. (3 crs.)

EAS 551. INVERTEBRATE PALEONTOLOGY. This course involves a detailed study of fossil representatives of the various invertebrate phyla as well as a consideration of the more important of these as index fossils. Emphasis is on laboratory exercises and problem solving. It is hoped that this course will prove to be of interest to students in biology as well as those in geology. (3 crs.)

EAS 563. COASTAL GEOMORPHOLOGY AND MARINE RESOURCES. A study of the physical processes that shape coastal landforms and the pelagic and neritic resources of the oceans. Topics include longshore transport, wave action, swash zone dynamics, estuarine and deltaic geomorphology, ferromanganese and petroleum resources, and beach structure. Prerequisite: EAS 163 or permission of the instructor. (3 crs.)

Early Childhood Education - ECE

Prerequisites for all ECE courses include completion of 48 college or university credits with a minimum 2.6 QPA. and achievement of a satisfactory score on the Pre-Professional Skills Test (PPST) of Praxis Series.

ECE 203. FIELD EXPERIENCES WITH INFANTS, TODDLERS, AND PRESCHOOLERS. This course is intended to provide the student with an introduction to working with young children ages infancy through five, by providing field experiences in infant/toddler day care centers and preschool centers (day care, Head Start, or nursery school). The student observes, plans activities, and prepares learning materials for children in group settings. Lectures and classroom teaching are combined to give students an opportunity to discover their aptitude for and interest in working with very young children. Prerequisites: EDF 290 & PSY 208. (3 crs.)

ECE 302. EMERGING LITERACY. The purpose of this course is to prepare early childhood students to become facilitators of early literacy learning. The content of this class deals with concepts of emerging literacy and instruction in language arts strategies for children from infancy through the primary grades. (3 crs.)

ECE 304 . THEMATIC TEACHING IN EARLY CHILDHOOD. This course introduces a thematic approach to teaching integrated curricula and focuses on teaching science, social studies, and health concepts. Students will gain understanding and skill in developing and implementing thematic units. (3 crs.)

ECE 315. MATHEMATICAL CONTENT IN EARLY CHILDHOOD. The student is introduced to how mathematics develops in the very young child and how to assess this development. The student is introduced to the teaching of arithmetic, measurement, and geometry to the young child. Skills and understandings that children acquire from infancy to age eight are covered. (3 crs.)

ECE 319. PARENT AND COMMUNITY INVOLVEMENT IN EDUCATION. This course emphasizes the role of parents and community in the framework of educational planning for young children. The student will demonstrate skills in planning education workshops. Students will use interview and conferencing techniques to learn from parents and community people actively involved in programs for children. (3 crs.)

ECE 405. EARLY CHILDHOOD EDUCATION SEMINAR. This course investigates how young children have been viewed and educated by society throughout history. The present-day circumstances of children and families are studied. Students receive background in how to work together with parents, communities, other professionals, and policy-makers to ensure a quality, developmentally-appropriate education for young children. Prerequisites: EDF 290 & PSY 208. (3 crs.)

Economics - ECO

ECO 100. ELEMENTS OF ECONOMICS. An introduction to the elements of economic analysis, structured particularl0y for the nonmajor. The student is exposed to the mechanics of the market system and a survey of modern macroeconomic theory and policy. (3 crs.)

ECO 200. CURRENT ECONOMIC ISSUES. An application of contemporary economic principles. Current readings in economics are examined. Prerequisite: ECO 100 or ECO 201. (3 crs.)

ECO 201. INTRODUCTORY MICROECONOMICS. An introduction to the market mechanism in a modern mixed economy; supply and demand analysis is applied to consumer markets as well as resource markets. (3 crs.)

ECO 202. INTRODUCTORY MACROECONOMICS. An introduction to the determination of national income; problems of inflation and unemployment; international trade and economic growth. Emphasis is placed on the roles of monetary and fiscal policy in the conduct of macroeconomic policy. Prerequisite: ECO 100 or ECO 201 is recommended. (3 crs.)

ECO 242. GOVERNMENT AND BUSINESS. A study of the legal framework within which business operates, including the Sherman Anti-Trust Act, Clayton Act, Robinson-Patmon Act, Federal Trade Act, and other newer forms of social control regulation. The course explores the relationships between government and business: government as regulator, subsidizer, partner, and competition. (3 crs.)

ECO 251. DEVELOPMENT OF THE AMERICAN ECONOMY. A survey of the beginning, development, and growth of the American economy with emphasis on the business sector. Prerequisite: ECO 100 or ECO 201 or ECO 202. (3 crs.)

ECO 301. INTERMEDIATE MICROECONOMICS. An analysis of the theories of consumer behavior and of firms in the allocation of resources, and of general price and distribution theory, with application to current economic issues. Prerequisites: ECO 201 & ECO 202 or permission of instructor. (3 crs.)

ECO 302. INTERMEDIATE MACROECONOMICS. Analysis of the determination of national income, employment and price levels. Discussion of consumption, investment, inflation, and government fiscal and monetary policy. Prerequisite: ECO 201 & ECO 202. (3 crs.)

ECO 304. MONEY AND BANKING. Relation of money and credit to economic activity and prices; impact of public policy in financial markets and for goods and services; policies, structure and the functions of the Federal Reserve System; organization, operations, and functions of the commercial banking system, as related to questions of economic stability and public policy. Prerequisites: ECO 201 & ECO 202. (3 crs.)

ECO 307. STATE AND LOCAL FINANCE. Principles and problems of financing state and local governments. Topics include taxation, expenditures, intergovernmental grants, and governmental fiscal relations. Prerequisite: ECO 100 or equivalent. (3 crs.)

ECO 311. LABOR ECONOMICS. An introduction to labor economics, theories of the labor movement, the American labor movement, wage and employment theory, comparative labor movements and trade union impact on wages, prices, and national income. Prerequisites: ECO 201 & ECO 202. (3 crs.)

ECO 320. MATHEMATICAL ECONOMICS. A course designed to enable Economics and Business majors to understand the simpler aspects of mathematical economics. Relationships of functions and graphs, simultaneous equations, maximization techniques, and those parts of algebra and calculus required for economic analysis are presented. Prerequisites: ECO 201, ECO 202 & MAT 181 or MAT 182. (3 crs.)

ECO 322. MANAGERIAL ECONOMICS. A survey of analytical techniques available to the modern business manager. Topics include economics for managers, business forecasting, cost and production functions, industrial pricing, profit planning, business decision making. Prerequisites: ECO 201, ECO 202 & ECO 320 or a course in calculus. (3 crs.)

ECO 331. REGIONAL ECONOMICS. An introduction to regional 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. Prerequisite: ECO 100 or ECO 201 or ECO 202. (3 crs.)

ECO 342. ENVIRONMENTAL ECONOMICS. Environmental pollution, failure of the market system, and optimum resource allocation; levels of pollution abatement and public policy; energy and public policy. Prerequisite: ECO 201 & ECO 202. (3 crs.)

ECO 351. COMPARATIVE ECONOMIC SYSTEMS. An analysis of the institutional structure of each type of economy and understanding of the reasons for the similarities and differences of institutional structures by comparing capitalist, socialist, and communist economic systems. Prerequisites: ECO 100 or ECO 201 or ECO 202. (3 crs.)

ECO 379. SPECIAL PROBLEMS IN ECONOMICS. This course is designed to meet the changing interests of students and faculty. Topics vary in response to those interests. Prerequisites: ECO 201 & ECO 202 or permission of instructor. (Variable crs.)

ECO 401. INDUSTRIAL ORGANIZATION. Analysis of market structure and its relation to market performance, changing structure of U.S. industry, and pricing policies in different industrial classifications of monopoly and competition in relation to the problems of public policy. Prerequisite: ECO 201. (3 crs.)

ECO 405. PUBLIC FINANCE. A study of the role of federal, state, and local governments in meeting public wants. Topics include analysis of tax theory and policy, government expenditures, public debt management, government budgeting, benefit cost analysis and income redistribution. Prerequisites: ECO 201 & ECO 202. (3 crs.)

ECO 421. APPLIED ECONOMETRICS. The formulation, estimation and testing of economic models. Topics include single variable and multiple variable regression techniques, estimation of lagged relationships, use of dummy variables, problems of multicolinearity and autocorrelation and system of equations. Prerequisites: MAT 225, ECO 201 & ECO 202. (3 crs.)

ECO 431. INTERNATIONAL ECONOMICS. A descriptive and theoretical analysis of international trade, balance of payment accounts, comparative costs, mechanisms of international financial relations. Prerequisites: ECO 201 & ECO 202. (3 crs.)

ECO 433. ECONOMICS OF GROWTH AND DEVELOPMENT. Understanding of the obstacles to economic growth, requirements for growth, and other topics related to economic growth in underdeveloped countries. Prerequisites: ECO 201 & ECO 202. (3 crs.)

ECO 451. HISTORY OF ECONOMIC THOUGHT. An extensive survey of the development of economic thought from ancient times to the present stressing the contributions of Smith, Ricardo, Marx, Marshall and Keynes. This course should be taken quite late in the undergraduate career. Prerequisites: ECO 201 & ECO 202. (3 crs.)

ECO 492. ECONOMICS INTERNSHIP. The student is placed with a business firm, a bank, an industrial firm, a government office, a health care facility or a similar institution for on-the-job experiences related to classroom course work. This course should be taken quite late in the undergraduate career. Credit hours will range from 1 to 12 depending upon the nature of the particular assignment. Prerequisite: Senior standing or permission of instructor. A maximum of 12 credits can be used toward the completion of degree. (Variable crs.)

ECO 495. SEMINAR IN ECONOMICS. An intensive examination of selected subjects from the fields of Economics, Management, Business and Labor Relations. It is a repeatable course if course content is different. Prerequisite: Permission of instructor. (3 crs.)

Education - EDU

EDU 210. TEACHING IN A MULTI-CULTURAL SOCIETY. The development of intergroup-interpersonal awareness to promote a better understanding of different races, sexes, religious beliefs, national origins, and socioeconomic backgrounds found in our multicultural society. Emphasis on developing the awareness, knowledge skill and competency needed for positive human relationships. (3crs.)

EDU 340. MAINSTREAMING EXCEPTIONAL LEARNERS. This course is designed to prepare educational personnel with the information and skills necessary for accommodating exceptional learners in a variety of school arrangements. Focus is on assessment and remediation of learning problems, classroom organization and management, teaching resources, legal issues, curriculum considerations, parent involvement, condition of professional services, and many other issues pertinent to the education of exceptional learners in the "mainstream" of education. (3 crs.)

EDU 449. STUDENT TEACHING - SPECIAL EDUCATION. This course is only for those students who are student teaching overseas or through another college or university. (Variable crs.)

EDU 459. STUDENT TEACHING - ELEMENTARY EDUCATION. This course is only for those students who are student teaching overseas or through another college or university. (Variable crs.)

EDU 469. STUDENT TEACHING - SECONDARY EDUCATION. This course is only for those students who are student teaching overseas or through another college or university. (Variable crs.)

Educational Foundations - EDF

EDF 121. SCHOOLS AND VALUES. Schools and Values will examine the values that are taught and modeled in classrooms from pre-school through post-secondary levels. The course will consider how teachers and other staff unavoidably contribute to the moral development of the students they serve. Although the course is designed primarily for education majors, it will address issues that should concern other majors who have a vested interest as citizens and parents in how schools influence the moral development of students. (3 crs.)

EDF 290. POLICY STUDIES IN AMERICAN EDUCATION. A course for prospective teachers designed to study the educational policy process at all levels, from local school districts to the federal government, as well as a study of the policies that have shaped educational practices in today's schools. Through a critical examination of a number of timely and interesting developments in contemporary education, students will relate historical, philosophical and social perspectives to contemporary interpretation. Prerequisite: Must have sophomore standing. (3 crs.)

EDF 301. COMPUTERS FOR TEACHERS. This course in educational computing provides the learner with fundamental concepts and skills that build a foundation for applying computers and other 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. Laboratory assignments requiring use of the university computer facilities are designed to provide generalizable and transferable competencies. (3 crs.)

EDF 302. APPLIED INSTRUCTIONAL TECHNOLOGY. This course is the study of the principles of selection, use and development of basic and advanced instructional technology. The student will study "Instructional Systems Technology," and appropriate media. Laboratory sessions include learning and practicing the proper operation of equipment and identifying and solving typical instructional problems. Prerequisite: EDF 301 Computers for Teachers or computer literacy by examination. (3 crs.)

EDS 300 PROBLEMS OF SECONDARY EDUCATION. This is a course in professional development which focuses on the practical problems of teaching and learning in the secondary school. Field experiences enable student participation in a range of activities which provide real life experiences with the problems confronting public school teachers today. (3 crs.)

EDS 440. TEACHING OF ENGLISH IN SECONDARY SCHOOLS. The application of principles of educational psychology, philosophy, and sociology to the teaching of English in secondary schools. The course includes both practical techniques of classroom practice and an investigation of the larger problems of the profession. Adequate prior content courses in English are necessary to the student undertaking this course. (3 crs.)

EDS 445. TEACHING OF SOCIAL STUDIES IN SECONDARY SCHOOLS. Methods that may be used in teaching social studies. Emphasis is placed on the philosophy, objectives, courses of study, and organization of subject matter for teaching purposes; curriculum materials; procedures; and development. (3 crs.)

EDS 460. TEACHING MATHEMATICS IN SECONDARY SCHOOLS. To further develop the mathematics required to be an effective teacher of secondary school mathematics. To acquaint the student with general procedures in classroom preparation, organization, control and evaluation. To acquaint the student with specific procedures for developing a problem-solving approach to the teaching of mathematics. Results of mathematical standards according to recent research, studies and trends are indicated. The evaluation and use of technological and visual aids pertaining to mathematics are considered. (3 crs.)

EDS 461. STUDENT TEACHING AND SCHOOL LAW. This is the final and most extensive clinical experience. Students are assigned to a supervising teacher or teaching team at one of our clinical sites. The students spend full time in classroom teaching for a semester of fifteen weeks. A university supervisor observes periodically and a weekly practicum brings student teachers together to discuss common problems and concerns and those aspects of school law pertinent for classroom teachers. Student teaching is scheduled during either the fall or spring terms of the senior year. Pass/fail grade. (12 crs.)

EDS 465. DEVELOPMENTAL READING IN THE SECONDARY SCHOOL. Intended to help the prospective teachers of the Secondary Education academic subject areas develop an understanding and appreciation of the reading skills needed by their students. Methods of establishing awareness of general reading needs as well as the special skills unique to their subject areas are stressed. (2 crs.)

EDS 466. TEACHING MODERN LANGUAGES (K through 12). The course covers the theory and practice of teaching modern languages. Instruction in the use of the laboratory is given. Emphasis is given to the student developing an adequate understanding of the needs, interests, learning characteristics and motivations of students at various ages of development, K through 12. (3 crs.)

EDS 467. TEACHING OF SCIENCE IN SECONDARY SCHOOLS. This course prepares pre-service middle school and high school science teachers to engage students in understanding science through personal experience. The course emphasizes strategies that engage students in active inquiry, collaboration with peers, and acquiring and using tools of learning in an experiential learning environment. The approach of the course is experiential, inquiry-oriented and reflective. Prerequisite: 12 hours of work in the major field and junior-level status. (3 crs.)

EDS 494. STUDENT TEACHING WORKSHOP. For those individuals who have had at least one year of teaching experience in a private school, college, military, etc. Approval by the department chair and director of student teaching is required. Typically, students are placed in a public school during the month of May until the close of the school year (5-6 weeks) in order to determine competence in a public school setting for state certification. (6 crs.)

EET 110. DC CIRCUITS. An introduction to the study of electrical circuits. Topics include resistance, voltage, current, mesh analysis, and nodal analysis. Network theorems pertaining to dc sources are presented. Corequisite: MAT 181. (4 crs.)

EET 160. AC CIRCUITS. 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. Prerequisite: EET 110. Corequisite: MAT 191. (4 crs.)

EET 170. DIGITAL ELECTRONICS DESIGN. An introduction to the design of combination and sequential digital logic circuits. Topics include number systems, codes, gates, latches, decoders, multiplexers, flip-flops, counters, A/D and D/A concepts and memory circuits. Two hours of lecture and three laboratory hours per week. Prerequisite: None. (3 crs.)

EET 210. LINEAR ELECTRONICS I. A study of solid state diodes and transistors. Methods of biasing, temperature stabilization, determining voltage gain and input resistance for small signal amplifiers. Prerequisite: EET 160. (4 crs.)

EET 220. INTRODUCTION TO ELECTRIC POWER. A study of the fundamentals of three-phase circuits, transformers, dc machines, polyphase ac machines, and single-phase ac machines. Prerequisite: EET 160. (4 crs.)

EET 260. LINEAR ELECTRONICS II. An introduction to power amplifiers, differential amplifiers, field effect transistors, operational amplifiers, frequency effects, voltage regulation, and operational amplifier applications. Prerequisites: EET 210, MAT 281. (4 crs.)

EET 270. INTRODUCTION TO MICROPROCESSOR DESIGN. Introduction to programming concepts includes branching, stack operations, subroutines and vector interrupts. Interfacing topics include coding, drivers, D/A and A/D conversion. Prerequisite: EET 170. (4 crs.)

EET 310. METHODS IN ENGINEERING ANALYSIS. Introduction to matrix theory, classical first and second order transient analysis, active filter and oscillator design, and Fourier analysis. Computer solutions to special problems will be presented. Prerequisites: EET 260, MAT 281. Corequisites: EET 320, MAT 282. (4 crs.)

EET 320. 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. Prerequisites: EET 260, MAT 281. Corequisites: EET 310, MAT 282. (4 crs.)

EET 335 MICROPROCESSOR INTERFACING. This course deals with advanced concepts in the programming and 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 will provide the student with experience in developing the hardware and software required to incorporate microprocessors into systems that solve real-world interfacing problems. Three lecture hours and a three laboratory hours per week. (4 crs)

EET 360. MICROPROCESSOR ENGINEERING. The analysis and development of MCU stand-alone controllers. The requirements for the design of Industrial applications and the use of advanced software development tools and PCs as development systems will be presented. Prerequisite: EET 330. (4 crs.)

EET 370. INSTRUMENTATION DESIGN I. The design of electronic instruments utilizing linear and digital integrated circuits and opto-electronic devices. Topics will include dual slope digital voltmeters, electronic thermometers, isolation amplifiers, frequency counters and function generators. Numerical linearization methods for non linear transducers are introduced. Prerequisite: EET 320. (4 crs.)

EET 400. SENIOR PROJECT PROPOSAL. 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 a time schedule for completion. Prerequisite: Senior Status. Corequisite: ENG 217. (1 cr.)

EET 410. AUTOMATIC CONTROL SYSTEMS. Design of feedback control systems and devices as applied to electrical machinery and transducers. Topics will include Bode plots, the root-locus method and nyquist diagrams. Prerequisite: EET 370. Corequisite: EET 420. (4 crs.)

EET 420. INSTRUMENTATION DESIGN II. A microprocessor-based instrumentation design course utilizing linear, digital and opto-electronic devices. Software solutions to input/output problems will be considered along with software solutions to nonlinear transducer data. Prerequisite: EET 370. Corequisite: EET 410. (4 crs.)

EET 430. RF COMMUNICATIONS. Communication systems principles including: AM/FM modulation, AM/FM demodulation, transmitters, receivers, antennas, transmission lines, digital techniques and protocols. Prerequisite: EET 320. (4 crs.)

EET 440. 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, internetworking devices and protocols. Hands-on application of network theory is provided via a laboratory style term project involving a multi-user network computer system. The student will design and develop the hardware and communication software required to implement access to a network available, shared resource. (4 crs.)

EET 450. 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 the approval from the advisor, group projects may also be involved. Three laboratory hours per week. Prerequisite: EET 400. (3 crs.)

EET 460. DIGITAL SIGNAL PROCESSING. Introduction to linear systems, digital filters and the Z-Transform, and the Fast Fourier Transform. Fundamentals of sampling concepts and the interfacing of analog and digital signal processing will also be covered. Prerequisites: EET 410, EET 360. (4 crs.)

EET 475. BIOMEDICAL ENGINEERING TECHNOLOGY. A study of widely used medical devices with emphasis upon those types used for patient care in the hospital. The Physics and Engineering of various devices will be presented and their relationship to human anatomy and physiology will be emphasized. Hospital organization and the role of the Clinical Engineering department will be examined. Prerequisite: EET 420. (4 crs.)

EET 476. BIOMEDICAL ENGINEERING TECHNOLOGY INTERNSHIP. Upon acceptance to a hospital the student will work with a Clinical Engineer and/or a Biomedical Equipment Technician inspecting, maintaining, calibrating and modifying biomedical equipment. Programs of instruction will vary from hospital to hospital, but the student will be exposed to medical devices from all special and critical care areas. Prerequisite: EET 475. (4 crs.)

EET 495 ELECTRICAL ENGINEERING TECHNOLOGY INTERNSHIP. Upon acceptance to an internship site, the student will work with an electrical engineer and/or an electronic technician inspecting, maintaining, calibrating, testing, analyzing, assembling, modifying or designing various types of electronic devices. Programs of instruction will vary but the student will be provided with practical work experience in a dynamic environment in which they will be dealing with actual problems requiring practical solutions. Advisor, department chairperson and college dean approval is required before course enrollment. (4 crs.)

Elementary Education - EDE

Prerequisites for all EDE (except EDE 100) courses include completion of 48 college or university credits with a minimum 2.6 QPA. and achievement of a satisfactory score on the Pre-Professional Skills Test (PPST) of Praxis Series.

EDE 100. READING, STUDY AND LISTENING SKILLS. The purpose of this course is to develop reading, study, and listening skills at the college level. Included are suggestions for taking more efficient notes, time management, locating and utilizing library resources, development of vocabulary, and improving reading and listening skills for college reading purposes. (3 crs.)

EDE 205. ART FOR THE ELEMENTARY GRADES. Emphasis is placed on the nature of creativity and its values in the development of the whole child. Creativity is given personal meaning through the exploration of art materials and techniques. The role of the classroom teacher teaching art is established. (3 crs.)

EDE 211. INSTRUCTIONAL STRATEGIES IN ELEMENTARY AND EARLY CHILDHOOD EDUCATION. This course is designed to teach students a set of teaching behaviors that are related to student achievement in the elementary and early childhood classrooms. Topics covered include: conception of elementary/early childhood curriculum, Bloom's taxonomy of cognition, questioning and discussion behaviors, utilization of thinking skills, integration of subject areas, inductive and deductive teaching, observation and assessment of children, cognitive and affective concerns of children as outlined by Piaget, and content presentation skills. Through class discussions, practice sessions, role-playing, and microteaching, the students will learn how to plan for and utilize strategies based on research in effective teaching and in the cognitive and affective development of children. (3 crs.)

EDE 300. LANGUAGE AND LITERACY IN THE ELEMENTARY SCHOOL I. This is the first in a series of two required courses that examine the development of literacy in elementary-age children. Students are taught how to teach reading, writing, listening, and speaking skills using an integrated approach, consistent with the constructivist theory of teaching and learning. Theoretical orientations to several approaches of literacy instruction 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 microteaching, as well as in field work. (3 crs.)

EDE 305. MATHEMATICAL CONTENT AND METHOD IN THE ELEMENTARY SCHOOL. Emphasis is on understanding children's cognitive development and perception and their work with mathematics. To accomplish this it is suggested that students work with children. The professor demonstrates learning activities appropriate to the developmental and academic levels of children. As time permits, and on the basis of the experiences gained through observing and working with children, critical analyses of commercial arithmetic materials and texts, as well as recent trends and current projects in arithmetic, will be considered. Prerequisites: 32 college credits, 9 natural science credits. (3 crs.)

EDE 306. TEACHING OF SOCIAL STUDIES FOR ELEMENTARY GRADES. The foundations of the social studies are examined. Instructional strategies for the constructivist classroom will be emphasized. Attention will be given to current trends and the present status of social studies. Prerequisites: 32 college credits, 9 social science credits. (3 crs.)

EDE 307. SCIENCE FOR THE ELEMENTARY SCHOOL. This course is designed to acquaint students with the history of science curricula, the content of science, and the process of science teaching. The instructor will generate enthusiasm for science, encourage scientific inquiry, demonstrate positive attitudes, enhance appreciation for science and science interests, and model effective science teaching consistent with the Elementary/Early Childhood Department's Constructivist Model for Teaching. Prerequisites: 32 college credits; 9 natural science credits. (3 crs.)

EDE 311. CHILDREN'S LITERATURE. This course acquaints the student with literature available for children and various techniques that may be employed in elementary classrooms to stimulate interest in reading and telling stories and poems. Prerequisites: 32 college credits; 9 humanities credits. (3 crs.)

EDE 320. FIELD EXPERIENCES MIDDLE SCHOOL. The student receives background and experience in working with intermediate grade children in the classroom. Lectures and classroom teaching experiences are combined to give the student an opportunity to discover an aptitude and interest in working with children. (3 crs.)

EDE 321. FIELD EXPERIENCES ELEMENTARY SCHOOL. The students receive background and experience in working with elementary grade children in the classroom. Lectures and classroom teaching experiences are combined to give students an opportunity to discover their aptitude and interest in working with young children. (3 crs.)

EDE 330. TEACHING IN THE MIDDLE SCHOOL. Successful instruction in the middle school calls for creating an environment that is responsive to the developmental needs of early adolescents. This course provides the student with an understanding of the overall structure of middle school curriculum and instruction. The historical development, goals, philosophy, and mission of middle level education will be explored. The student will be introduced to a variety to instructional strategies appropriate for the wide diversity of development among middle school students. (3 crs.)

EDE 340. LANGUAGE AND LITERACY IN THE ELEMENTARY SCHOOL II. This is the second in a series of two required courses that examine the development of literacy in elementary-age children. Students review the theoretical bases of an integrated approach to teaching the language arts. Specific strategies that reflect these theories are then investigated, demonstrated, and practiced. Such strategies teach children necessary literacy skills through a meaning-centered approach, and emphasize the integration of all subject areas, as well as the connection between the language arts modes. Students are expected to demonstrate their abilities to connect theory to practice in field work. (3 crs.)

EDE 450. ASSESSING CHILDREN'S PERFORMANCE. This course presents practical methods and techniques for planning, construction and use of oral, performance, essay, and objective tests with an assumption that evaluation's role in the teaching/learning process is both active and fundamental. (3 crs.)

EDE 461. STUDENT TEACHING. During this course the student is assigned to work in two classrooms in the public schools. Under supervision, the student observes and participates in all teaching activities related to the performance of a teacher's work in the elementary grades. Besides field work, students attend practicum class once a week. Discussions are centered around the current materials utilized in all subject areas. Pennsylvania school laws relevant to the work of the classroom teacher are analyzed and discussed. Opportunities are provided to discuss problems encountered by students in their student teaching experiences. Teaching opportunities are identified and discussed on a weekly basis. (12 crs.)

English - ENG

ENG 100. ENGLISH LANGUAGE SKILLS. A beginning course which 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. (3 crs.) Fall & spring.

ENG 101. ENGLISH 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. (3 crs.) Fall & spring.

ENG 102. ENGLISH 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. Prerequisite ENG. 101 (3 crs.) Fall & spring.

ENG 106. INTRODUCTION TO POETRY. An introduction to the elements of poetry through the close analysis and explication of selected poetry from a variety of poets. (3 crs.) Fall & spring.

ENG 107. INTRODUCTION TO FICTION. An introduction to the elements of fiction through the close reading of selected short stories and novels by a variety of authors. (3 crs.) Fall & spring.

ENG 108. INTRODUCTION TO DRAMA. An introduction to the basic elements of drama. Readings will be selected from works from the Greek Classical Period to the Modern Age. (3 crs.) Fall & spring.

ENG 155. BLACK LITERATURE. An introduction to the writings of Black Americans in poetry, fiction, and drama, ranging from the Harlem Renaissance of the 1920s to the contemporary productions of Leroi Jones, Ishmael Reed and Toni Morrison. (3 crs.) Fall.

ENG 167. JOURNALISM I (NEWSWRITING). An introduction to basic news gathering and newswriting taught by in-class exercises early in the semester, followed by weekly assignments that require submissions to the California Times. (3 crs.) Fall.

ENG 168. JOURNALISM II (FEATURE WRITING). Feature writing and in-depth news reporting. Students write four feature articles suitable for publication in the California Times. (3 crs.) Spring.
ENG 203. GREAT BOOKS. The texts and historical backgrounds of selections from the most highly regarded literature of the world. The range is from the classical Greek era to the twentieth century. (3 crs.) Fall & spring.

ENG 205. WORLD LITERATURE TO 1600. Examples of works from a variety of periods and cultures through 1600 are examined for their literary merit and national characters. Works are read in translation. (3 crs.) Fall.

ENG 206. WORLD LITERATURE FROM 1600. Examples of works from a variety of cultures and periods after 1600 are examined for their literary merit and national characters. Works are read in translation. (3 crs.) Spring.

ENG 211. BUSINESS WRITING I. An introduction to the analysis, writing, and oral presentation of formal and semi-formal documents essential to the business communities. Prerequisite: ENG 101. (3 crs.) Fall & spring.

ENG 212. BUSINESS WRITING II. A continuation in the practice of those skills developed in Business Writing I. Prerequisite: ENG 211 Business Writing I or equivalent writing ability. (3 crs.) Fall & spring.

ENG 217. SCIENTIFIC AND TECHNICAL WRITING I. An introduction to the specific techniques used in the preparation of reports and other scientific documents. Recommended for Science and Technology majors. Prerequisite ENG 101. (3 crs.) Fall & spring.

ENG 218. SCIENTIFIC AND TECHNICAL WRITING II. A problem solving approach to technical writing: adapting to various audiences, organization of complex documents, computer documentation. Students will prepare extensive technical reports. (3 crs.) Alternate spring.

ENG 254. AMERICAN JOURNALISM: A study of the recent history of journalism and of the present state of the profession. The emphasis is on print journalism; however, the news gathering and reporting aspects of radio and television are covered. Prerequisites: ENG 167 & ENG 169. (3 crs.)

ENG 301. ENGLISH LITERATURE I. A survey of English literature from the beginnings in the sixth century to the late eighteenth century. (3 crs.) Fall.

ENG 302. ENGLISH LITERATURE II. A survey of English literature from the Romantic poets to the present day. (3 crs.) Spring.

ENG 308. RESEARCH FOR WRITERS. For students in each of the Professional Writing concentrations. Basic library materials and techniques, on-campus resources, government documents, research libraries, advanced techniques of interviewing, document analysis, etc. Concludes with a

prepublication draft of a researched paper in the student's area of specialization. (3 crs.) Alternate fall.

ENG 310. SURVEY OF OLD AND MIDDLE ENGLISH LITERATURE. A study of English literature from the beginnings to approximately 1500. Some of the topics, authors, and works are Beowulf, elegiac and Christian poetry, the rise of the drama, the romance (Sir Gawain and the Green Knight and Thomas Malory's Morte D'Arthur), and selections from Geoffrey Chaucer's Canterbury Tales. Most of the writing is read in Modern English versions. Attention is paid to historical and social backgrounds. (3 crs.) Alternate spring.

ENG 313. SPORTSWRITING: A study of the history of sportswriting in America and the techniques of writing daily coverage of sports and athletes. Students will study interviewing, finding and using statistics, the standards and practices of the profession and the make-up, layout and design of the daily sports page. Students will be assigned beats and will be asked to write at least one story per week. (3 crs.)

ENG 315. SURVEY OF AMERICAN WOMEN WRITERS: METHOD AND TEXT. 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 to 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. (3 crs.)

ENG 318. POETICS. Through readings from a text on poetic theory, essays on poetry by poets, and an anthology of poetry, students learn to analyze poems in great detail, stressing poetry as an act of language and something which is made as much as it is inspired. Students become acquainted with the variety of means by which the literary craftsman creates feeling and meaning. (3 crs.)

ENG 321. THE ENGLISH RENAISSANCE: SKELTON THROUGH DONNE. A study of nondramatic prose and poetry chosen from such writers as Thomas Wyatt, the Earl of Surrey, Thomas Sackville, John Skelton, Sir Philip Sidney, Edmund Spenser, William Shakespeare, and John Donne, with emphasis on such literary genres as the lyric and sonnet, and an examination of various philosophical, historical, and social documents. (3 crs.)

ENG 322. THE ENGLISH RENAISSANCE: BACON THROUGH MARVELL. A study of the nondramatic prose and poetry of England in the seventeenth century from the works of John Donne, Ben Jonson, Robert Herrick, George Herbert, John Milton, and Henry Vaughan. Emphasis on the three schools of poetry of this century. (3 crs.)

ENG 334. NEWSPAPER REPORTING. A professional level course that acquaints students with basic newsroom procedures and assignments. Prerequisites: ENG 167 & ENG 169. (3 crs.) Fall.

ENG 336. COMPUTER ASSISTED NEWSREPORTING. An advanced level journalism course designed to show students how to gain access to computer records and how to arrange that material into meaningful patterns using an interrelational data base program and a simple spread sheet program. The course assumes no prior knowledge of computers and is designed for the computer novice. (3 crs.) Alternate fall.

ENG 337 SURVEY OF AMERICAN LITERATURE I. This course spans American literature from its colonial inception to the end of the Civil War, the literature's formative years, focusing on diverse forms and voices of expression. This literature presents writings of Native Americans, Colonialists, Federalists, Romantics, Trancendentalists, Slaves, and others as formative expressions of our American heritage. (3 crs.)

ENG 338 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 Twentieth Century, culminating in works by contemporary authors. The emphasis is on showing the development of an eclectic and uniquely American literature. (3 crs.)

ENG 341. ROMANTIC LITERATURE. An intensive study of selected works by such Romantic poets as William Blake, William Wordsworth, Samuel Taylor Coleridge, Percy Bysshe Shelley, John Keats, and Lord Byron. (3 crs.)

ENG 342. VICTORIAN LITERATURE. An historical and critical survey of the poetry and nonfictional prose of the Victorian period through such writers as Alfred Tennyson, Robert and Elizabeth Barrett Browning, Thomas Carlyle, Matthew Arnold, Dante Gabriel and Christina Rossetti, Gerard Manley Hopkins, John Stuart Mill, John Ruskin, John Henry Newman, T. H. Huxley, and Walter Pater. (3 crs.)

ENG 345. ENGLISH GRAMMAR AND USAGE. Provides future English teachers, professional 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. (3 crs.) Fall.

ENG 346. HISTORY OF THE ENGLISH LANGUAGE. A survey of the development of the language from its Germanic base to the emergence of American English. Explanations of sound shifts and foreign and social influences. (3 crs.) Spring.

ENG 347. INTRODUCTION TO LINGUISTICS. An examination of 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. (3 crs.) Fall.

ENG 348. HISTORY OF LITERARY CRITICISM. An examination of major critical documents from Plato through the modern critics. An intensive examination of the works themselves, with some additional concern on their place in literary history. (3 crs.)

ENG 351. PUBLISHING THE MAGAZINE. Students in this course publish a magazine, Flipside. They contribute works of literature and reportage, illustrate it with original work or with photographs, solicit contributors, finance the magazine through advertising, and establish editorial policy. (3 crs.) Fall & spring.

ENG 352. STUDIES IN WRITING. 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. (3 crs.)

ENG 355. SURVEY OF THE ENGLISH NOVEL I: THE BEGINNING THROUGH SCOTT. A study of the development of the novel from its beginnings through the Romantic period, with emphasis on Daniel Defoe, Samuel Richardson, Henry Fielding, Tobias Smollett, and Jane Austen. (3 crs.)

ENG 356. SURVEY OF THE ENGLISH NOVEL II: DICKENS TO THE PRESENT. A study of the novels and novelists of the Victorian period and the twentieth century, including Charles Dickens, Charlotte, Emily and Ann Brontë, W. M. Thackeray, George Eliot, Joseph Conrad, James Joyce, and Virginia Woolf. (3 crs.)

ENG 357. TWENTIETH CENTURY BRITISH LITERATURE TO WORLD WAR II. A study of fiction, drama, and poetry with emphasis on W. B. Yeats, D. H. Lawrence, George Bernard Shaw, James Joyce, Joseph Conrad, Virginia Woolf, E. M. Forster, and W. H. Auden. (3 crs.)

ENG 358. CONTEMPORARY LITERATURE SINCE WORLD WAR II. An exploration of texts, in a variety of genre including major movements, critical, social and political from writings both in English and in translation. (3 crs.)

ENG 371. CRITICAL THEORY AND THE 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 emphasized items typically taught in secondary schools, including both canonical (e.g., Shakespeare's plays) and non-canonical (e.g., Young Adult literature and Multicultural literature) works. (3 crs.)

ENG 372. COMPOSITION THEORY AND THE TEACHING OF WRITING. A required course for English majors in the Secondary English track, Composition Theory and the Teaching of Writing is an introduction to rhetorical theory as it concerns the nature of writing and the teaching of writing. The 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. (3 crs.)

ENG 376. 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. (3 crs.)

ENG 377. 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. (3 crs.)

ENG 378. CREATIVE WRITING: DRAMA. Writing techniques for the modern stage; students progress from idea through written text to the production of a scene or a one-act play. (3 crs.)

ENG 401. COPYWRITING. Students who have already taken the basic advertising course are expected to improve preexisting writing skills through individual and group projects in the areas of direct mail advertisements, newspaper and magazine space advertisements, industrial newsletters and brochures, radio and TV advertisements. Each student writes at least two usable advertisements for off-campus and one for a campus program or organization. Not for beginners. Prerequisite: ENG 437. (3 crs.)

ENG 415. CHAUCER. The Canterbury Tales and other works. (3 crs.)

ENG 419. INTERNSHIP IN PROFESSIONAL WRITING. Introduces students to the competitive world of professional writing. Students and cooperating institutions conclude a formal agreement whereby they work at a job and simultaneously receive undergraduate credit. All details of the course are to be worked out with the Coordinator of Professional Writing. (Variable crs.) Fall & spring.

ENG 425. SHAKESPEARE. Explores in considerable depth, and with special reference to the condition of Shakespeare's times and theater, some of his greatest plays, especially (a) those most often studied in secondary school and (b) his great tragedies. (3 crs.)

ENG 427. MILTON. An examination of the major poetry: Paradise Lost, Paradise Regained, Samson Agonistes, and Lycidas. The prose is treated insofar as it is related to the poetry. (3 crs.)

ENG 430. ADAPTATION OF LITERARY MATERIALS. Adaptation of literature to the mechanical demands of television, radio, theater, and film. While remaining faithful to an author's intent, the student must adapt written texts to each of the following: television, theater, and film. (3 crs.)

ENG 437. ADVERTISING. An introduction to marketing theories, behavior patterns, and techniques of advertising campaigns: copywriting, layout, and production of advertising through working for an actual client. (3 crs.) Fall.

ENG 440. LINGUISTICS AND THE TEACHING OF ENGLISH. The purpose of this course is to help prepare English and Language Arts majors through an understanding of two applications of linguistics to language learning and research. In the first application, students will examine linguistic research focused upon the study of schooling and the teaching and learning of language to advance an understanding of students' developing reading, writing and literary practices. In the second application, students will analyze various linguistic research methodologies to develop a sense of how they might apply one or more of them to their own teaching. Assignments and course readings are intended to encourage students to acquire a critical sense of pedagogical practice used in the teaching of reading and writing, as well as a critical sense of the relative merit of various research approaches to the study of language learning. (3 crs.)

ENG 448. PRACTICAL CRITICISM. Provides examples of criticism and the opportunity to criticize poetry, fiction, and drama. (3 crs.)

ENG 478. DIRECTED PROJECTS. (Variable crs.)

ENG 485. STUDIES IN TWENTIETH CENTURY ENGLISH LITERATURE. Contemporary trends in literature, the war novel, the poets of the thirties, Irish literature, the British novel and theater. (3 crs.)

ENG 487. STUDIES IN AMERICAN LITERARY GENRES. The American short story, the nineteenth century American novel, the twentieth century American novel, modern American poetry, American drama, American nonfiction. (3 crs.)

ENG 488. STUDIES IN DRAMA. Classical drama, theater of the absurd, continental drama, film and television as drama, realism and naturalism in drama. (3 crs.)

ENG 495. CREATIVE WRITING SEMINAR. The fictional principles learned in ENG 376 are applied to the writing of a major creative work, such as novella, and the student is given the opportunity to polish and extend writing skills previously acquired. (3 crs.)

ENG 496. 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. (3 crs.)

Environmental Studies - ENS

ENS 101. INTRODUCTION TO ENVIRONMENTAL SCIENCE. The broad field of environmental management including humans' biological basis, soil and land use, water, air pollution and noise 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. Three lecture hours weekly. (3 crs.) Fall & spring.

ENS 341. TECHNIQUES IN WATER AND WASTEWATER ANALYSIS. A study of the chemical testing of water in wastewater plants, streams, and drinking water sources. Emphasis is placed on learning acceptable levels of chemicals in different types of water. Samples of water from sources of concern are analyzed in the laboratory portion of the course. Three lecture hours and three laboratory hours weekly. Prerequisites: CHE 101 & CHE 102. (4 crs.)

ENS 380. WILDLIFE ISSUES. This course is designed to familiarize students with current issues in wildlife biology allowing them to propose and discuss possible solutions. The course will consist of field trips and projects emphasizing wildlife issues in the Northeastern United States. Trips will be supplemented with discussions of national and international wildlife issues from current literature. (4 crs.) summer.

ENS 420. PRINCIPLES OF WILDLIFE MANAGEMENT. This course is designed to provide students with an understanding of the philosophies and concepts of scientific wildlife management. Major emphasis will be placed on wildlife management in North America, but differing perspectives from other regions of the world will be incorporated into the course. Topics to be covered will include monitoring habitats and habitat management, population exploitation and administration, economics, and socio-political topics as they relate to wildlife management. Three lecture hours and three laboratory hours weekly. Prerequisites: BIO 115 & BIO 120. (4 crs.) Fall.

ENS 423. WILDLIFE MANAGEMENT TECHNIQUES. This course will cover techniques commonly used by wildlife biologists with emphasis on those applicable to birds and mammals. Important techniques covered in the course include aging and sexing of important game species, habitat measurement and evaluation, population analysis, and analysis of food habits. The lecture portion of the course provides an introduction to common techniques and the lab emphasizes practical use and application of those techniques. Three lecture hours and three laboratory hours weekly. Prerequisites: BIO 115, BIO 120 & BIO 125. (4 crs.) Spring.

ENS 430. AIR QUALITY MONITORING. The technologies involved in the abatement of emissions from mobile and stationary sources, monitoring techniques, and air quality standards. Three lecture hours weekly. Prerequisites: CHE 331, CHE 361, PHY 121, PHY 122, & MAT 215. (3 crs.) Alternate fall.

ENS 424. FISHERIES MANAGEMENT. A combination of lectures, labs, 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.

ENS 431. SOLID WASTE MANAGEMENT. The fundamental techniques involved in the collection, processing, and disposal of urban, industrial, and agricultural wastes. Three lecture hours weekly. Prerequisites: CHE 331. (3 crs.) Alternate spring.

ENS 432. ENVIRONMENTAL REGULATIONS. This course will cover the history of natural resource protection, local, state, and federal laws and policy, enforcement, and current issues. Lectures will include discussion of laws ranging from the Clean Air act to local Fish and Wildlife regulations. (3 crs.) Alternate spring.

ENS 459. ENVIRONMENTAL RESEARCH PROBLEMS. An independent study with a cooperating faculty member. Emphasis on scientific research on contemporary environmental problems. These independent studies are as field-oriented as possible, with a final research paper written in proper scientific format. This course is not repeatable. (3 crs.)

ENS 475. 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. Prerequisites: BIO 310 and permission of instructor. (4 crs.)

ENS 492. 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. Three lecture hours and three laboratory hours weekly. Prerequisites: BIO 310 & MAT 215. (4 crs.) Fall.

ENS 495. DESIGN AND ANALYSIS. The purpose is to provide with the theoretical and applied basis of experimental design, sampling theory and sampling designs, data input and output, statistical analysis and interpretation of research studies. The application of computer methods for data base, spreadsheet, word processing, and statistical packages will also be emphasized. Three lecture hours weekly. Prerequisites: BIO 115 & MAT 273 or MAT 281 or permission of the instructor. (3 crs.) Fall.

Finance - FIN

FIN 201. INTRODUCTION TO FINANCE. A survey course which covers an introduction to financial markets and institutions responsible for the flow of funds in the economy. The basic principles and concepts which assist the market participants in making sound financial decisions are discussed. Prerequisite: ECO 100 is recommended. (3 crs.)

FIN 211. PERSONAL MONEY MANAGEMENT. 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. Prerequisite: ECO 100 or permission of instructor. (3 crs.)

FIN 301. FINANCIAL MANAGEMENT. The study of financial analysis, planning and control, including working capital management, capital budgeting, cost of capital, and other selected subjects. Advanced techniques of financial analysis are employed. Prerequisites: ECO 201 & MAT 171. MAT 225 is recommended. (3 crs.)

FIN 302. ADVANCED FINANCIAL MANAGEMENT. A continuation of FIN 301. An intensive study of cost of capital, long-term financing and analysis of cases relating to financial decisions of firms. Prerequisite: FIN 301. (3 crs.)

FIN 305. INVESTMENTS. An introduction to financial investments. Topics include securities and securities markets, investment risks, returns and constraints, portfolio policies, and institutional investment policies. Prerequisite: MAT 171 or permission of instructor. (3 crs.)

FIN 331. INTERNATIONAL FINANCIAL MANAGEMENT. A course providing the conceptual framework within which the key financial decisions of he multinational firm can be analyzed. Topics include: Exchange Rates, Foreign Exchange Market, Currency Futures and Option Markets, Foreign Exchange Risk Management, Multinational Working Capital Management, International Banking, and Foreign Investment Analysis. Prerequisites: Intro Micro (ECO 201) and Intro Macro (ECO 202) recommended. (3 crs.)

FIN 341. INSURANCE AND RISK MANAGEMENT. A survey of the nature and significance of risk and the basic ideas, problems, and principles found in modern insurance and other methods of handling risk. (3 crs.)

FIN 351. REAL ESTATE FUNDAMENTALS. A basic cognitive course covering physical, legal and economic aspects of real estate. Topics include valuation, agreements of sale, title, leasing, settlements and landlord-tenant relations. (2 crs.)

FIN 352. REAL ESTATE PRACTICE. Role of the real estate agent in listing, sales contract, financing, and completion of RESPA approved settlement sheet. The course examines the legal and ethical aspects of brokerage. (2 crs.)

FIN 405. ADVANCED INVESTMENT ANALYSIS. Systematic approach to security analysis and valuation; portfolio construction and management. Prerequisite; FIN 305 or permission of instructor. (3 crs.)

FIN 411. FINANCIAL MARKETS AND INSTITUTIONS. Description and analysis of major financial institutions, money and capital markets. Current topics in financial market and institutions. (3 crs.)

FIN 411. FINANCE INTERNSHIP. On the completion of this course, the student should be able to see how the knowledge acquired in the Finance courses is applied in real world situations. It provides the student with opportunity to translate academic principles to real world situations and to test his/her career interests. It will also enable the student to determine what additional skills are needed to be successful in the workplace. Prerequisite: Consent of the instructor. (Repeatable; variable credits; a maximum of 12 credits may be used toward a baccalaureate degree.)

FIN 531. BANK MANAGEMENT. Detailed analysis of operational decisions faced by bank managers in the areas of loans, investments, sources of funds, and liability management. (3 crs.)

French - FRE

FRE 101. 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. Three class hours each week and one hour language laboratory per week. (3 crs.)

FRE 102. ELEMENTARY FRENCH II. A continuation of French 101. Three class hours each week and one language laboratory per week. Prerequisite: FRE 101 or one year of high school French. (3 crs.)

FRE 203. INTERMEDIATE FRENCH I. French grammar and reading. A review of essential French grammar. Development of audio-lingual comprehension, reading and writing facility. Three class hours each week; one hour language laboratory per week. Prerequisites: FRE 101 & FRE 102 or two years of high school French. (3 crs.)

FRE 204. 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. Three class hours and one hour language laboratory each week. Prerequisite: FRE 203 or equivalent. (3 crs.)

Culture Courses are taught in English and are intended, as indicated on the General Education Curriculum, to satisfy General Education Humanities, Multicultural Awareness, and certain Fine Arts requirements as well as those in the intended major. One culture course is offered each semester.

FRE 240. THE MIDDLE AGES AND THE RENAISSANCE (800-1600). This course surveys the evolution of French culture from the Middle Ages to the end of the sixteenth century, from an age of analogy to one of skepticism. While it follows sociological, political, philosophical and historical developments to a certain degree, the course puts its primary emphasis 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. (3 crs.)

FRE 241. THE SEVENTEENTH CENTURY AND THE CLASSICAL AGE. This course surveys the evolution of French culture from the early seventeenth 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. (3 crs.)

FRE 242. THE EIGHTEENTH 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 and 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. (3 crs.)

FRE 243. THE AGE OF FRENCH ROMANTICISM: FROM THE NAPOLEONIC EMPIRE TO THE REVOLUTION OF 1848. 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 nineteenth 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. (3 crs.)

FRE 244. 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. (3 crs.)

FRE 245. THE BIRTH OF THE 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 inter-war years are treated in all their artistic output, especially in inter-war theater, fiction, and the presence of the school of Surrealism in poetry, fiction, theater, and art. (3 crs.)

FRE 246. CONTEMPORARY FRENCH CULTURE IN THE ARTS SINCE WORLD WAR II. 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. (3 crs.)

FRE 311. 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. Three class hours and one hour language laboratory each week. Prerequisite: FRE 204. (3 crs.)

FRE 312. 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. Prerequisite: FRE 311. (3 crs.)

FRE 401. ADVANCED COMPOSITION: GRAMMAR AND STYLISTICS. An in-depth grammatical analysis of the French language through intensive practice in oral exercises and written compositions. It is required of all French majors in Liberal Arts as well as those seeking a teacher certification degree or certification in French. Prerequisite: FRE 312. (3 crs.)

FRE 421. 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. Three class hours each week. (3 crs.)

FRE 422. 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. Three class hours each week. (3 crs.)

FRE 450. FOREIGN LANGUAGE COLLOQUIUM IN FRENCH. An advanced course in intensive spoken contemporary French required of all French majors as well as those seeking teacher certification in French. Prerequisite: FRE 311. (3 crs.)

FRE 469. STUDIES IN FRENCH LITERATURE. Subject matter to be arranged. Designed for French majors who wish to take additional credits and/or study aboard. Prerequisite: 18 hours of French. (Variable crs.)

FRE 479. FIELD WORK. Regularly offered as a "cultural tour" of specific geographical areas in France. This tour is preceded by a semester-length course reflecting on the cultural elements of the region as well as its people. (3 crs.)

General Engineering Technology - GET

GET 101. INTRODUCTION TO ENGINEERING TECHNOLOGY. As the first course in the engineering technology core, this course introduces students to the various fields of engineering technology and presents an overview of career possibilities. The courses focuses on fundamental principles that cross the boundaries of engineering technology curricula, demonstrates how mathematics and physical sciences are integrated into the solution of problems, and introduces students to computer aided drafting. Two lecture hours and three laboratory hours per week. (3 crs.)

Geography - GEO

GEO 100. INTRODUCTION TO GEOGRAPHY. Introduces students to regional differences throughout the world in terms of landforms, 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. (3 crs.)

GEO 105. 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. (3 crs.)

GEO 110. MAP PRINCIPLES. A non-technical course to develop competence in development, recognition, understanding and evaluation of map information. Interpretation of thematic maps, both regional and world, is emphasized. (3 crs.)

GEO/IND 123. INTRODUCTION TO CAD/GIS. The student will be introduced to various methods and techniques associated with computer-assisted drafting (CAD) and Geographic Information Systems (GIS). CAD will explore the software and hardware associated with computer-assisted drafting and design and utilize these components in creating a variety of models. GIS will present the representation of 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. (3 crs.)

GEO 150. SURVEY OF TRAVEL AND TOURISM. An overview of the travel and tourism industry is emphasized. Topics include introductory principles, measuring and forecasting demand, tourism planning, tourism marketing, tourism development, and the role of the geographer. (3 crs.)

GEO 155. HOSPITALITY INDUSTRY & OPERATIONS. An introduction to the field of hospitality services. Topics covered relate directly to the operation of resorts and hotels. (3 crs.)

GEO 165. 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.

GEO 175. INTRODUCTION TO PLANNING. An introduction to the history, process, regulations, and types of planning. A broad overview is given for each topic. Students will also engage in a project using a city planning simulation software. (3 crs.)

GEO 200. ECONOMIC GEOGRAPHY. The study of areal variation on the earth's surface in man's activities related to producing, exchanging, and consuming resources. (3 crs.)

GEO 205. WORLD CITIES/GEOGRAPHY OF TOURISM. The geography of tourism in selected cities of the world with an emphasis on form and function. Topics include an analysis of resources for tourism, the organization of related land use patterns, and developmental processes. (3 crs.)

GEO 210. URBAN GEOGRAPHY. An investigation of city environments. Topics investigated and analyzed about cities include their classification, location, distribution, function, growth, type, and pattern of land use. Emphasis toward urban planning is incorporated. (3 crs.)

GEO 217. DEMOGRAPHIC ANALYSIS. A basic course on demographic processes and trends. Emphasis is placed on distribution patterns and environmental ramifications. (3 crs.)

GEO 220. GEOGRAPHY OF THE UNITED STATES AND PENNSYLVANIA. A study of the physical and cultural environment throughout the United States and Pennsylvania particularly as it relates to spatial patterns of population, agriculture, industry, service and transportation patterns. (3 crs.)

GEO 240. HUMAN ECOLOGY. A social science approach to the relationship between humanity and the organic and inorganic environment. Emphasis is placed on the physical, biological and cultural basis of human adaptation. (3 crs.)

GEO 285. RETAIL TRAVEL. The skills used in the worldwide travel industry that are essential for a career as a travel agency owner, manager, or agent, as a tour operator, or as a corporate, convention travel planner or manager. (3 crs.)

GEO 306. MARKETING GEOGRAPHY. Spatial patterns associated with the location, distribution, and consumption of goods and services. Emphasis placed on techniques for site selection, marketing, and spatial analysis through the use of geo-technology. (3 crs.)

GEO 311. 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 upon the processes involved in the collection, compilation, and display of geographic data within a data base. (3 crs.)

GEO 317. LAND USE ANALYSIS. An analysis of the structure of urban and rural land use which emphasizes patterns and trends in land use. Methods of analysis are developed so that land use can be effectively understood. (3 crs.)

GEO 319. TRANSPORTATION GEOGRAPHY. This course deals with transportation patterns in the United States and current transportation problems as they relate to past and present travel demands and transportation policy. (3 crs.)

GEO 325. GEOGRAPHY OF EUROPE. A study of forces which 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. (3 crs.)

GEO 328. GEOGRAPHY OF LATIN AMERICA. A regional analysis of the physical and cultural environments that make the human landscape. Present Latin America society is studied through a historical perspective. (3 crs.)

GEO 338. GEOGRAPHY OF THE PACIFIC BASIN. A regional study of the physical and cultural environments of the Pacific rimland . Emphasis on Australia, Indonesia, Japan, New Zealand, and the Philippines. (3 crs.)

GEO 340. HISTORICAL GEOGRAPHY. A study of the interrelationships between the natural and cultural environments and the historical development of the cultural landscape. Historical development of the United States is emphasized. (3 crs.)

GEO 345. POLITICAL GEOGRAPHY. The state is the focus of the course, emphasis on the role played by the physical and cultural environment in terms of its form and function. Particular emphasis placed on frontiers, boundaries, law of the seas, transportation and ecology. (3 crs.)

GEO 350. SYSTEMS APPLICATION FOR TRAVEL INDUSTRY. An applied course in the principles and practices of travel industry automation. (3 crs.)

GEO 358. COMPREHENSIVE TRAVEL PLANNING. A basic understanding of the procedures and components of travel planning and promotion. The student is introduced to the major principles and techniques used in the development of travel programs, trip packages, and group tours. (3 crs.)

GEO 362. SITE PLANNING AND DESIGN. The components of the site design process. Specific tools and procedures necessary for effective planning of recreation and park facilities. Introduction to the complete planning process from concept to construction. (3 crs.)

GEO 365. 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. (3 crs.)

GEO 374. DEVELOPING AND MANAGING LEISURE ENTERPRISES. An overview of the commercial leisure 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 emphasis is placed on the management skills necessary for the effective and profitable management of the enterprise. (3 crs.)

GEO 378. RECREATION INDUSTRY MANAGEMENT. 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. (3 crs.)

GEO 412. PROGRAM PLANNING AND ADMINISTRATION. 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. (3 crs.)

GEO 425. CORPORATE TRAVEL OPERATIONS. An applied course in the principles of corporate travel managing such as corporate travel requirements, policies, economics, and travel industry automation. (3 crs.)

GEO 474. 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. (3 crs.)

GEO 479. 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. (Variable crs.)

GEO 485. SEMINAR IN PLANNING. This course is designed to provide students with knowledge of planning theory and the ethics of planning. This knowledge will assist students if they choose to take the AICP exam. Students are required to participate in group presentations, complete two written papers (one in planning theory and one in planning ethics), and participate in a debate on planning ethics. (3 crs.)

GEO 491. FIELD COURSE IN GEOGRAPHY. Field investigation utilizing geographic tools and techniques concentrating on primary data. (Variable crs.)

GEO 493. SEMINAR IN GEOGRAPHY. Consideration of evolving geographic thought, evaluation of selected geographic literature, and the development of individual or group research projects. Recommended as a culminating course for majors in geography. (3 crs.)

GEO 520. PHYSIOGRAPHY OF THE UNITED STATES. This course is for students with a background that includes Principles of Geomorphology. It involves a systematic survey of the major physiographic provinces in the United States. Emphasis is placed on the relationship of the underlying geology, geologic history, and climate to the development of today's landscapes. Laboratory work principally involves interpretations from air photos and topographic maps. (3 crs.)

GEO 550. ADVANCED GEOGRAPHIC INFORMATION SYSTEMS. This course is a follow-up to GEO 311 Geographic Information Systems. The course will include two lecture/discussion hours and two laboratory hours each week. In the lecture/discussion, students will gain a deeper knowledge of geographic information systems. They will also be exposed to extension programs to Arc View including Network Analysts, Spatial Analysts, and 3D Analysts. During laboratory sessions, student s will work on exercises in all three extensions. Prerequisite: GEO 311. (4 crs.)

German - GER

GER 240. FROM TACITUS TO LUTHER. Fifteen hundred years of German Cultural History is traced in this course, including the tribal era, establishment of the Holy Roman Empire and medieval society. (3 crs.)

GER 241. THE GERMAN BAROQUE. This course examines approximately two hundred years of German cultural history beginning with the spread of Protestantism in the late Renaissance and concluding at the apogee of Enlightenment thought and influence. (3 crs.)

GER 242. THE AGE OF GOETHE: PART I ENLIGHTENMENT. The first half of the life of Johann Wolfgang von Goethe is the basis for the course chronology: 1749-1796; the period reflects the acceptance, endorsement and ultimate waning of Enlightenment ideals in the German lands. (3 crs.)

GER 243. THE AGE OF GOETHE: PART II ROMANTICISM. The concluding segment of Goethe's life (1796-1832) encompasses the reaction against Enlightenment ideals and the realities of the Napoleonic Wars. These led to the rise of romanticism and the first decisive steps to German cultural prominence in nineteenth century Europe. (3 crs.)

GER 244. RICHARD WAGNER AND HIS TIMES: TRIUMPH OF THE BOURGEOISIE. The period covered begins in the year of Goethe's death, 1832, which is also the year which witnessed the first attempts of writing for the musical stage by Richard Wagner. The rise of the German middle class and triumph of bourgeois ideals form the background for the endeavors and developments of Wagner and his contemporaries. (3 crs.)

GER 245. THE WILHELMINIAN ERA. The survey covers the period 1870-1918 when German lands are united into a powerful national state, the Deutsches Reich. Germany is viewed at the peak of her cultural leadership in western civilization before the debacle of the First World War. (3 crs.)

GER 246. THE WEIMAR REPUBLIC. The ill-fated German Weimar Republic lasted fourteen years, from 1919 to 1933, but in that period the world witnessed an unparalleled concentration of cultural endeavor born from military defeat, political humiliation and social and economic chaos following World War I. (3 crs.)

GER 247. GERMAN CULTURE UNDER THE NATIONAL SOCIALISTS. The premise for this course is that German culture did not cease to manifest itself during the period from 1933 to 1945 when Adolf Hitler and the Nazi Party controlled Germany's destiny. What the German public was permitted in the way of cultural consumption during the Nazi era is the focal point of the survey. Only works produced in Germany at the time and either explicitly or tacitly endorsed by the Nazi government are dealt with. (3 crs.)

GER 248. GERMAN CULTURE IN EXILE. Many intellectuals uprooted for political or racial reasons by the Nazi usurpation of political power in Europe fled their homelands, never to return. Documentary evidence from 1933 to 1949 is used to understand their exile and German culture abroad. (3 crs.)

GER 249. POSTWAR GERMANY 1945 TO 1990: BUNDESREPUBLIK (FEDERAL REPUBLIC OF GERMANY, WEST GERMANY). The cultural spectrum of the Federal Republic of Germany (West Germany, Bundesrepublik Deutschland) is the subject of this survey. (3 crs.)

GER 250. POSTWAR GERMANY 1945 TO THE PRESENT: DEUTSCHE DEMOKRATISCHE REPUBLIK (GERMAN DEMOCRATIC REPUBLIC, EAST GERMANY) the cultural spectrum of the German Democratic Republic (East Germany, Deutsche Demokratische Republik) is the subject of this survey which begins with 1945 and continues to its demise. (3 crs.)

GER 251. AUSTRIA: FROM THE BABENBERGS TO THE CONGRESS OF VIENNA 976-1813. This topic presents an approximately one thousand year cultural history of the Austrian empire from its birth as protector and successor of the Holy Roman Empire, to its twilight at the end of the Napoleonic Wars. (3 crs.)

GER 252. AUSTRIA: FROM THE CONGRESS OF VIENNA TO THE TREATY OF VERSAILLES 1813-1918. The last century of Hapsburg rule is the backdrop for this survey of the Golden Age of Austrian cultural enterprise. (3 crs.)

GER 253. AUSTRIA: FIRST REPUBLIC HEIM INS REICH SECOND REPUBLIC (1919-PRESENT). This course presents a cultural history of Austria from 1919 to the present with representative works from the first Republic (1919-38), the period of Nazi annexation (Anschluss) (1938-45) and the post-World War II era which gave rise to the Second Republic (1955 to the present). (3 crs.)

GER 254. SWITZERLAND. This course presents a cultural survey of the German speaking Swiss primarily though the cultural contributions of the other language groups are represented. Although it begins in the days of the Roman Empire and proceeds swiftly through the formation of the Swiss Confederation in the 13th century to the beginning of the 18th century, the

greater part of the course deals with the last two hundred years of Swiss cultural enterprise. (3 crs.)

Gerontology - XGE

XGE 101. INTRODUCTION TO GERONTOLOGY. An introduction to the field of aging for majors and non-majors. A general overview of the psychosocial, biological, cultural, and behavioral aspects of late life. (3 crs.)

XGE 102. 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 learn to apply critical thinking skills as they 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. (3 crs.)

XGE 201. 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 outgrowth of development 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. Prerequisites: XGE 101. (3 crs.)

XGE 202. MIDDLE YEARS OF LIFE. Multidisciplinary life cycle approach to middle scene. Relationships of middle-age to family, work, and community are examined. Adult developmental tasks and stages are emphasized. (3 crs.)

XGE 204. BIOLOGY OF AGING. Introduction to biological aspects of aging, both normal and pathological. Studied are age-related changes in the digestive, skin, musculoskeletal, endocrine, and reproductive systems. Prerequisite: XGE 205.(3 crs.)

XGE 205 MEDIA & LIBRARY RESOURCES IN AGING. This course provides research skills for gerontology students, aging certificate students and others interested in conducting gerontological research. (3 crs.)

XGE 210. GROUP WORK WITH OLDER ADULTS. Focuses on basic principles of group dynamics and information about aging as it applies to group work. Students are introduced to skills and specific techniques required to facilitate groups with older adults in institutional and community-based settings. (3 crs.)

XGE 249. 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. (3 crs.)

XGE 289. MINORITY AGING / INSTITUTIONALIZATION. An overview of the theory, research, and policy issues regarding minority aging and institutionalization, and implications of this information for practitioners, researchers, and society. (3 crs.)

XGE 300. HEALTH AND SAFETY IN AGING. Information and experience relative to health assessment, maintenance, and promotion of wellness among older adults. Safety issues for older adults will be presented. (3 crs.)

XGE 320. COUNSELING THE OLDER ADULT. Combines information about the aging process with information and skills practice in counseling intervention. (3 crs.)

XGE 340. ACTIVITIES IN LONG-TERM CARE. Basic principles of therapeutic recreation and activity program planning as it applies to serving older adults in long-term care settings; primarily nursing homes, personal care homes, and adult day care facilities. Students will be introduced to the skills needed to develop and implement a well-balanced activity program. (3 crs.)

XGE 349. SELECTED TOPICS. Roundtable discussions of selected gerontological topics. For students wanting to study either a new topic or a topic in more detail. Topics vary according to students and instructor. Prerequisite: XGE 101. (Variable crs.)

XGE 350. EXERCISE FOR THE ELDERLY. Course provides information and experiences to develop and conduct physical activity programs for the elderly. Activities to maintain and improve health and fitness, and corrective and therapeutic activities are also presented. Prerequisites: XGE 204, HPE 314. (3 crs.)

XGE 369. RURAL AGING. Overview of rural, non-metropolitan areas as they relate to older adults. Course compares rural older adults to their urban metropolitan counterparts. (3 crs.)

XGE 370. NURSING HOMES. Examines nursing homes from historical, medical, managerial, environmental, and psychosocial perspectives. (3 crs.)

XGE 380. ADULT DEVELOPMENT AND AGING. Introduction to psychology of aging. An overview of late life cognitive processes including intelligence, learning, memory, problem solving, and creativity. Examination of adult socialization, personality adjustment, psychopathology, and death. Prerequisites: XGE 101, XGE 102, XGE 204, XGE 205, and junior level standing. (3 crs.)

XGE 439. SEMINAR IN AGING. For advanced gerontology students to intensively examine and discuss selected aging subjects. Topics chosen by instructor, research paper/project required. Prerequisites: XGE 101, 102, 201, 204, senior standing, and permission of instructor. (3 crs.)

XGE 449. GERONTOLOGY PRACTICUM. Opportunity to apply theoretical knowledge to practice through placement in agency or institution serving older people. Practicum sites include senior centers, nursing homes, adult day care centers, independent living facilities, or area agencies on aging. Prerequisites: Permission of instructor and extensive coursework. (Variable crs.)

Graphic Communications Technology - GCT

GCT 100. GRAPHIC COMMUNICATION PROCESSES I. This course offers the student an opportunity for experiences of practical application in the five major printing processes. It covers image design, conversion, assembly, carrier preparation, transfer and finishing techniques related to lithographic, screen, letterpress, flexographic, and gravure printing. Related areas of studies include duplication, ink chemistry, paper use and selection, and photography. Two hours of lecture and three laboratory hours per week. (3 crs.)

GCT 200. GRAPHIC COMMUNICATION PROCESSES II. Emphasis in this second course is on equipment, processes, materials and supplies utilized by the industry for phototypesetting, photocomposition, darkroom techniques, image assembly, platemaking, and offset duplicator operations. Learning experiences develop a comprehensive understanding of the scope, structure, products and related process of the printing industry. Two hours of lecture and three laboratory hours per week. Prerequisite: GCT 100 or TED 111. (3 crs.)

GCT 211. SCREEN PRINTING TECHNIQUES. The first in a series of three courses that define and analyze the process of screen printing, this course is an introduction to the various applications of screen printing. Emphasis of the course is centered on establishing repeatability of the printing process by controlling variables; photographically generated stencil systems; single and multiple color image generation, conversion, assembly and transfer; sheet-fed manual and semi-automatic presswork; flat substrate printing applications of simple and complex close register line artwork. Two hours of lecture and three laboratory hours per week. Prerequisite: GCT 100. (3 crs.)

GCT 220. 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, camera operation, film processing, enlarging, print processing, finishing procedures and selecting photographic equipment and supplies. Two hours of lecture and three laboratory hours per week. (3 crs.)

GCT 225. PRINCIPLES OF LAYOUT AND DESIGN. A presentation of design elements principles used to produce various layouts for printing production. The individual must strive to develop harmonious relationships between these design elements and principles and various printing applications through practical activity assignments. The fundamentals of producing mechanical layouts for newspaper, magazine, direct mail, poster, 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. (3 crs.)

GCT 230. COLOR PHOTOGRAPHY. A study of the concepts and techniques involved in producing color prints and color transparencies from color negatives. Emphasis is placed on picture composition, developing color negatives, contact printing, filter fundamentals, enlarging calibration procedures and photo finishing. Microphotography and digital photography techniques are also covered. Two hours of lecture and three laboratory hours per week. Prerequisite: GCT 220. (3 crs.)

GCT 240. 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, image setting and encryption of data. Each student will experience hands-on activities with microcomputers utilizing high-end design, draw, paint, scanning, and integrated layout software packages. Two hours of lecture and three laboratory hours per week. (3 crs.)

GCT 270. LITHOGRAPHIC TECHNIQUES. An in-depth study of photographic process as it relates to line and halftone reproduction of graphic materials. Projects representing the various combinations of line and halftone materials as they are used in the Industrial setting are produced. Besides the projects required of each student, the theoretical aspects of the optical system are investigated, as well as the areas of sensitive materials, light and related chemical reactions. Two hours of lecture and three laboratory hours per week. Prerequisites: GCT 100 and GCT 200. (3 crs.)

GCT 300 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. Two hours of lecture and three laboratory hours per week. Prerequisite: GCT 240 (3 crs.)

GCT 311. ADVANCED SCREEN PRINTING TECHNIQUES. A study of the techniques used for image transfer of line and halftone copy on substrates commonly used by the screen printer. Each student has the opportunity to identify, calibrate and print upon selected substrates. Two hours of lecture and three laboratory hours per week. Prerequisite: GCT 211. (3 crs.)

GCT 330. FLEXOGRAPHY AND PACKAGE PRINTING. 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. Two hours of lecture and three laboratory hours per week. Prerequisite: GCT 100. (3 crs.)

GCT 342. 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 course. Prerequisite: GCT 311 or GCT 270. (3 crs.)

GCT 365. COLOR IMAGING. Primary emphasis is placed on developing an understanding of the nature of light, the nature of color, its relation to filters and printing inks used in the graphics industry and the problems caused by color contamination in making color separations. A presentation of direct and indirect methods of color separations as well as the various masking techniques is included. The use of various control devices is discussed and employed in the laboratory. Special techniques required to strip projects, make the plates, and produce them on the press are also covered. Two hours of lecture and three laboratory hours per week. Prerequisites: GCT 225, GCT 230, GCT 320 and GCT 370. (3 crs.)

GCT 370. ADVANCED LITHOGRAPHIC TECHNIQUES. A continuation of GCT 270 which utilizes the film elements produced in order to complete required projects for this course. This course treats the subjects of stripping, platemaking and presswork. A critical study of imposition of various type of jobs, from simple single-color to more complex multi-color jobs. The latest techniques of platemaking as well as information on types of plates presently in use are discussed. Feeder-delivery setup, press packing methods, inking/dampening systems, control devices, rollers, blankets and other related press activities are thoroughly discussed. Also, some folding and binding techniques are included. Two hours of lecture and three laboratory hours per week. Prerequisite: GCT 270. (3 crs.)

GCT 380. ADVANCED FLEXOGRAPHIC TECHNIQUES. This course provides advanced 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 tonal and special effects images on various substrates. Emphasis is placed on establishing repeatability of the printing process by controlling variables related to advanced flexographic reproduction. Methods and techniques of quality assurance are implemented as an integral part in the production of flexographic printed products. Two hours of lecture and three laboratory hours per week. Prerequisites: GCT 100, GCT 200 and GCT 330. (3 crs.)

GCT 390. GRAVURE PRINTING. This course is a comprehensive study of gravure printing. You will examine the various products printed by gravure including: publications, labels, package, wallcovering, vinyl flooring and wrapping paper. Industry visits to gravure printing plants that specialize in each of these products will be made. Product design for each gravure printing product will be explored. Environmental compliance in the gravure Industry will be covered in depth. (3 crs.)

GCT 411. SCREEN PRINTING PRODUCTIONS. This course is directed study relevant to the Individual's career objectives based on specific screen printing applications. The student formulates specifications, estimates and a procedural rationale for self-determined screen printed product. Student productions are organized as a portfolio consistent with the Individual career objective that has been developed through previous screen printing course work. Four-color process screen printing with ultraviolet curing theory and practice is analyzed for application through student independent study course work. Two hours of lecture and three laboratory hours per week. Prerequisite: GCT 311. (3 crs.)

GCT 430. FLEXOGRAPHIC PRINTING PRODUCTIONS. The third and final course in a series which is directed study relevant to the Individual's career objectives based on specific flexographic printing applications. The student generates specifications, estimates, and procedures for the production of self-directed flexographic printed products. The student productions are organized as a portfolio consistent with the Individual career objective that has been developed through previous flexography coursework. Process color flexographic printing, ultraviolet curing theory and practice, statistical process control, and current trends in flexographic printing are analyzed for application through student coursework. Two hours of lecture and three laboratory hours per week. Prerequisites: GCT 100, GCT 200, GCT 330 and GCT 380. (3 crs.)

GCT 445 PRINTING 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 structures. It emphasizes items of day-to-day administra-

tive importance: production planning, scheduling and control, inventory control and purchasing, production cost analysis, quality control and management. (3 crs.)

GCT 460. SUBSTRATES AND INKS. This course is a comprehensive study of all the substrates and inks used in offset lithography, screen printing, flexography, gravure, and other specialty printing processes. The course covers the fundamentals of substrate and ink manufacturing, selection, and testing. How substrates and ink interact and the identification and prevention of potential problems will be included in the course. Two hours of lecture and three laboratory hours per week. Prerequisites: GCT 100 and GCT 200. (3 crs.)

GCT 470. WEB OFFSET. This course is a comprehensive study of the web offset printing Industry and covers both heatset and non-heatset printing. The student will study all aspects of prepress, 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 heatset web offset press and a non-heatset web offset press. Two hours of lecture and three laboratory hours per week. Prerequisites: GCT 365 and GCT 370. (3 crs.)

GCT 485. GRAPHICS SEMINAR. This is an all-encompassing seminar-type course designed to provide graduating seniors in Graphic Communications Technology 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 issue relating to the graphics Industry. Career services workshops will also be included. Prerequisites: Senior Standing. (3 crs.)

GCT 495. GRAPHIC COMMUNICATIONS INTERNSHIP. Student interns are placed with an organization that most nearly approximates employment goals. If this is not possible, students are placed in some type of graphics environment that 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. Advisor and Department chairperson approval is required before course enrollment. This is a repeatable course and may be taken as follows: Students may earn up to seven credits of internship. Prerequisite: Upper Level Standing. (1-7 crs.)

GET General Engineering Technology

GET 101 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 fields of Engineering Technology study and present an overview of a career in Engineering Technology. The course will focus on the fundamental principles that cress 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. Two lecture hours and three laboratory hours per week. (3 crs.)

Harrisburg Internship Program - HIN

HIN 374. 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. Prerequisites: 45 credits, 3.0 QPA, and permission of program director. (Variable crs.)

HIN 375. HARRISBURG INTERNSHIP. This course is completed in conjunction with HIN 374. (3 crs.)

HIN 376. PUBLIC POLICYMAKING. This seminar is completed in conjunction with HIN 374. (3. crs)

Health and Physical Education - HPE

HPE 105. CURRENT HEALTH ISSUES. This course is designed to convey information concerning the individual's role in establishing a healthful lifestyle as well as encouraging a sense of responsibility about that role. The current health framework encompasses topics such as basic fitness and nutrition, the prevention of disease, as well as a focus on healthful living. Topics will be covered in lecture and interactive sessions by the instructor and the health student. (3 crs.) Fall & spring.

HPE 314. FIRST AID AND PERSONAL SAFETY. Provides an understanding of the cause-effect, prevention and treatment of emergency situations. This course is helpful to all students, especially students in the teacher education program. Three year certification is offered by the American Red Cross. (3 crs.) Fall & spring.

HPE 300. EMERGENCY MEDICAL TECHNICIAN (EMT). Prepares students to become certified as Emergency Medical Technicians. Emphasis is placed upon the care and treatment of the ill or injured in a variety of emergency situations. Students are required to devote at least ten hours to actual in-hospital observation. Prerequisite: Age 16. (4 crs.) Fall

Health Science and Sport Studies - HSC

HSC 110. HUMAN ANATOMY AND PHYSIOLOGY I. The organization, structures, and functions of the human body: the development of the cell, tissues, integumentary system, digestive system, respiratory system, urinary system, reproductive system, lymphatic and cardiovascular systems. (4 crs.) Fall.

HSC 120. HUMAN ANATOMY AND PHYSIOLOGY II WITH LABORATORY. The organization, structures and functions of the human body: the development and function of the skeletal system, ligament and joint structure, muscular system, and the nervous system. Prerequisite: a grade of C or better in HSC 110. (4 crs.) Spring.

HSC 270. PHYSIOLOGY OF EXERCISE. The course covers the scientific theories and principles underlying strength, muscular endurance, cardio–vascular endurance, flexibility, training and conditioning in human movement. Prerequisite: HSC 110 & HSC 120. (3 crs.) Fall.

HSC 275. FUNCTIONAL KINESIOLOGY. The biomechanics of motor performance. Prepares students to analyze movement in order to teach, correct, or improve human performance. Prerequisite: HSC 110 & HSC 120. (3 crs.) Spring.

HSC 290. THERAPEUTIC MODALITIES WITH LABORATORY. Lectures and laboratory exercises that explain the use and theory of physical therapy modalities that are used in the sports medicine clinical setting. Prerequisite: Athletic Training or Physical Therapist Assistant major or by permission by the instructor. (4 crs.) Spring.

History - HIS

HIS 101. HISTORY OF THE U.S. 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. (3 crs.)

HIS 102. HISTORY OF THE U.S. 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, the computer age and its challenges. (3 crs.)

HIS 104. HISTORY OF WESTERN SOCIETY TO 1740. Western society from its origins in the near East to the period of Absolutism in Europe. (3 crs.)

HIS 106. HISTORY OF WESTERN SOCIETY SINCE 1740. Western society from the Enlightenment to the present. (3 crs.)

HIS 107. HISTORY OF SOUTHWESTERN PENNSYLVANIA. This course surveys the role of southwestern Pennsylvania from the local, regional, national and international perspectives. These include the reactions of the Native Americans to the coming of the "white" frontier;

the military events leading to the French and Indian War; the Whiskey "insurrection"; the evolution of transportation from the flatboat/keelboard and steamboat eras to the railroad and automobile; the rise and decline of the iron/steel industry; immigration and agriculture; and education and culture, particularly the influence of the former and the significance of the latter. (3 crs.)

HIS 111. DEVELOPMENT OF MAJOR WORLD CIVILIZATIONS. The process and interplay of the major world cultures in their evolution: Indian, Moslem, East Asian (China, Korea, Japan), Slavic, Western European, Latin American, and African. (3 crs.)

HIS 112. MAJOR WORLD CIVILIZATIONS IN TRANSITION. 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. (3 crs.)

HIS 147. HISTORY OF THE MIDDLE EAST. A history of the region, emphasizing the twentieth century interplay of cultural changes with traditional ways; Islam and modernization; Soviet-American rivalry; the politics of oil; the Arab-Israeli conflict; and Arab nationalism; its leaders; the role of terrorism. (3 crs.)

HIS 188. 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 first hand the importance of local and family history at the grass roots level. (3 crs.)

HIS 200. 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. (3 crs.)

HIS 201. CIVIL WAR AND RECONSTRUCTION. The causes of the Civil War; the military, political, economic, and social developments during the war; the consequences of the postwar period from the standpoint of contemporary developments and their applications today. (3 crs.)

HIS 203. HISTORY OF TRANSPORTATION IN PENNSYLVANIA. The roles that Pennsylvania has played in the development of transportation systems since Colonial times, including turnpikes, canals, river transport (flatboats to steamboats), railroads, and motor transportation. (3 crs.)

HIS 204. HISTORICAL PERSPECTIVES ON AGING. A chronological survey of aging in American culture from colonial times to the present. Principal subjects for examination are the emergence and development of retirement programs and institutional and non-institutional treatment of the elderly in social, religious, political, and cultural contexts. (3 crs.)

HIS 211. INTRODUCTION TO PUBLIC HISTORY. This course is an overview of the methods and arenas of the public historian. Through hands-on experience in such areas as museum design, collection development, museum education, archival management, historic preservation and historical editing, the student will gain an understanding of the challenges and rewards of the public historian. (3 crs.)

HIS 215. EXPANSION OF AMERICAN FOREIGN POLICY. The emergence of modern American foreign policy and the factors that have influenced its operation in the twentieth century: the interplay of military strategy and the conduct of foreign relations, the role of an expanding intelligence activity since World War II, global economic problems, modern revolutionary movements, and the scientific revolution. (3 crs.)

HIS 217. AFRICAN AMERICANS IN U.S. HISTORY. A survey of the role of African Americans in the course of American history. The course explores African roots, American slavery, the rise of black protests, the Civil Rights movement, and the rise of the Black City. (3 crs.)

HIS 220. UNITED STATES MILITARY HISTORY. The development of America's military strategy and the growth of the United States military establishment; principal campaigns and battles; the role of the armed forces as a social and political institution from the Revolution to the post-Vietnam Era. Emphasis is given to twentieth century strategy and related policy problems. (3 crs.)

HIS 224. HISTORY OF THE ANCIENT WORLD. This course investigates life and culture in the ancient world, from ancient Mesopotamia and Egypt through classical Greece and late imperial Rome. The emphasis is socio-cultural, but economic, political and military aspects will also be explored. (3 crs.)

HIS 225. HISTORY OF CONTEMPORARY EUROPE. Major developments in Europe within the last 45 years which have significance in challenging and transforming many of the traditional values of society. The decline in the preeminent position of Europe in world affairs and the rise of a global civilization. (3 crs.)

HIS 226. HISTORY OF MEDIEVAL EUROPE. A study of the political, social, religions, economic, and cultural forces of the Middle Ages, with emphasis on institutional and cultural life from the fall of Rome to the Renaissance. (3 crs.)

HIS 228. EARLY MODERN EUROPE. An introduction to the history of early modern Europe from the sixteenth century to the French Revolution, including the growth of monarchies, European overseas exploration, cultural and social characteristics, the scientific revolution and the Enlightenment. Prerequisites: HIS 104 or HIS 106 are recommended. (3 crs.)

HIS 230. HISTORY OF EASTERN EUROPE. The medieval origins of Poland, Czechoslovakia, Hungary, Yugoslavia, and Bulgaria. Romania through the period of national revival of the nineteenth century, independence after World War I, sovietization after World War II, and reemerging nationalism. (3 crs.)

HIS 234. URBAN PLANNING IN HISTORICAL PERSPECTIVE. The planning implications of urbanization, the early city planning of the pre-industrial era, and the efforts by city planners and developers to make the city more attractive and livable in various periods of urban growth. (3 crs.)

HIS 236. HISTORY OF URBAN AMERICA. The urban experience in America from the seventeenth century to the present. Urban America in the context of world urbanization, industrialization, technology and the rise of mass culture. The emergence of progressive reform and the implication of these forces on urban spatial development. (3 crs.)

HIS 238. HISTORY OF AMERICAN LABOR. This course examines how work and working class culture has contributed to the shaping of America. It includes a study of the process of industrialization, the formation of organized labor unions, and the meaning of work to those who have labored in American's fields, homes and factories from the 1600s through the 1900s. (3 crs.)

HIS 240. 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, Vietnam; the politics and leadership of both nations; the emergence of Russia as a global power. (3 crs.)

HIS 245. HISTORY OF RUSSIA. Russian history, culture, and institutions from the inception of the Kievian state to the present; the pre-Soviet periods and those aspects of development of the Russian state and people that have played a dominant role in the shaping of Russian character, temperament, and history. (3 crs.)

HIS 247. HISTORY OF ETHNIC AMERICA. The immigrant in United States history from the eighteenth century through the contemporary period. (3 crs.)

HIS 265. HISTORY OF LATIN AMERICA. The emergence of modern Latin America from the Aztecs to Castro; economic and social development of the region in the twentieth century; struggle for social justice among diverse cultures; conflicts within Latin American political life; military dictatorships; parliamentary democracy; guerrilla warfare and counterterrorism. (3 crs.)

HIS 275. PITTSBURGH HISTORY. 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 post-industrial, service-oriented city. Therefore, the course affords a unique urban perspective on the social, spatial, and political implications of both industrialism and post-industrialism. Pittsburgh History features lectures, and field trips, as well as class discussions. (3 crs.)

HIS 304. GREAT DEPRESSION AND WORLD WAR II. The stresses and strains of the 1930-1945 period of United States history using recent trends in scholarship. (3 crs.)

HIS 305. CONTEMPORARY HISTORY OF THE U.S. The unprecedented changes that have occurred in the United States since the end of World War II. (3 crs.)

HIS 308. HISTORY OF THE 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. (3 crs.)

HIS 310. CHRISTIANITY TO 1700. This course explores Christianity's role in transforming western society from earliest times to the seventeenth century. It explores Christianity's role in transforming society through study of its belief system, the growth of monasticism and the institutional church, issues of dissent and reform before and after the Reformation, European wars of religion in the sixteenth and seventeenth centuries, and the expansion of Christianity to the New World. Prerequisites: HIS 104 is recommended. (3 crs.)

HIS 312. WOMEN IN ANCIENT AND MEDIEVAL 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. Prerequisites: HIS 104 is recommended. (3 crs.)

HIS 314. ISSUES IN THE HISTORY OF WESTERN SCIENCE: ORIGINS TO THE SCIENTIFIC REVOLUTION. This course explores scientific thought from the ancient Greeks to the scientific revolution of the early modern period, focusing on the historical interaction of scientific, religious, philosophical and sociocultural forces. Open to students of all disciplines. Prerequisite: HIS 104 or HIS 106 are recommended. (3 crs.)

HIS 320. ANATOMY OF DICTATORSHIP. The basic, social, economic, psychological, and political elements that make up the modern dictatorship. (3 crs.)

HIS 325. 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. Research projects will provide an opportunity to pursue a topic in depth. (3 crs.)

HIS 329. HISTORY INTERNSHIP. Application of historical methodologies to various professional environments, under faculty supervision. (Variable crs.)

HIS 345. SOCIAL HISTORY OF THE U.S. A study of the lives of ordinary Americans throughout the history of the United States. The course focuses on factors such as race, gender, and class which have had a major influence on all members of American society during every historical period. (3 crs.)

HIS 348. HISTORY OF AMERICAN SPORT. Sport as a pervasive facet of our popular culture, as a social institution, as an arena of human activity, and as a drama; sports and cultural values and values conflict; the relationship of sport to social change throughout American history. (3 crs.)

HIS 350. ADOLF HITLER. The philosophical and psychological elements that led to the rise of National Socialism, and its impact upon the western world. (3 crs.)

HIS 379. SPECIAL PROBLEMS IN HISTORY. Development of individual programs by students. (Variable crs.)

HIS 416. 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. Prerequisites: HIS 104 or HIS 106 are recommended. (3 crs.)

HIS 418. HISTORY OF BOURBON FRANCE. This course examined the Bourbon monarchy in France from its late sixteenth century origins to the French Revolution. The cultural, social and political influences that shaped France and Europe from 1598 to 1789 are discussed in their historical context. Prerequisites: HIS 104 is recommended. (3 crs.)

HIS 420. RENAISSANCE AND REFORMATION IN EUROPE. A study of Renaissance culture in Europe from the fourteenth to sixteenth centuries, with an emphasis on the Italian Renaissance, the universal church, and the appearance and character of the principal branches of Protestantism. Prerequisites: HIS 104 and HIS 106 are recommended. (3 crs.)

HIS 491. READINGS IN EUROPEAN HISTORY. This course presents a series of guided readings in European history with emphasis given to the significant trends in the writing of history and historical scholarship since the mid-twentieth century. Prerequisites: HIS 104 & HIS 106 are recommended. (3 crs.)

HIS 495. SEMINAR IN U.S. HISTORY. A study of American historians and their writings; the changing interpretations of major topics in American history. (3 crs.)

Honors Program - HON

HON 100. 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. (1 cr.)

HON 150. HONORS COMPOSITION I. Honors Composition I, a course designed specifically for first-year students in the Honors Program, is an introduction to the advanced literacy of the academy. In this course, students will develop an understanding of how diverse scholarly disciplines employ differing strategies and conventions for organizing and transmitting knowledge. (3 crs.)

HON 187. INFORMATION LITERACY. Knowledge is of two kinds: we know a subject ourselves, or we know where we can find information upon it." Dr. Samuel Johnson (1709-1784). The course will focus its attention on the second kind of knowledge described by Dr. Johnson. The honors student will learn how to find information, and evaluate and use it effectively. The Louis L. Manderino Library, the Internet, and other electronic resources will be the primary emphases of the course. The course will provide the honors student with practical research and bibliographic skills that can be utilized in any area of study. (3 crs.)

HON 197. EURASIAN AND NORTH AFRICAN CIVILIZATION. This course is the first in a two semester sequence on the origin, nature, accomplishments and failures of the diverse civilization of this planet. A panoramic, balanced picture of human achievement in technology, government, religion, and the arts is provided. A decided emphasis is placed on the student critically analyzing some enduring themes and questions common to the different civilizations. (3 crs.)

HON 201. QUANTITATIVE PROBLEM SOLVING. This course will provide the student with an application-oriented, investigative mathematics curriculum. The students will use technology and cooperative group work

to solve real-life problems and strengthen their understanding of mathematics. The goals of the course are parallel to those of the National Council of Teachers of Mathematics Curriculum and Evaluation Standards. The topics covered target Pre-Calculus where the problems associated with engineering, physical and life sciences, business, finance and computer science drive the mathematics. This course will provide the student with a foundation to pursue further study in calculus, finite mathematics, discrete mathematics and statistics. (3 crs.)

HON 207. MODERN CIVILIZATION. This second semester on world civilization examines human development in technology, government, religion, thought, and the arts during the last five centuries. It extends the geographic coverage to include the entire planet, but emphasizes the issue of European dominance--its causes, the reaction to it, and its future prospects. Particular attention is devoted to the questions of democracy and the possible bases for moral behavior. (3 crs.) *Currently under development and awaiting University Wide Curriculum Committee approva*l

HON 250. HONORS COMPOSITION II. Honors Composition II, a course designed specifically for first-year students in the Honors Program, is a companion and follow-up course to Honors Composition I. In Honors Composition II, students will investigate an academic research question on a topic and in a field of their choosing and produce a research paper addressing this question. Research results will be presented before a panel of interested peers and faculty. (3 crs.)

HON 281. KNOWLEDGE AND CULTURE: SOME EXPLORATIONS. To be culturally literate is to possess the basic information needed to thrive in the modern world." E. D. Hirsch. This course explores what every student needs to know to read intelligently. Class sessions focus on skills needed to acquire cultural literacy, i.e., the grasp of a coherent community of values and recognitions. The course provides honors students with a framework of reference and bibliographic skills that they can utilize in their areas of study. (3 crs.)

HON 285. PROTEST MOVEMENTS IN THE 1960S. This course affords a general and comprehensive perspective on the unique, exciting, and dangerous world of 1960s politics. Understanding the period entails the use of films, videos, and records as well as extensive reading. (3 crs.)

HON 286. COMMENTARIES ON TECHNOLOGY. A study of the history of the development of science and technology from the humanity point of view. The view that technology is good and beneficial to man is examined along with the way that man looks at himself. Diverse literature is used to explore and examine modern institutions with the expectation of identifying why things are the way they are and how they might have been different under other circumstances. What is and what has been will be studied to predict future developments and their effect on humanity. (3 crs.)

HON 287. THE LITERATURE OF SOCIAL UNREST. This course will analyze the relationship between literature and social change by studying contemporary fiction and drama from Eastern Europe, Latin America, and South Africa. Class discussion will emphasize the historical and political significance of works by such authors as Jerzy Kosinski, Milan Kundera, Vaclav Havel, Gabriel García Márquez, Athol Fugard, and Nadine Gordimer. (3 crs.)

HON 295. LITERATURE, THE VISUAL ARTS AND THE WORLD VIEW. This course investigates the relationship between literature and the visual arts, primarily sculpture and painting, as revealed in various periods of history and culture-Ancient Greece, the Renaissance, Mannerism, the Baroque, the Rococo, Romanticism, Realism, and Naturalism, Impressionism, and Expressionism. The course focuses on an exploration and analysis of the historical, social, and philosophical backgrounds and "world view" of each period, and how these factors contribute to the emergence of artistic movements or schools (3 crs.)

HON 297. SCIENTIFIC INQUIRY. Scientific Inquiry is an interdisciplinary foray into the hard sciences. It presumes no prior acquaintance with chemistry, physics, or biology. It defines science, its terminology and its methodology, and exposes students to its essential elements. A perspective of scientific evolution will be developed by examining salient events and personalities. Various topics, especially from the physical sciences will be examined with an emphasis on how scientific knowledge is used to elicit technical innovations, solve problems, and shape the future. Later class discussions will focus on defining possible and probably future yields and prioritizing national efforts. (3 crs.)

HON 315. EXPRESSION OF SELF IN THE ARTS AND HUMANITIES. This course, broadly conceived as a humanities appreciation course, focuses on three general themes-Relationships: The Impact of Love, Family, and Friends; Passages: An Exploration of Life's Transitional Periods; and The Search for Meaning and Understanding. By examining and critically analyzing selected works from literature, the fine arts, music, theatre, photography, and film, the student is expected to develop a nonprescribed but comprehensive and integrative overview of these central themes. Also, students will have the opportunity to explore their own self-expression through a creative, artistic assignment. (3 crs.)

HON 375. THE ARTISTIC SPIRIT AND THE EXTERNAL WORLD. This course, broadly conceived as a humanities appreciation course, focuses on two general themes: Nature; Conflict and Social Change. By examining and critically analyzing selected works from literature, the fine arts, music, theater, photography and film, the student is expected to develop a nonprescribed but comprehensive and integrative overview of these central themes. Also, students will have the opportunity to explore their own self-expression through a creative, artistic assignment. (3 crs.) *Currently under development and awaiting University Wide Curriculum Committee approval*

HON 381. EVOLUTION OF EARTH SYSTEMS. The evolutionary dynamics of living systems; namely, how the interrelationships between plants, animals, humans and environment shape their evolution, extinction, diversity, geographic distribution, geologic history, and, for humans, their cultural history. Specific examples of past and present biotic communities include Ice Age vertebrates, living mammals, amphibians and reptiles, continental and island faunas, and human cultures from Peru, Egypt, the Amazon Basin and the Arctic. Lectures are strongly supplemented with study of specimens, artifacts, and exhibits from The Carnegie Museum of Natural History. (3 crs.)

HON 385. BIOLOGICAL ORIGINS OF SOCIAL BEHAVIOR. The purpose of this course is to develop an understanding of sociobiology and the influence of the process of natural selection on social behavior in nonhuman and human animals. Findings from the biological and social sciences are integrated to provide a comprehensive view of the origin and nature of various social behaviors. Field and laboratory observations of animal behavior are used to demonstrate a complex variety of social behaviors. (3 crs.)

HON 388. PRINCES AND PAUPERS: STUDIES IN SOCIAL CLASS, WEALTH AND POVERTY IN WORLD HISTORY. The course examines the impact of social and economic inequality on world history. Using a case study approach, students will explore the existence of wealth and poverty in Ancient Rome, in Medieval and Reformation Europe, in Colonial America, in Victorian England, and in 20th century urban America. (3 crs.)

HON 499. HONORS THESIS. The seniors honors project serves as the capstone of the university honors program. Under the supervision of a faculty advisor 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. (3 crs.)

Information Systems Technology - IST

IST 121. PRINCIPLES OF INFORMATION TECHNOLOGY. This course is an introductory study of information technology. Major topics include the role and value of information systems, hardware and software used in information technology, managing information and data resources, and decision making in developing information systems. (3 crs.)

IST 311. CLIENT-SERVER PROGRAMMING. This course is an introduction to client-server information systems. The main focus is to write client-side and server-side programs in the languages commonly used

in the Information Technology field. Prerequisites: IST 121, CSC 201, CSC 202, CSC 223, and CIS 215. (3 crs.)

IST 475. SPECIAL TOPICS IN INFORMATION TECHNOLOGY. This course allows current topics in Information 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. Students are able to take the course several times as different topics are addressed. The topics chosen will depend on current trends and the interests of students and the instructor. (3 crs.)

IST 476. PHYSICAL DESIGN AND IMPLEMENTATION. A continuation of Systems Analysis that includes completion of the physical design and implementation of a medium scale information system. The student will produce a project user guide and will demonstrate proficiency in the academic programs through the development of the project and a comprehensive outcome examination. Prerequisites: IST 311, CSC 375 and CSC 456. (3 crs.)

Industrial Technology - ITE

ITE 101. INDUSTRIAL SAFETY. An introduction to the fundamentals of safety as well as sound management-oriented practices related to the development of a safe work place. Legal requirements of OSHA and worker's compensation laws are discussed. Students will be able to identify cause of accidents, identify safety hazards, and apply methods of accident prevention. (3 crs.)

ITE 104. DRAWING AND DESIGN. An introductory course for those who wish to become more skilled and confident in their ability to draw and design. Design elements, principles and practices are studied. Creativity, self-discovery, and self-expression are encouraged. The student is required to develop a disciplined approach to problem solving and a sensitivity to craftsmanship in order to create solutions to a wide variety of challenging design assignments. Two hours of lecture and three laboratory hours per week. (3 crs.)

ITE 110. TECHNICAL DRAWING I. A beginning course with emphasis on the graphic language, mechanical drawing, lettering, geometric construction, sketching and shape description, multi-view projection, sectional views, dimensioning, axonometric projection, and oblique projection. Six laboratory hours per week. (3 crs.)

ITE 123. INTRODUCTION TO CAD/GIS. The student will be introduced to various methods and techniques associated with computer-assisted drafting (CAD) and Geographic 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. (3 crs.)

ITE 130. INTRODUCTORY CIRCUIT ANALYSIS. An introduction to DC and AC circuit theory and analysis. The theory includes electrical measurement systems, Ohm's Law, Kirchoff's Laws, circuit theorems, and component characteristics. Laboratory work provides experiences with electrical components, schematics, electrical tools, and basic electrical and electronic instrumentation. Two lecture hours and three laboratory hours per week. Prerequisite: MAT 181. (3 crs.)

ITE 135. 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 trouble-shooting techniques. Two lecture hours and three laboratory hours per week. (3 crs.)

ITE 165. MACHINE PROCESSING I. An introduction to basic foundry (metal casting) and machine metalworking. Includes sand moldmaking and gating, layout, tool geometry, lathe work, milling, shaping, drilling, and bench work. Six laboratory hours per week. (3 crs.)

ITE 181. 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 including ceramics. Sufficient background in general chemistry is included to provide a proper foundation. Two hours of lecture and three laboratory hours per week. (3 crs.)

ITE 184. ENERGY AND POWER SYSTEMS. An application of the systems approach to the study of energy sources and converters, power transmission, and controls. Instruction will focus on energy as it is applied to propulsion systems, residential conservation, and Industrial uses. Energy alternatives, system efficiency and conservation are emphasized. Two hours of lecture and three laboratory hours per week. (3 crs.)

ITE 210. TECHNICAL DRAWING II. Provides experiences in problem-solving through the use of technical working drawings. Special emphasis is placed on American National Standards drawing practices, shop processes, conventional representation, standardization of machine parts and fasteners, preparation of tracings, the reproduction of drawings, and surface development. Two hours of lecture and three laboratory hours per week. Prerequisite: ITE 110. (3 crs.)

ITE 215. COMPUTER-AIDED DRAFTING (CAD) I. This course involves the use of computer software and hardware as applied to mechanical design and drafting. Students learn to manipulate basic geometric entities (points, lines, and arcs) to create 2-D and 3-D models. Experiences dealing with dimensioning, level/layer surfaces and planes are also explored. Two hours of lecture and three laboratory hours per week. Prerequisite: ITE 110. (3 crs.)

ITE 218. DESCRIPTIVE GEOMETRY & SURFACE DEVELOPMENT. Adding to the knowledge and experiences gained in Technical Drawing I, this course covers the theory of projection in detail with emphasis on the manipulation of points, lines and planes in space. In addition, surface development and design in order to serve of value in future advances such as computer-aided drafting, computer-aided instruction and computer-aided manufacturing. Two hours of lecture and three laboratory hours per week. Prerequisite: ITE 110. (3 crs.)

ITE 230. INTRODUCTION TO LINEAR ELECTRONICS. An investigation into the fundamental concepts of analog electronics including semiconductor device theory, power supplies, amplifiers, operational amplifiers, oscillators, linear integrated circuits, and control circuits. Laboratory experiments provide experiences with electronic instrumentation, electronic components, and electronic circuit behavior. Two hours of lecture and three laboratory hours per week. Prerequisite: ITE 130. (3 crs.)

ITE 235. INTRODUCTION TO MICROPROCESSORS. A presentation of number systems and codes, microprocessor architecture, computer arithmetic, machine language programming, and microprocessor interfacing. Emphasis is placed on laboratory experiments dealing with machine language program execution and microprocessor interfacing. Two hours of lecture and three laboratory hours per week. Prerequisite: ITE 135. (3 crs.)

ITE 236. NUMERICAL CONTROL PROGRAMMING I. An introduction to the procedures for manually programming numerically controlled equipment. Students write programs following a machine format detail, using Cartesian coordinates for motion command and incorporating preparatory and miscellaneous commands necessary to manufacture parts on a machining and turning center. Six laboratory hours per week. (3 crs.)

ITE 250. 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 (AGV's), computer aided drafting (CAD), machine vision, automatic identification, and programmable logic controllers (PLC's). Students learn what automation is, its advantages and disadvantages, and how it is applied. Two hours of lecture and three laboratory hours per week. (3 crs.)

ITE 265. MACHINE PROCESSING II. Current foundry (metal casting) processes are studied. Advanced machine metalworking processes, including indexing and gear cutting are emphasized. Students are respon-

sible for determining the sequence of operations necessary to produce a product. Six laboratory hours per week. Prerequisite: ITE 165. (3 crs.)

ITE 267. PROGRAMMABLE CONTROL SYSTEMS. This course focuses on the use of programmable logic controllers (PLCs) to control Industrial sequences. Students are provided with theoretical and hands-on experience in designing, programming, testing and controlled by a PLC. Two hours of lecture and three laboratory hours per week. (3 crs.)

ITE 268. AUTOMATED SUPPORT SYSTEMS. This course emphasizes the use of non-robotic types of automation. These types include sensors, automatic guided vehicles (AGVs), machine vision, and automatic identification. Students are provided with theoretical and hands-on experience that will enable them to understand the appropriate application of non-robotic types of automation in Industrial situations. Additional topics include artificial intelligence, computer interfacing, connectors, and cables. Two hours of lecture and three laboratory hours per week. Prerequisite: ITE 250. (3 crs.)

ITE 270. HYDRAULIC/PNEUMATIC FLUID POWER. This is an introductory course in the study of basic hydraulic and pneumatic circuits and systems. Topics covered are: physical laws applicable to fluid power components, circuit construction and analysis, the use of manually and remotely controlled devices, the use of linear and rotary actuators, and the operation of hydraulic pump and air compressor systems. Theoretical concepts are verified by practical hands-on laboratory activities. Two lecture hours and three laboratory hours per week. (3 crs.)

ITE 278. PLASTICS TECHNOLOGY. This is a survey course designed to provide the student with an opportunity to gain information about the Industrial and technological uses of plastic-like materials. In the laboratory the student designs, constructs and uses a variety of tools, forms and molds. Depending upon the activity and the time allotted, students will be encouraged to create well-designed products for personal and/or professional use. Two hours of lecture and three laboratory hours per week. (3 crs.)

ITE 282. SMALL GASOLINE ENGINES. An introduction to the theory, operation and major overhaul procedures of small 2 and 4 cycle gasoline engines. Engine components, diagnosis, testing, maintenance, disassembly, reassembly, and trouble shooting are stressed in the course to afford the participants the opportunity to develop the expertise in course content skills and the background to repair small gasoline engines. Laboratory work provides for the opportunity to apply theoretical concepts in general practices. Six laboratory hours per week. (3 crs.)

ITE 301. SAFETY SUPERVISION. This course focuses on the specialized study of the roles and responsibilities of the first-line safety supervisor: specifically, linkages between management and the workforce, fundamentals of communication and human relations, loss control, quality job training, development of good safety attitudes, detecting hazardous conditions and unsafe work practices, safety inspections, and accidents investigations. Also included are specialized issues involving state and federal safety and environmental protection laws, the Hazard Communication Standard, ergonomics, and industrial hygiene. (3 crs.)

ITE 310. TECHNICAL DRAWING III. An extension of Technical Drawing I and II with continued emphasis on skill, technique, and the use of ANSI and ISO drafting standards. The course is developed around current industrial drafting practices and includes instruction in geometric tolerancing, surface texture, weldments, metrication, etc. Two hours of lecture and three laboratory hours per week. Prerequisites: ITE 110 and ITE 210. (3 crs.)

ITE 311. INDUSTRIAL ERGONOMICS. An introduction to 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 systems. Current advances in practical biomechanics and ergonomics in industry in combating musculoskeletal injury and illness will be discussed. Prerequisite: ITE 101. (3 crs.)

ITE 315. COMPUTER AIDED DRAFTING (CAD) II. This course is an extension of Computer Aided Drafting (CAD) I and will include more complex problems and procedures in the development of graphic solutions. The use of extended geometry will comprise an important part of the course. Students will gain additional experiences on PC based computer drafting systems. Two hours of lecture and three laboratory hours per week. Prerequisite: ITE 215. (3 crs.)

ITE 320. ARCHITECTURAL DRAFTING AND DESIGN. Experience is provided in basic residential design. The fundamental sequences in designing and drawing are stressed as the student completes the architectural drawings necessary for the construction of a residence. Elements of the course include architectural styles, area planning, structural detailing, pictorial rendering, building specifications, and cost analysis. Two hours of lecture and three laboratory hours per week. Prerequisite: ITE 110. (3 crs.)

ITE 325. STATICS AND STRENGTH OF MATERIALS. The study of statics and strength of materials focuses on the pragmatic technologist who needs a better understanding of the fundamentals of mechanics. The statics portion of the course is concerned with parts (bodies) of machines and structures, while the strength portion covers the ability of these individual parts to resist applied loads. Then the technologist will be able to determine the dimensions to ensure sufficient strength of the various industrial materials and manufactured components. Two hours of lecture and three laboratory hours per week. (3 crs.)

ITE 335. ADVANCED MICROPROCESSORS. This course deals with advanced concepts in machine language programming. It introduces the world of editors, assemblers, and debuggers. It also covers the advanced architecture of modern microprocessors and their more sophisticated instruction sets and addressing modes. The student will learn to develop hardware and software required to apply microprocessors to real world problems. Two hours of lecture and three laboratory hours per week. Prerequisite: ITE 235. (3 crs.)

ITE 336. NUMERICAL CONTROL PROGRAMMING II. The second of two courses in the manual programming of numerically controlled machines. Concentration is placed on continuous path machining of parts using the linear interpretation capability of machines to cut chords of arcs to closely approximate curves. Circular interpolation is studied with the additional word addresses that are necessary. Assignments provide experiences in three axis linear interpolation programming and two axis circular interpolated programming. Two lecture hours and three laboratory hours per week. Prerequisite: ITE 236. (3 crs.)

ITE 337. COMPUTER PROGRAMMING NUMERICALLY CONTROLLED EQUIPMENT (COMPACT II). A study of the COMPACT computer language used to produce machine tape instructions for manufacturing parts. Students learn to access and utilize a computer to produce part geometry and direct a machine tool to accomplish a variety of metal machining operations. The graphics capability of BRAVO software will be explored. Two hours of lecture and three laboratory hours per week. Prerequisite: ITE 236. (3 crs.)

ITE 338. COMPUTER PROGRAMMING NUMERICALLY CONTROLLED EQUIPMENT (APT). An investigation of the APT machine tool language for programming numerically controlled machine tools. Students write APT programs and operate equipment with the produced tapes to manufacture milled and turned parts. Two hours of lecture and three laboratory hours per week. Prerequisite: ITE 236. (3 crs.)

ITE 345. CONSTRUCTION PROCESSES I. A course in construction with an emphasis on residential housing. Instruction and experiences will include aspects of construction such as planning and estimating, personnel and time management, site preparation, footings and foundations, framing and roofing. The safe and intelligent use of tools and materials is stressed. Two hours of lecture and three laboratory hours per week. (3 crs.)

ITE 350. ROBOTIC SYSTEMS. This course emphasizes the use of robots in automated applications. Students are provided with theoretical as well as hands-on experience in the design, programming, debugging, setup, and interfacing of Industrial robotic applications. Also discussed are servo systems, their operation, components, functions, and application to automated equipment. Two hours of lecture and three laboratory hours per week. Prerequisite: ITE 250. (3 crs.)

ITE 355. WOOD TECHNOLOGY. A study of woodworking providing instruction in furniture and case work. The safe use and care of machines

and hand tools is stressed. Emphasis is placed on project planning and design, cost analysis, wood technology, material selection and product development. Students design and produce a project involving operations on basic machines. Two hours of lecture and three laboratory hours per week. (3 crs.)

ITE 365. SPECIAL MACHINE PROCESSING. A special course designed to allow the student to investigate a specific area of interest in the metal machining field. Students interested in taking this course will complete a document identifying the scope of their interest, specifying the activities that will be pursued throughout the semester, and have it approved by the instructor six weeks before the beginning of the class. The student's background in the metal machining processes will be broadened by completing the laboratory experiences outlined in the approved proposal. Six laboratory hours per week. Prerequisites: ITE 165 and ITE 265. (3 crs.)

ITE 375. PRINCIPLES OF PRODUCTION. An introduction to the methods used in analyzing the production flow from raw material 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 Industrial environment will be presented. (3 crs.)

ITE 385. INDUSTRIAL COST ESTIMATING. An introduction to the methods used to cost and budget a production organization. Topics include some accounting basics, cost accounting, the time value of money and cost estimating as related to Industrial operations. (3 crs.)

ITE 415. COMPUTER-AIDED DRAFTING AND DESIGN III. This course uses a PC-based CADD package along with an associated tool design software package in a design application. The students will explore advanced CADD problems using solid modeling, analysis, and the introduction of standard components from the tool design software. Two hours of lecture and three laboratory hours per week. Prerequisites: ITE 215 and ITE 315. (3crs.)

ITE 416. INTRODUCTION TO SOLID MODELING AND FINITE ELEMENTS. This course will use a PC-based CADD program to introduction the concepts of mathematical modeling and engineering analysis. The student will use a drawing created with a CADD program to generate a solid model of the drawing component and to mesh that solid model into a finite element model. 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. The transfer of data between computer programs, using the IGES format, will also be presented. Two hours of lecture and three laboratory hours per week. Prerequisites: ITE 215, ITE 325 and PHY 110. (3 crs.)

ITE 420. PRODUCTION ANALYSIS. A continuation of the principles of production with an emphasis on the calculations associated with production management. Topics include linear programming, scheduling and project management as with pert, simulation and inventory control. Use is made of personal computers for the calculations involved. Prerequisite: ITE 375. (3 crs.)

ITE 437. ADVANCED COMPUTER PROGRAMMING NUMERICALLY CONTROLLED EQUIPMENT (COMPACT II). An investigation into the more sophisticated processes of the COMPACT II machine tool programming language. Parts are programmed and manufactured on a CNC milling machine and lathe using the COMPACT II language and the BRAVO3 graphic software. Two hours of lecture and three laboratory hours per week. Prerequisite: ITE 337. (3 crs.)

ITE 438. ADVANCED COMPUTER PROGRAMMING NUMERICALLY CONTROLLED EQUIPMENT (APT). The machining of parts using matrixes, loops, pocketing, macros, and other advanced techniques. These methods are applied to the operation of a CNC vertical milling machine and a CNC lathe. Two hours of lecture and three laboratory hours per week. Prerequisite: ITE 338. (3 crs.)

ITE 445. QUALITY CONTROL. An introduction to the methods used in analyzing quality control. 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 quality control department of a manufacturing facility will be presented. (3 crs.)

ITE 450. APPLICATIONS OF INDUSTRIAL AUTOMATION. An advanced automation course that incorporates many of the topics of previous courses, but in a more in-depth and integrated manner. The focus is to provide students with the opportunity to learn about automated systems through the planning and implementing of such a system. Students are involved in the design, programming, setup, installation, and trouble-shooting of an automated system that includes robots, but may also include an automatic guide vehicle (AGV), machine vision system, programmable logic controllers, bar code scanners, computers, and a computerized numerical control (CNC) machine. Two hours of lecture and three laboratory hours per week. Prerequisites: ITE 250, ITE 268, and ITE 350. (3 crs.)

ITE 460. PRINCIPLES OF MANUFACTURING. An introduction to the methods used in manufacturing processes. Topics covered include 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. Prerequisites: ITE 375 and ITE 385. (3 crs.)

ITE 461 MANUFACTURING PRODUCTION AND INVENTORY CONTROL. 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. Prerequisite: ITE 375 (3 crs.)

ITE 471. PROJECT MANAGEMENT. Operations and projects differ in that operations are on-going 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. Prerequisite: ITE 375 (3 crs.)

ITE 475. 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. Two hours of lecture and three laboratory hours per week. Prerequisites: ITE 420, ITE 460, ITE 461. (3 crs.)

ITE 481. CONCEPTS AND ISSUES IN INDUSTRIAL TECHNOLOGY. This is a multidiscipline course that combines the various elements in Industrial technology, giving the student the opportunity to study problems typically encountered by an Industrial technologist. The exact content of the course will vary depending upon the background and experience of the instructor but it is intended to include problem solving and role playing in a wide variety of Industrial settings. Industrial consultants will also be used to expose the student to modern industry. Two hours of lecture and three laboratory hours per week. Prerequisite: Senior Standing. (3 crs.)

ITE 495. MANUFACTURING TECHNOLOGY INTERNSHIP. Student interns are placed 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 relatively short time frame. Advisor and Department Chairperson approval is required before course enrollment. This is a repeatable course and may be taken as follows: Students may take up to 6 credits. The extra credit may be used as a free elective or for a credit deficiency due to other program changes. Prerequisite: Upper Level Standing. (1-6 crs.)

Literature - LIT

LIT courses are introductions to literature, with emphasis on the subject indicated in the title. They are primarily intended for the general student and may not be used to fulfill requirements for the English major.

LIT 111. STAR TREK AND MODERN MAN. A multi-media literature course wherein the Norton Anthology of English Literature and the cinematic works of Gene Roddenberry constitute a two-fold study: "Star Trek" as literature and literature in "Star Trek" to study the nature and evolution of modern human consciousness. (3 crs.)

LIT 116. MYTH, MAGIC AND MYSTICISM. A study of the four basic paths into the unknown: magic, mysticism, fantasy, and myth. (3 crs.)

LIT 125. THE AMERICAN WEST. A general introduction to the literature of the Great American West through an examination of a variety of literary types. (3 crs.)

LIT 127. WOMAN 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. (3 crs.)

LIT 138. WAR IN THE NOVEL. A study that limits itself to those wars fought after 1900 and to their treatments in literature. In particular, the course is interested in the effects of war upon individuals, and in the ambivalence toward war shown by novelists. (3 crs.)

LIT 147. SCIENCE FICTION. An introductory survey of the forms of science fiction, with particular emphasis on the author's ability to detail and predict future developments. (3 crs.)

LIT 148. HORROR IN LITERATURE. An examination of the tradition of horror literature in England and America from a literary, historical, and psychological viewpoint. Some emphasis on the sociological implications of the popularity of the form. (3 crs.)

LIT 150. 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 the student that works learns about both himself and his country. (3 crs.)

LIT 170. ALL ABOUT WORDS. An introduction to the total complexity and fascination of words. The course deals with words as shapes, analogues, formulas, and games. Indirectly, but significantly, it instructs in vocabulary by introducing a sizable vocabulary for talking about words and nurturing a student's natural curiosity about words. (3 crs.)

LIT 178. LITERATURE AND FILM. A study of the total relationship between literature and film, with emphasis on the involvement of literary writers in motion pictures and television, the process of literary adaptation, and the influence of motion pictures on literary critics and writers. (3 crs.)

Management - MGT

MGT 201. PRINCIPLES OF MANAGEMENT. A survey of the theories in the field of management, covering concepts developed by the classical school, the behavioral school, and the management science school. Emphasis is on human factors, but the influences of economics and technological factors are also considered. Prerequisite: PSY 100 or permission of instructor. (3 crs.)

MGT 205. ENTREPRENEURSHIP I: SMALL BUSINESS FUNDAMENTALS. Entrepreneurship and new venture initiation. A study of the development of a business appropriate to the objectives and resources of the individual entrepreneur. This course deals with the initiation of a new business venture rather than the management of ongoing enterprises, and treats new venture formation primarily from the standpoint of the individual entrepreneur rather than that of an established enterprise expanding into a new area. (3 crs.)

MGT 271. COMPUTER APPLICATIONS IN BUSINESS I. An introduction to the basic tools and techniques of software used to solve business problems. This course is taught on a lecture-laboratory basis in which the computer is utilized to present applications of the spreadsheet in business situations. (1 cr.)

MGT 273. COMPUTER APPLICATIONS IN BUSINESS II. A continuation of Computer Applications in Business I with an emphasis on more advanced topics and problem-solving. This course is taught on a lecture-laboratory basis in which the computer is utilized to present applications of the spreadsheet in business situations. (1 cr.)

MGT 301. ORGANIZATIONAL BEHAVIOR. An examination of theories and concepts relating the individual to the organization. The course analyzes the forces which influence behavior within an organization. Prerequisite: MGT 201 or permission of instructor. (3 crs.)

MGT 305. ENTREPRENEURSHIP II: SMALL BUSINESS MANAGEMENT. A management course designed to integrate all business functions at a small business level. Study of the development and management of a business plan appropriate to the objectives and resources of the individual entrepreneur. This course deals with the management of ongoing enterprises. A computer software package is utilized to develop various cases and problems found in the text. Each student develops a business plan in either Retailing Operations, Service Business, or Manufacturing Operations. (3 crs.)

MGT 311. ORGANIZATION THEORY AND DESIGN. 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. Prerequisite: MGT 201. (3 crs.)

MGT 315. ORGANIZATION DEVELOPMENT AND CHANGE. This course is about planned organization change and is designed to introduce the student to the field of organization development, its definition, goals, precedents, emergence, approaches, and current status. Prerequisite: MGT 201. (3 crs.)

MGT 352. HUMAN RESOURCE MANAGEMENT. Decision-making and analyses of major management problems that arise in manpower planning, recruitment, selection, development, compensation, and appraisal of employees in various organizations. Prerequisite: MGT 201. (3 crs.)

MGT 353. COMPENSATION MANAGEMENT. The design, implementation and evaluation of wage and salary packages in both private and public sectors. Prerequisite: MGT 352. (3 crs.)

MGT 362. LABOR RELATIONS. A survey of the many facets of employee-management relations. The course examines the historical, statutory and social bases for modern workplace relationships with emphasis given to the role of organized labor. Prerequisite: Junior level standing or permission of instructor. (3 crs.)

MGT 371. MANAGEMENT INFORMATION SYSTEMS. An introduction to management control systems, which include control of production costs, standard costs, flexible budgets, managed costs, profit centers and capital acquisitions. Prerequisite: MGT 201, CSC 101, & MGT 271. (3 crs.)

MGT 373. COMPUTER BASED MANAGEMENT INFORMATION SYSTEMS. An introduction to the technology, application, and management of computer-based information systems. Topics covered include business computer systems, computer hardware, computer software, data-based management systems, general accounting application, materials control application, management information processing, systems planning,

and operations management. Prerequisites: CSC 101, MGT 371 & ACC 202. (3 crs.)

MGT 402. STRATEGIC MANAGEMENT. A capstone course for all business majors requiring students to integrate and apply multidisciplinary knowledge and skills in formulating, implementing, and evaluating organizational strategies. Case analysis method predominates. Prerequisite: Prior completion of all core business courses and senior standing. (3 crs.)

MGT 431. INTERNATIONAL BUSINESS MANAGEMENT. The concepts, problems and policies of international business enterprises for managers. Prerequisite: Junior level standing. (3 crs.)

MGT 452. HUMAN RESOURCE STRATEGY AND PLANNING. This course examines organizational human resources management from a strategic perspective. The key focus is on exploring HR planning and strategy concepts, developing an understanding of the related analytical tools, and determining how these concepts and tools can be used to enhance an organization's competitive position. (3 crs.)

MGT 492. MANAGEMENT INTERNSHIP. On the completion of the course, the student should be able to see how the knowledge acquired in the Management courses is applied in real world situations. It provides the student with an opportunity to translate academic principles to real world situations and to test his/her career interests. It will also enable the student to determine what additional skills are needed to be successful in the workplace. (Repeatable; variable crs.; a maximum of 12 credits can be used toward the completion of a baccalaureate degree.)

Marketing - MKT

MKT 222. PRINCIPLES OF SELLING. A study of basic principles of persuasive communications with emphasis on proven, practical selling techniques. Activities include interactive class discussions and video role-playing. Prerequisite: BUS 100. (3 crs.)

MKT 271. PRINCIPLES OF MARKETING. An introduction to basic principles of marketing management. Other topics covered are selecting target markets, developing marketing mixes, functions of marketing management. Prerequisite: ECO 100 or ECO 201& MGT 201. (3 crs.)

MKT 321. SALES MANAGEMENT. Proven management techniques for remotely located field sales force member, are fully explored. Motivation, evaluation, and control of sales force activities are developed through case presentations and class discussions. Prerequisites: MGT 201, MKT 222. (3 crs.)

MKT 331. RETAILING. A management and marketing analysis of department, discount, specialty and chain stores with special emphasis on location, human resources, merchandising and effective pricing. Prerequisite: BUS 100 recommended. (3 crs.)

MKT 341. MARKETING FOR NON-PROFIT ORGANIZATIONS. A marketing course designed for both business and nonbusiness 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 management tools (product policy, distribution and delivery systems, monetary pricing, and communication strategies) to the nonbusiness entity. (3 crs.)

MKT 351. ADVERTISING MANAGEMENT. A study of the basic components of the advertising mix, establishing media selection techniques, and determining the best vehicles for specific selling and promotional efforts commonly confronting marketing managers today. Prerequisite: MKT 301. (3 crs.)

MKT 401. MARKETING MANAGEMENT. Description and analysis of the nature, strategies and techniques of marketing management. Prerequisite: MKT 301. (3 crs.)

MKT 421. CONSUMER BEHAVIOR. This integrates the disciplines of psychology, anthropology, economics and sociology with marketing to explain, understand, and predict consumer decisions. 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. (3 crs.)

MKT. 431. MARKETING RESEARCH. Description of behavioral and statistical tools for designing and implementing research projects. Prerequisites: MKT 301, MAT 225. (3 crs.)

MKT 452. BUSINESS MARKETING. The characteristics of business-to-business marketing are explored and developed focusing on environment, pricing, planning, distribution, evaluation and strategy development for marketing business and industrial products to the professional user or buyer. Prerequisite: MKT 301. (3 crs.)

MKT 501. INTERNATIONAL BUSINESS MARKETING. Upon completion of the course, the student will be able to evaluate and make recommendations and decisions concerning the strategy and tactics of real-life targeting and marketing mix development for both global and country-specific markets. The course will also cover selected elements of international marketing research. (3 crs.)

Mathematics - MAT & DMA

DMA 092. INTRODUCTORY ALGEBRA. Designed to aid the student in the transition from arithmetic to algebra. It may be a terminal course for some or may be a preparation for a traditional College Algebra course. Topics will include operations on integers and polynomials, factoring and linear equations. This course may not be used as a Natural Science elective. This course does not earn credit toward graduation. Prerequisite; basic mathematics competence. (3 crs.)

DMA 094. INTERMEDIATE ALGEBRA. Designed for the student who has recently and successfully completed a course covering concepts and skills associated with an Introductory Algebra course. Intermediate Algebra was established to provide the student with further development of the basic essentials of algebra and serve as a bridge to a required college mathematics course such as College Algebra or Technical Mathematics I. Expected topics to be covered: set notation, solving linear equations and related applications, solving linear inequalities, graphs of linear equations, functional notation, solving systems of linear equations, polynomials, rational exponents, radicals, complex numbers, rational expressions, solving quadratic equations. (3 crs.)

MAT 100. FUNDAMENTALS OF MATHEMATICS. Sets and their language, numeration systems; properties of natural numbers, whole numbers, integers, rational and real numbers; elementary number theory; modular arithmetic; mathematical systems; logic. Prerequisite: DMA 092 or pass math proficiency test. (3 crs.)

MAT 171. MATHEMATICS OF FINANCE I. Simple interest, compound interest, value of money relative to time and interest, discounting, accumulation, mortgage points, annuities, amortization schedules, and equations of value. Prerequisite: MAT 181 or MAT 182. (3 crs.)

MAT 181. COLLEGE ALGEBRA. Fundamental operations; factoring and fractions, exponents and radicals; functions and graphs; equations and inequalities; systems of equations. Prerequisite: DMA 092 or pass math proficiency test. (3 crs.)

MAT 182. TECHNICAL MATHEMATICS I. An introduction to algebraic topics usually covered in a high school algebra course, such as functions, graphs, exponents and radicals, and linear and quadratic equations. Emphasis on technology applications. Prerequisite: DMA 092 or pass math proficiency test. (3 crs.)

MAT 191. 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. Prerequisite: MAT 181 or MAT 182 or passing score on part C of the university mathematics placement exam. (3 crs.)

MAT 192. TECHNICAL MATHEMATICS II. An emphasis on trigonometry: trigonometric functions, vectors, graphs of trigonometric functions, exponents and logarithms, and additional topics in trigonometry. Emphasis on technology applications. Prerequisite: MAT 181 or MAT 182. (3 crs.)

MAT 199. PRE-CALCULUS. Fundamental notions (functions, lines, segments, slopes, angle between lines, graphs and equations), conics, algebraic and transcendental curves. Prerequisite: MAT 181 or MAT 182. (3 crs.)

MAT 201. MATHEMATICAL MODELING. This course provides an introduction to mathematical modeling for majors as well as non-majors. An in-depth study of Discrete Dynamical Systems (DDS) is covered along with an introduction to calculus. The course affords the student an early opportunity to see how the pieces of an applied problem fit together. Using computer technology (simulation and spreadsheet software) the student investigates meaningful and practical problems chosen from many academic disciplines, including mathematical sciences as well as management and life sciences. (3 crs.)

MAT 215. 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 distribution 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. Prerequisite: DMA 092 or pass math proficiency test. (3 crs.) (3 crs.)

MAT 225. 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. Prerequisite: MAT 181 or MAT 182. (3 crs.)

MAT 271. MATHEMATICS OF FINANCE II. Generalized annuities; bonds, amortization of premiums and accumulation of discount; cash flows; depreciation schedules; comparison of depreciation; net cash flow; rate of return; capitalized cost and annual return; life annuities; life insurance. Prerequisite: MAT 171 (3 crs.)

MAT 272. DISCRETE MATHEMATICS. An introduction to theories and methods of mathematics that are relative to computer science. Topics include: logic, sets, elementary number theory, mathematical induction, combinatorics, relations, digraphs, Boolean matrices, trees. Prerequisite: MAT 181 or MAT 182 or MAT 199 or equivalent background in mathematics. (3 crs.)

MAT 273. BASIC CALCULUS. The techniques of differentiation and integration are covered without the theory of limits and continuity. Applications in business and biological science are considered. Prerequisites: MAT 181 or MAT 182 & MAT 131. (3 crs.)

MAT 281. CALCULUS I. A review of absolute value and inequalities; an introduction to analytic geometry; functions, limits, and continuity; the derivative; applications of the derivative. Prerequisite: MAT 199 or four years of high school mathematics. (3 crs.)

MAT 282. CALCULUS II. The integral; fundamental theorem of integral calculus; applications of the integral; inverse functions; logarithmic functions; exponential functions; trigonometric functions; hyperbolic functions; techniques of integration. Prerequisite: MAT 281. (3 crs.)

MAT 303. GEOMETRY. Analysis of axiomatic systems, axiomatic development of elementary Euclidean geometry and non-Euclidean geometry. Prerequisite: MAT 272. (3 crs.)

MAT 304. HISTORY OF MATHEMATICS. This course is a historical summary of the development of mathematics. Emphasis will be 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. Prerequisites: MAT 303 and MAT 282. (3 crs.)

MAT 305. THEORY OF EQUATIONS. Complex numbers; theorems involving polynomials in one variable; cubic and biquadratic equations; separation of roots, Sturm's theorem, and approximate evaluation of roots. Prerequisite: MAT 272. (3 crs.)

MAT 341. LINEAR ALGEBRA I. Systems of linear equations and matrices; determinants; vectors in 2-space and 3-space; vector spaces; linear transformations. Prerequisite: MAT 272. (3 crs.)

MAT 351. ABSTRACT ALGEBRA I. Fundamental concepts of logic; natural numbers, well-ordering property, induction, elementary concepts of number theory; groups, cosets, Lagrange's theorem, normal sub-groups, factor groups; homomorphism, isomorphism, and related topics including Cayley's theorem, natural hemomorphism, and the three fundamental homomorphism theorems. Prerequisite: MAT 272 is required and MAT 341 is recommended. (3 crs.)

MAT 381. CALCULUS III. Indeterminate forms and improper integrals, polar coordinates and conic sections, infinite series, and the theory of infinite series. Prerequisite: MAT 282. (3 crs.)

MAT 382. CALCULUS IV. Vectors in the plane; vectors in three space; theory or curves and surfaces; the differential calculus and the integral calculus of functions of several variables. Prerequisite: MAT 381. (3 crs.)

MAT 406. 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. Prerequisite: MAT 282 and MAT 381. (3 crs.)

MAT 441. 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-bases matrices, representation matrices; inner-product spaces, eigenvalues and eigenvectors, diagonalization. Prerequisite: MAT 341. (3 crs.)

MAT 451. ABSTRACT ALGEBRA II. Study of rings, ideals, quotient rings, integral domains, and fields; ring homomorphisms; polynomial rings, division algorithms, factorization of polynomials, unique factorization, extensions, fundamental theorem; finite fields. Prerequisite: MAT 351. (3 crs.)

MAT 461. STATISTICAL ANALYSIS I. Basic concepts of both discrete and continuous probability theory. The study of random variables, probability distributions, mathematical expectation and a number of significant probability models. Introduction to statistical estimation and hypothesis testing. Prerequisite: MAT 282 (3 crs.)

MAT 462. STATISTICAL ANALYSIS II. Statistical theory and application of statistical estimation techniques and hypothesis testing methods. Simple linear and multiple linear regression models. Statistical techniques are implemented with microcomputer statistical software. Prerequisite: MAT 461. (3 crs.)

MAT 469. HONORS COURSE IN MATHEMATICS. Mathematics majors must, as a prerequisite for this course, have completed 64 credits with a QPA of 3.25 in all work and the permission of the department chair. (3 crs.)

MAT 481. ADVANCED CALCULUS I. Logic and techniques of proof; relations, functions, cardinality, and naive set theory; development of real numbers from natural numbers through topology of the line; convergence and related ideas dealing with functions (sequences and series) including continuity. Prerequisites: MAT 272 and MAT 382. (3 crs.)

MAT 482. ADVANCED CALCULUS II. Further development of the limit concept pertaining to functions including differentiation and integration along with appropriate theorems and properties; continuation of development of sequences and series including functions. Prerequisite: MAT 481. (3 crs.)

MAT 490. TOPOLOGY. Set theory as applied to topological spaces including the real line; metric spaces. Prerequisite: MAT 351 or MAT 481. (3 crs.)

MAT 495. SEMINAR IN MATHEMATICS. Topics in this course are chosen jointly by the instructor and the student or students involved. Prerequisite: Permission of instructor and chair of the department. (Repeatable for a maximum of 3 crs.)

MAT 496. SENIOR RESEARCH PROJECT. This course, which should be taken near the end of the student's bachelors degree program, involves an indepth 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. Prerequisite: Permission of Mathematics and Computer Science Department. (3 crs.)

MAT 500. TECHNOLOGY FOR MATHEMATICS. This course, designed for mathematics and science majors and for prospective and practicing educators, explores the facets of using technological tools in the teaching, learning, and application of mathematics. The course, which will be taught from a laboratory-based perspective, consists of four components - using graphing calculators, using calculator-based laboratories, using the internet, and using mathematical software. Prerequisites: CSC 101, MAT 281 and MAT 282 or permission of instructor. (3 crs.)

Multimedia Technology - MMT

MMT 180 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, stock art/images, animation, 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. Two lecture hours and three laboratory hours per week. (3 crs.)

MMT 310 DIGITAL PORTFOLIO. This 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. Two lecture hours and three laboratory hours per week. (3 crs.)

MMT 320 DIGITAL VIDEO. This course canvasses the intricacies of digital video also known as nonlinear video editing and what makes a successful digital video editor. Cross-platform computer environments, enhanced hardware and software are used as components in the digital video process. End-user will be able to design, create, edit and produce digital video for the Internet, multimedia presentations and video broadcasts. Two lecture hours and three laboratory hours per week. Prerequisites: ART 120 and MMT 180, or permission of the instructor. (3 crs.)

MMT 330 WEB PUBLISHING. This course examines the complexity of publishing on the web and what makes an accomplished web designer / master by examining areas such as client-server computing, intranets and the Internet, HTML scripting, and server-based support. End-user interaction utilizing web page elements such as animations, sounds, and video is accentuated. Dynamic tools such as Java/JavaScript, Active-X and Shockwave are highlighted. Two lecture hours and three laboratory hours per week. Prerequisites: ART 120, MMT 180, MMT 320, or permission of the instructor. (3 crs.)

MMT 340 COMPUTER ANIMATION AND 3D 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. Students will learn the fundamentals in the classroom and apply them in laboratory activities. Two lecture hours and three laboratory hours per week. Prerequisites: ART 120, MMT 180, or by permission of the instructor. (3 crs.)

Music - MUS

MUS 100. INTRODUCTION TO MUSIC. Exposes 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 and video recordings, and concerts. (3 crs.)

MUS 104. VOICE CLASS I. This course is designed for students who want to improve their singing voice as a musically expressive instrument. Breathing, vocal placement and diction will be emphasized. Attention will also be given to improving sight-singing ability. (3 crs.)

MUS 115. FUNDAMENTALS OF MUSIC. 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. (3 crs.)

MUS 191 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. (1 cr., repeatable up to a maximum of 4 crs.)

MUS 192 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 women's trio or men's quartet, may rehearse separately to prepare extra concert repertoire. Choreography, dialogue or mime is part of some performances (1 cr., repeatable up to a maximum of 4 crs.)

MUS 196. JAZZ ENSEMBLE. Entrance by interview with Jazz Ensemble Director. Required attendance at rehearsals and all public performances. Membership granted only by audition. (1 cr., repeatable up to a maximum of 4 crs.)

MUS 198 UNIVERSITY 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 student interested in auditioning for Feature Twirler or for a position on the Auxiliary Unit as a Silk, Dancer, or Rifle. (1 cr., repeatable up to a maximum of 4 crs.)

MUS 199 UNIVERSITY CONCERT BAND. 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. (1 cr., repeatable up to a maximum of 4 crs.)

MUS 200. SIGHT SINGING AND EAR TRAINING. 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, the student will refine his or her aural skills. Students will learn to notate simple melodies dictated as well as to sing, whistle or hum melodies and chords represented by notation. Prerequisite: MUS 115. (3 crs.)

MUS 202 NORTH AMERICAN MUSIC Presents a panoramic view of the musical activities in America from Colonial times through the present. Included in this study of American folk, popular and art music are the various aspects of primitive music, psalmody, early opera, and concert life, African and European folk music's influence in America, the singing

school, the musical effect of European immigrants, and the roots of jazz and its ramifications. Prerequisite: MUS 100 is strongly recommended. (3 crs.)

MUS 204. HISTORY OF THE AMERICAN MUSICAL. This course will present 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. Prerequisite: MUS 100 is strongly recommended. (3 crs.)

MUS 210. VOICE CLASS II. This course is designed for students who have taken Voice I, or have had comparable vocal training and who want to continue to improve their singing voice as a musically expressive instrument. Breathing, vocal placement and proper diction will be emphasized. A more demanding level of vocal literature, commensurate with the student's singing ability will be performed. Attention will also be given to further improvement of sight-singing ability. Prerequisites: MUS 104, MUS 115, & MUS 200. (3 crs.)

MUS 211. KEYBOARD I. For the beginning students interested in achieving facility at the piano. Includes playing of major and minor scales, patterns and fingerings. Chords (I, IV, V) in both major and minor keys followed by their inversions and the common tone chord sequence pattern. A student completing the course should be able to play simple songs by combining melody with chord accompaniment. It is expected that students will be at an entry level in keyboard experience. Prerequisite: MUS 115. (3 crs.)

MUS 300. JAZZ: HISTORY, FORM & ANALYSIS. This course presents the historical background of jazz from 1900 to the present, the important artists and ensembles and their contributions to the art form, and analysis of jazz styles and forms via guided listenings to recordings, videos, and attendance at live performances. Prerequisite: MUS 100. (3 crs.)

MUS 301. 20TH CENTURY MUSIC: HISTORY, FORM & ANALYSIS. This course will demonstrate and analyze the compositional and performance techniques developed in 20th century art and popular music, and will identify those techniques as continuing earlier procedures or reacting to and breaking away from the music of earlier eras. The connection of new musical expression with societal, artistic, economic and historical developments of the 20th century will be shown. The student should acquire from this course an aural and intellectual grasp of new music trends, the vocabulary to discuss these trends and an acquaintance with the composers of the 20th century and with some of their works. Prerequisites: MUS 100 & MUS 115. (3 crs.)

MUS 303. MUSIC MATERIALS & METHODS FOR THE CLASSROOM TEACHER, GRADES K-8. This course is designed to show future teachers many effective ways to use music in the elementary and middle school classroom, as well as techniques to reinforce the teaching of the music specialist. Basic performance skills are developed, as well as K-8 classroom use of rhythm instruments, singing games, recordings, dances, part-singing and other creative activities. Information on resource material is researched and shared. Students will have the opportunity to practice-teach selected music topics in the K-8 classroom. Prerequisite: MUS 115, MUS 211 is strongly recommended. (3 crs.)

MUS 306. THE OPERA: HISTORY, FORM & ANALYSIS. This course will examine the origins, the history and the 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. Prerequisite: MUS 100, MUS 115 is strongly recommended. (3 crs.)

MUS 308. THE SYMPHONY: HISTORY, FORM & ANALYSIS. This course studies both the symphony as an orchestral performing ensemble and, in much greater depth, the symphony as a musical form or development that has been evolving and reinventing itself since the 18th century. Special notice will be taken of the effect of social, technological, philosophical, and economic changes on the historical development of the symphony to the present day. Prerequisite: MUS 100, MUS 115 is strongly recommended (3 crs.)

MUS 312. KEYBOARD II. A continuation of Keyboard I for the more advanced student. Review of scales, chords, inversions and sight readings followed by the improvisation of simple accompaniments from chord symbols. Modulation study is begun with the study of the circle of fifths; further methods of modulation are introduced as time permits. Transposition at both the second and third is introduced. A thorough study of dominant sevenths, ninths and eleventh chords is undertaken in various keys. Prerequisite: MUS 211 (3 crs.)

MUS 109, 209, 309, 409. PRIVATE INSTRUCTION, BRASS I-IV (1 cr.)

MUS 119, 219, 319, 419. PRIVATE INSTRUCTION, PIANO I-IV (1 cr.)

MUS 129, 229, 329, 429. PRIVATE INSTRUCTION, PERCUSSION I-IV (1 cr.)

MUS 149, 249, 349,449. PRIVATE INSTRUCTION, WOODWINDS I-IV (1 cr.)

MUS 159, 259, 359, 459. PRIVATE INSTRUCTION, VOICE I-IV (1 cr.)

Nursing (BSN Program) - NUR

NUR 101. WOMEN'S HEALTH ISSUES. This course addresses various health care issues, needs and concerns of women. Emphasis is on the biological, developmental, psychological and social concepts related to women's health care. OPEN TO ALL STUDENTS. (3 crs.)

NUR 105. PARENTING: INSIGHTS AND ISSUES. This course examines the challenge of parenthood and effective parenting. Explication of the functions, process and problems of parenting serves as a foundation for discussion of effective parenting skills and behaviors. OPEN TO ALL STUDENTS. (3 crs.)

NUR 120. THE INFORMED HEALTH CONSUMER. This course examines the role of consumer movement and its relationship to the health care delivery system. Emphasis is placed on educating the consumer to knowledgeably and effectively use the health care delivery system. OPEN TO ALL STUDENTS. (3 crs.)

NUR 200. TRANSITIONS IN NURSING. This RN/BSN transition course is designed to assist the registered nurse student in developing and achieving professional goals. Emphasis is on educational trends in nursing, concepts of professionalism, theories of role transition, and culture shock. (3 crs.)

NUR 330. PHILOSOPHY OF PROFESSIONAL NURSING. Focuses on theoretical frameworks for professional nursing practice, including an introduction to the nursing process and general systems theory. Assignments help students develop and apply a personal philosophy of professional nursing, and to independently plan appropriate interventions for multicultural clients of all ages. Prerequisite. BSN Status. (3 crs.) Fall.

NUR 350. HEALTH ASSESSMENT. Concepts and skills of history-taking and physical assessment are emphasized, focusing on the variations in approach as well as in findings at different stages of human development. Prerequisite: BSN Status. (3 crs.) Fall.

NUR 370. METHODS OF NURSING RESEARCH. Basic concepts and methods related to the research process. Opportunity is 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. Prerequisite. BSN Status. (3 crs.) Spring.

NUR 375. LEADERSHIP AND CHANGE IN NURSING. Enhances leadership skills through analysis of theories/concepts and experiential exercises. Practicums provide for application of general systems theory in critical analysis of situations and decision-making within the practice of nursing to meet emerging health needs of consumers. Prerequisite: BSN Status. (6 crs.: 3 crs. Theory, 3 crs. Clinical) Spring.

NUR 406. SCHOOL HEALTH NURSING. Examines the role of the school nurse in relation to child health supervision and health education for the school-age population. Clinical practicum involves preceptorships with certified school nurses in local districts. Prerequisite: BSN Status. (4 crs.: 3 crs. Theory, 1 cr. Clinical). Spring.

NUR 410. RESEARCH UTILIZATION IN NURSING. Differentiates between conducting research and research utilization. Through participation in research utilization activities, students learn to synthesize research-based knowledge into applicable protocols of care and to utilize research on an organizational level. Prerequisite: NUR 370. (2 crs.) Fall.

NUR 450. TRENDS AND ISSUES IN NURSING. Analysis of professional nursing as well as bio-ethical issues from historical and contemporary viewpoints with implications for professional nursing practice in the health care delivery system. Prerequisite: BSN Status. (3 crs.) Spring.

NUR 470. FAMILY HEALTH NURSING. An introduction to the theory and practice of family nursing. A variety of nursing theories, as well as general systems theory, will provide the basis for serving families as units as well as family subsystems and individual family members. Clinical experiences will focus on home care of families for health promotion, restoration, and/or rehabilitation. Prerequisite: NUR 330 & NUR 350. (6 crs.: 3 crs. Theory, 3 crs. Clinical) Fall.

NUR 475. COMMUNITY HEALTH NURSING. Focuses on the synthesis of theories from nursing and the public health sciences with emphasis on improving the health of the community by identifying subgroups that are at risk. Clinical activities focus primarily on health promotion directed toward a total community or population group. Prerequisite: BSN Status. (6 crs.: 3 crs. Theory, 3 crs. Clinical) Spring.

NUR 485. PROFESSIONAL DEVELOPMENT IN NURSING. Examines professional growth from entry into the BSN program to graduation. This capstone course culminates in completion of a professional portfolio. Prerequisite: This course must be taken the final semester in the nursing major. (1 cr.) Fall & spring.

Nursing (ASN Program) - NRN

These courses are offered by faculty from the Community College of Allegheny County as part of the Cooperative Associate Nursing Program with California University.

NRN 101. INTRODUCTION TO NURSING. This course introduces the student to the profession of nursing through theory and applications of concepts within the CCAC organizing framework. Prerequisite: CSC elective. Corequisites: BIO 230, PSY 100, and MAT elective. (8 crs.) Spring.

NRN 102. HEALTH PROMOTION/ILLNESS PREVENTION IN AGE BASED POPULATIONS. This course addresses the promotion of health to individuals and families. Illness prevention is introduced and addressed in diseases commonly seen in women, children, and adolescents. The course provides an opportunity to identify basic management and delegation skills to meet the nursing needs of older adults in diverse health care systems. Emphasis is placed on the aging process as it applies to normal developmental changes and utilization of the nursing process to deliver developmentally appropriate care. Prerequisite: NRN 101. Corequisites: BIO 260 and PSY 207. (8 crs.) Fall.

NRN 105. COMPUTER APPLICATIONS IN HEALTH CARE. This course provides an overview of actual and potential uses within the health care system. Emphasis is on learning about computer applications and their use specific to nursing/allied health. A hands-on component is included as part of the course. This course is graded on a pass/fail basis. (1 cr.) Fall and spring.

NRN 201. DIMENSIONS IN NURSING. This course explores current issues impacting on the nursing professional and health care delivery today. The emphasis is on group learning through shared experience. Students will explore legal-ethical questions, roles of the nurse, nursing research, the internet, health care systems, professional responsibilities, and accountability to self, the profession, and society. Prerequisite: NRN 101. (2 crs.) Spring.

NRN 202. HEALTH PROMOTION/ILLNESS PREVENTION IN ADULT POPULATIONS. This course provides expanded concepts related to nursing care for adults experiencing common complex alteration in health. Emphasis is placed on the nurse's role as a member of a multidisciplinary team and as a manager of care. Upon completion, students are expected to utilize evidenced-based information for clinical decision making in the provision of care to groups of adults in a variety of health care settings. Students will also be expected to develop teaching plans that incorporate cultural aspects and decrease known risks to promote health in the adult population. Prerequisites: BIO 226 and NRN 102. (10 crs.) Spring.

NRN 204. POPULATIONS IN CRISIS. This course builds on previous knowledge related to health promotion/illness prevention with the focus on complex alterations in health in the adult population. Emphasis will be on expanding decision making in the acute or critical care area. Students are expected to plan and implement a health promoting teaching project for an identified community. Prerequisites: NRN 101 and NRN 202. (7 crs.) Fall.

NRN 205. PROFESSIONAL CHALLENGES. This capstone course enables students to integrate health promotion/illness prevention, clinical decision making and professional behaviors through an in-depth clinical experience in selected health care settings. Emphasis is placed on the transition from the student role to that of professional nurse. The classroom setting provides the student with the opportunity to explore nursing management theory, address current issues in health care, share experiences, and refine teaching skills necessary for the professional nurse. Prerequisite: NRN 204. (3 crs.) Fall.

Occupational Therapy Assistant - OTA

OTA 100. INTRODUCTION TO OCCUPATIONAL THERAPY. This course provides an introduction to the Occupational Therapy profession. Basic principles are emphasized including history, philosophy, ethics, and the concept of the occupation. The development of the therapeutic relationship is introduced both with individuals and groups. The types of practice settings are reviewed with concentration in the three major clinical areas: physical disabilities, psychiatric, and developmental disabilities. (3 crs.)

OTA 110. PERSONAL AND GROUP DYNAMICS IN OTA. This course focuses on the use of activity groups as a treatment modality in occupational therapy. The process of structuring a group, selecting activities, inviting patient participation and using appropriate leadership interventions and evaluating outcomes is discussed. Analysis of group roles and dynamics is presented. Specific examples of groups appropriate for chronic patients are highlighted. Prerequisite: Formal admission to the occupational therapy assistant program. (3 crs.)

OTA 115. DIRECTED PRACTICE I. An understanding, use of, and competency in medical technology is developed; theoretical concepts of confidentiality, observation, and research are discovered and explored; basic interview, documentation and safety principles are practiced and applied; further development of personal creativity and advocacy issues are analyzed; community resources and cultural issues are examined and enriched through structured experiential field experiences. (2 crs.)

OTA 125. DIRECTED PRACTICE II. Experiential course with analytical thinking emphasis designed to develop skills in interpersonal and group interactions, activity analysis and group leadership. Includes exploration of values and ethics, personal creativity, sensitivity to cultural differences, personal and cultural attitudes. Community resources and cultural issues continue to be explored through structured fieldwork assignments. (2 crs.)

OTA 200. PSYCHOSOCIAL DIMENSIONS OF HEALTH. This course encompasses the evaluation and treatment of individuals with primary or secondary psychiatric diagnoses. Students learn about a variety of diagnoses as defined by DMS IV. Different occupational therapy practice models in mental health are articulated. Specific evaluation tools and activities are also analyzed. After reviewing the treatment planning process, students practice writing goals and intervention plans. Level I fieldwork is also incorporated into this class. Prerequisite: Formal admission to the occupational therapy assistant program. (4 crs.)

OTA 205. DIRECTED PRACTICE III. Experiential course with analytical thinking emphasis designed to continue to develop skills in interpersonal and group interaction, activity analysis and creativity. The COTA's role in clinical maintenance and management tasks will be examined. Structured fieldwork assignments will focus on psychosocial issues within the community. Community resources, cultural issues and advocacy will be explored. (2 crs.)

OTA 208. PHYSICAL DIMENSIONS OF HEALTH. Etiology, signs and symptoms, and issues specific to physical disabilities, understanding of the function and goals of certified occupational therapy assistants in treatment of these disabilities. Current modalities and therapeutic techniques specific to treatment are addressed, practiced and mastered. Prerequisite: Formal admission to the occupational therapy assistant program. (4 crs.)

OTA 215. DIRECTED PRACTICE IV. Experiential course with analytical thinking emphasis designed to continue to develop skills in interpersonal and group interactions, activity analysis and creativity. Special emphasis will be placed on clinical research issues. Structured fieldwork assignments will focus on physical dysfunction issues within the community. Community resources, cultural issues and advocacy will be explored. (4 crs.)

OTA 220. OCCUPATIONAL THERAPY (LEVEL II FIELDWORK). This experimental-based learning module will give the occupational therapy student an opportunity to put theory into practice in a minimum of two supervised practice settings. The student will learn to do treatment planning, direct service, and documentation under the direction of an occupational therapist in various settings. At the end of the field placement, the student will be able to demonstrate his/her competency by designing a treatment plan, carrying out treatment and documenting appropriately. Prerequisite: All occupational therapy coursework must be completed except for level II fieldwork. (12 crs.)

OTA 240. PROFESSIONAL ISSUES IN OCCUPATIONAL THERAPY. This seminar course examines the roles and functions of the COTA in screening and evaluation, program planning, providing treatment, service management, and maintaining professional qualifications. The role of the COTA in direct treatment and as manager of an activity department are emphasized. Prerequisite: All occupational therapy coursework must be completed exception for level II fieldwork. (2 crs.)

Philosophy - PHI

PHI 100. PERSPECTIVES IN PHILOSOPHY. An introduction to such major philosophical issues as the nature of knowledge, reality, religion and morals. (3 crs.)

PHI 115. LOGIC AND LANGUAGE. An introduction of basic principles and techniques for distinguishing correct from incorrect reasoning. (3 crs.)

PHI 200. WORLD RELIGIONS. The study of the seven world religions, including their origins and doctrines. (3 crs.)

PHI 201. HISTORY OF ANCIENT PHILOSOPHY. Study of the pre-Socratic philosophers, Plato, Aristotle, the Stoics, Epicureans, and the Skeptics. (3 crs.)

PHI 206. SIXTEENTH TO EIGHTEENTH CENTURY PHILOSOPHY. From Descartes to Kant; modern philosophy in the wake of the Scientific Revolution and the Reformation. (3 crs.)

PHI 211. FORMAL LOGIC I. Introduction to the syntax and semantics of truth-functional and first-order languages and also to proof theories for such languages. (3 crs.)

PHI 220. ETHICS. An examination of selected ethical systems and their philosophical foundations, with special emphasis on understanding such basic moral concepts as good, right and duty. (3 crs.)

PHI 225. SOCIAL AND POLITICAL PHILOSOPHY. An examination of selected social or political systems and their philosophical foundations. Special emphasis on such basic concepts as natural rights, equality, justice, individual freedom and political authority. (3 crs.)

PHI 231. PHILOSOPHY OF RELIGION. A consideration of 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. (3 crs.)

PHI 247. SCIENCE, TECHNOLOGY, AND SOCIETY. Examines the philosophical issues that stem from the impact that evolving science and technology have on people's beliefs, values, and behavior. (3 crs.)

PHI 270. PHILOSOPHY OF MARXISM. An 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 hilosophy. (3 crs.)

PHI 305. MEDIEVAL PHILOSOPHY. Begins with Neo-Platonism and proceeds with such thinkers as Augustine, Eigena, Anselm, Thomas Aquiliam of Ockham. (3 crs.)

PHI 307. MEDICAL ETHICS. This course extends the study of ethics – theoretical and applied – to moral dilemmas and decision making in the field of medicine and health related professions. (3 crs.)

PHI 310. NINETEENTH CENTURY PHILOSOPHY. A survey of the development of German idealism after Kant and the voluntaristic reactions to it. Also considers British Empiricism and French Positivism. (3 crs.)

PHI 312. FORMAL LOGIC II. A continuation of PHI 211 Formal Logic I, with emphasis on the meta-theory of truth-functional and first-order languages. It also considers selected topics in the Philosophy of logic and the philosophy of mathematics. Prerequisite: PHI 211. (3 crs.)

PHI 320. ETHICAL THEORY. An examination of the possibility and nature of ethical knowledge and the meaning of moral discourse. Special consideration is given to contemporary discussions. (3 crs.)

PHI 325. PHILOSOPHY OF SCIENCE. A study of the methods, concepts and presuppositions of scientific inquiry. An attempt is made to understand the historical development of science in the context of various theories of knowledge and reality. (3 crs.)

PHI 335. AESTHETIC THEORY. An examination of 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. (3 crs.)

PHI 370. THE PHILOSOPHY OF LAW. A survey of the debate about the concept of law in the history of philosophy and an examination of 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. (3 crs.)

PHI 405. EPISTEMOLOGY. An examination of selected theories of knowledge including contemporary discussions. (3 crs.)

PHI 410. METAPHYSICS. Studies general problems and theories concerning the nature of reality. (3 crs.)

PHI 415. PHILOSOPHY OF MIND. An examination of important stages in the philosophical development of the notion of mind. 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. (3 crs.)

PHI 426. PHENOMENOLOGY AND EXISTENTIALISM. A study of the historical background and development of twentieth century European Philosophy, with particular emphasis on such philosophers as Husserl, Heidegger, Sartre and Merleau-Ponty. (3 crs.)

PHI 431. ANALYTIC PHILOSOPHY. An exploration of selected philosophical issues (e.g., knowledge, truth and meaning), utilizing recent work in conceptual and methodological analysis. Though the course is usually problem-oriented, a good deal of the history of recent Anglo-American Philosophy is covered. Recommended prerequisites: PHI 206 and a Logic course. (3 crs.)

PHI 459. TUTORIAL IN PHILOSOPHY. (Variable crs.)

PHI 470. SPECIAL PROBLEMS IN PHILOSOPHY. A discussion of some special problem or issue in philosophy. (3 crs.)

PHI 490. SEMINAR IN PHILOSOPHY. A discussion of either one prominent philosopher or a movement in philosophy. (3 crs.)

Physical Science - PHS

PHS 117. BASIC PHYSICAL SCIENCE. An elementary, non-laboratory approach to the physical world. Topics may be selected jointly by the students and the instructor. Three class hours each week. (3 crs.) Spring & fall.

PHS 125. OBSERVATIONAL ASTRONOMY. This course is designed to present an opportunity to acquire a general understanding of the Night-Time sky as it relates to Astronomy as well as experiences and opportunities for observation. Two class hours each week. (2 crs.)

PHS 136. INTRODUCTION TO ENVIRONMENTAL CHEMISTRY. This course provides a 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 is primarily intended for the nonscience major. (3 crs.) Summer.

PHS 145. 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, telescopes, spectroscopes will be used. Three class hours each week. (3 crs.) Spring, summer & fall.

Physical Therapist Assistant - PTA

PTA 100. INTRO TO PTA. An overview of the discipline of physical therapy and the role and function of the physical therapy assistant. Additional topics include examinations of the history of physical therapy, physical therapy professional organizations, legal and ethical issues, and commonly encountered pathologies. (3 crs.)

PTA 101. 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.. Prerequisite: PTA 100 and admission into the Physical Therapist Assistant Program. (1 cr.)

PTA 110. INTRO TO PATHOLOGY. This course examines the disease process on the cellular, histological and systemic levels. Particular emphasis is placed upon those pathologies commonly encountered by the physical therapist assistant in pediatric, geriatric, orthopedic and neurologic patient populations. (2 crs.)

PTA 150. PHYSICAL THERAPY CLINICAL INTERNSHIP. 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 using principles common to all procedures. Prerequisite: Formal admission into the physical therapy assistant program and completion of PTA 100. (3 crs.)

PTA 200. PROFESSIONAL ISSUES FOR THE PTA. 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 State Board Examination. Prerequisite: Formal admission into the physical therapy assistant program. (2 crs.)

PTA 205. CARDIOPULMONARY REHABILITATION. An examination of the anatomy, physiology and pathology of the cardiopulmonary system. Specific methods of assessment and intervention, including indications and contraindications, are explored for a myriad of cardiopulmonary conditions. The laboratory portion of the course enables students to develop and practice specific psychomotor skills pertaining to cardiopulmonary rehabilitation. Prerequisite: Formal admission into the physical therapy assistant program. (2 crs.)

PTA 210. NEUROLOGICAL REHABILITATION. This course is an examination of the etiology, signs and symptoms and effects of pathologies to the central and peripheral nervous systems. Development of patient goals and physical therapy plans for specific neurological disorders are also presented. Specific treatment procedures and techniques are demonstrated and practiced in the laboratory setting. Prerequisite: Formal admission into the physical therapist assistant program. (4 crs.)

PTA 215. PEDIATRIC REHABILITATION. This is a lecture/laboratory course that encompasses etiology, signs and symptoms and issues specific to orthopedic disorders to children. Development of data collection skills, strategies for implementation of the treatment plan and physical skills needed to treat children are emphasized. (2 crs.)

PTA 220. GERIATRIC REHABILITATION. This course examines the etiology, signs and symptoms, and treatment protocols associated with disorders in gerontological populations. Development of intervention strategies and physical therapy protocols for common geriatric problems are emphasized. Prerequisite: Formal admission into the physical therapist assistant program. (2 crs.)

PTA 225. ORTHOPEDIC REHABILITATION. This course guides the physical therapist assistant student 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. Prerequisite: Formal admission into the physical therapist assistant program. (4 crs.)

PTA 250. PHYSICAL THERAPY CLINICAL INTERNSHIP II. This clinical internship provides physical therapist assistants with the opportunities to perform their responsibilities under appropriate physical therapist or physical therapist assistant supervision and with positive role modeling. The experience provides exposure to a variety of patients and learning activities. Prerequisite: All physical therapist assistant coursework must be completed with the exception of PTA 200. (12 crs.)

Physics - PHY

PHY 101. COLLEGE PHYSICS I. Introductory Physics. Vectors, mechanics, energy, momentum, conservation principles and oscillatory motion. Three class hours and three laboratory hours each week. Corequisite: MAT 281 (4 crs.) Spring.

PHY 121. GENERAL PHYSICS I. An introductory non-calculus course dealing with mechanics and heat. Three class hours and three laboratory hours each week. Functional knowledge of algebra and elementary trigonometry is assumed. (4 crs.) Spring, summer & fall.

PHY 122. GENERAL PHYSICS II. An introductory non-calculus course addressing the areas of sound, light and electricity and magnetism. Three class hours and three laboratory hours each week. Prerequisite: PHY 121. (4 crs.) Spring, summer & fall.

PHY 202. COLLEGE PHYSICS II. A continuation of College Physics I. Heat and thermodynamics, hydrostatics, waves and acoustics, electricity, magnetism and AC circuits. Three class hours and three laboratory hours each week. Prerequisite: PHY 101. Corequisite: MAT 282. (4 crs.) Fall.

PHY 203. COLLEGE PHYSICS III. A continuation of College Physics II. Maxwell's equation and electromagnetic waves, light, atomic and nuclear physics, and special relativity. Some review of material from College Physics I and II. Three class hours and three laboratory hours each week. Prerequisite: PHY 202. Corequisite: MAT 381. (4 crs.) Spring.

PHY 221. 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. Three class hours and three laboratory hours each week. Prerequisite: PHY 202. Corequisite: MAT 381. (4 crs.) As needed.

PHY 301. 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. Prerequisites: PHY 203 and MAT 381. Recommended PHY 221, MAT 382 and MAT 341. Three lecture hours and three laboratory hours each week. (4 crs.) As needed.

PHY 331. MODERN PHYSICS. Relativistic kinematics and dynamics, particle and wave aspects of radiation and particles, the structure of the hydrogen atom, and the many-electron atoms. Quantum mechanics introduced for the first time here. Prerequisites: PHY 203, MAT 381. (3 crs.) As needed.

PHY 341. MATHEMATICAL METHODS OF PHYSICS. Vector calculus, Fourier series and integrals, ordinary differential equations, partial differential equations, general series representations of functions and special functions. Prerequisites: PHY 203 and MAT 381. (3 crs.) As needed.

PHY 375. RADIATION AND OPTICS. This course begins with a review of Maxwell's equations and wave analysis. The course then goes into Fraunshofer diffraction, radiation from atoms, polychromatic waves, magneto-optic and electro-optic effects, and introduction of laser and maser theory. Prerequisite: PHY 301. (3 CRS.) As needed.

PHY 376. 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. (3 crs.) As needed.

PHY 410. PHYSICS INTERNSHIP. The student is provided an opportunity to work in an industrial or non-profit research laboratory, and the practical training is intended to supplement the student's coursework. Prerequisite: Junior standing and permission of the department chair. (Variable crs.) Spring, summer & fall.

PHY 451. 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. Prerequisite: 12 Physics credits. One class hour each week and three laboratory hours each week. (1 cr.) As needed.

PHY 475. ASTROPHYSICS. Topics concerning stellar evolution include observations, physical states of the stellar interior, evolutionary phases and initial and final stellar structure, and some vital statistics of the stars. (3 crs.) As needed.

PHY 495. PHYSICS SEMINAR. An introduction to literature, history, teaching, and research methods in the physical sciences. Prerequisites: Junior standing and at least 19 hours of physics (including College Physics I-II) (1 cr.) Spring, summer & fall.

Political Science - POS

POS 100. 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. (3 crs.)

POS 105. AMERICAN GOVERNMENT. 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. (3 crs.)

POS 205. MUNICIPAL GOVERNMENT. The organizational forms of municipalities, the process of decision-making and implementation, and proposed solutions to problems of an urban society. (3 crs.)

POS 210. 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. Prerequisites: POS 100 and POS 105. (3 crs.)

POS 218. POLITICAL PARTIES, CAMPAIGNS, AND ELECTIONS. The organization and operations of political parties in the United States. Careful attention is given to the methods used by parties in nominating candidates and in conducting campaigns and to the significance of pressure groups, public opinion, and the electorate in our political life. Prerequisite: POS 105. (3 crs.)

POS 219. THE MASS MEDIA AND AMERICAN POLITICS. The interaction of politics and the mass media within American society. 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. Prerequisite: POS 105. (3 crs.)

POS 220. INTRODUCTION TO PUBLIC ADMINISTRATION. Primarily an introduction to the study of American public administration, this course seeks to achieve several broad objectives. First, it conveys an understanding of the significant role played by administration in present-day American government and of the implications of that role for a democratic society. It has the further purpose of providing insight into the specific relationships between administration and the broad political environment from which it arises and in which it operates. Finally, and mainly, the course offers opportunity for consideration of those more specialized and technical factors, such as public organization, public personnel, budgeting, and executive leadership, that are involved in the formulation and administration of public policy. Prerequisites: POS 100, POS 105. (3 crs.)

POS 222. THE ADMINISTRATION OF CRIMINAL JUSTICE IN THE UNITED STATES. The operations of the criminal justice system in the United States. Topics include crime in American, the rule of law, the role of the police, the function of the prosecuting and defense attorneys, criminal courts and trial processes, sentencing, corrections, incarceration, probation and parole. Prerequisite: POS 105. (3 crs.)

POS 228. DEVELOPMENT OF POLITICAL THOUGHT: CLASSICAL AND MEDIEVAL. The basic ideas, values, and methods of the profound political thinkers and philosophers from Classical Greece, Rome, and the Christian Church. Prerequisites: POS 100 and POS 105. (3 crs.)

POS 229. DEVELOPMENT OF POLITICAL THOUGHT: MODERN. A sequel to the questions and approaches raised in POS 228. The major political philosophers from the Renaissance to the beginning of the twentieth century. Prerequisites: POS 100 and POS 105. (3 crs.)

POS 235. STATE AND LOCAL GOVERNMENT. A treatment of the organization, powers, functions, and problem of state and local governmental units. Emphasis is placed on the growing complexity of relationships among the various levels of government as a result of technological developments and the growth of metropolitan areas. (3 crs.)

POS 236. INTRODUCTION TO INTERNATIONAL RELATIONS. A practical and theoretical introduction to a study of systematic patterns in international relations. Includes analysis of rules, instruments, processes, decision-making factors, and conflict resolution. (3 crs.)

POS 237. INTERNATIONAL ORGANIZATIONS. An analysis and evaluation of the United Nations and other international organizations, and of some of the theoretical concepts and practical problems involved. Prerequisite: POS 100 or permission of instructor. (3 crs.)

POS 281. POLITICS OF RUSSIA. Basic components of Russian politics: background history, Marxist ideology, and the historical development of Russian political institutions and practices from the Revolution to the present. Prerequisites: POS 100, POS 105. (3 crs.)

POS 300. INTRODUCTION TO PUBLIC POLICY. Primarily in seminar fashion. Students present and discuss major ideas from assigned readings. Formal lectures are also scheduled when needed to present basic ideas and information. Prerequisite: Any Political Science course or permission of the instructor. (3 crs.)

POS 301. METHODS OF POLITICAL ANALYSIS. A description, analysis, and application of basic research tools in the discipline of Political

Science. Prerequisite: POS 101, 105, or permission of the instructor. (3 crs.)

POS 306. CONGRESS. An 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. Prerequisite: POS 105 or permission of the instructor. (3 crs.)

POS 307. 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. Prerequisites: POS 100 and POS 105. (3 crs.)

POS 310. THE PRESIDENCY. Intensive study of the American presidency, focusing on personality, organization of the office, use and misuse of power, and policy making. Prerequisite: POS 105 or permission of instructor. (3 crs.)

POS 314. 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. Prerequisite: POS 105 or permission of instructor. (3 crs.)

POS 315. CONSTITUTIONAL LAW: CIVIL LIBERTIES. 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. Prerequisite: POS 105 or permission of the instructor. (3 crs.)

POS 316. JUDICIAL PROCESS. Intensive study of the judicial process in the United States and the relationship between the judicial system and the larger American social system. Prerequisite: POS 105 or permission of the instructor. (3 crs.)

POS 320. U. S. 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. Prerequisite: POS 105. (3 crs.)

POS 322. POLITICS OF THE MIDDLE EAST. A comparative analysis of institutions, processes, and politics of Middle Eastern governments and how these have been shaped by international relations of the region. Prerequisite: POS 100. (3 crs.)

POS 323. POLITICS OF LATIN AMERICA. A comparative analysis of institutions, processes, and politics of Latin American countries and how these have been shaped by the international relations of the region. Prerequisite: POS 100. (3 crs.)

POS 325. 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. Prerequisites: POS 100 and POS 105. (3 crs.)

POS 326. POLITICS OF AFRICA. A comparative analysis of the institutions, processes and politics of selected African nations, and their place in the international arena. (3 crs.)

POS 327. CONTEMPORARY POLITICAL THOUGHT. A general survey of the major political ideas and thinkers of the twentieth century, drawing connections between these ideas and contemporary developments in philosophy, psychology, economics, and sociology. Prerequisites: POS 100 and POS 105. (3 crs.)

POS 329. INTERNSHIP IN POLITICAL SCIENCE. Practical field experience to supplement academic work, developing professional competencies in research and communication skills. (Variable crs.)

POS 330. 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. Prerequisite: Any Political Science course or permission of the instructor. (3 crs.)

POS 335. ADMINISTRATIVE LAW. The legal structure and political environment within federal administrative agencies in the United States that formulate public policy. Emphasis is given to the growth of the administrative state within the United States, the necessity for the delegation of legislative authority to administrative agencies and the need for judicial control of the bureaucracy. Prerequisite: POS 100 & POS 105 or permission of the instructor. (3 crs.)

POS 379. SPECIAL PROBLEMS IN POLITICAL SCIENCE. (Variable crs.)

POS 450. SEMINAR IN AMERICAN POLITICS. This seminar, required of all Political Science majors, is designed to provide intensive examination of a specific and narrowly focused area in the field of American politics. The course is research-oriented and consists of individually prepared contributions by all participants, which are discussed and critically appraised by all members of the class. Prerequisite: Students taking this course must be Seniors majoring in Political Science. (3 crs.)

Psychology - PSY

PSY 100. GENERAL PSYCHOLOGY. This course is a general introduction to the scientific study of behavior and mental processes. It explores topics such as methods of research, physiological development of the individual, learning, motivation, emotions, cognitive processes, sensation, perception, testing, personality, mental disorders and their treatments and individual differences. Research as well as practical application is stressed. (3 crs.)

PSY 205. CHILD PSYCHOLOGY. Age-related changes in social, cognitive, emotional, and physical characteristics. Development from prenatal stages through later childhood is included. Socialization of the child is examined. Prerequisite: PSY 100. (3 crs.)

PSY 206. ADOLESCENT PSYCHOLOGY. Factors that influence the growth and development of adolescents. Emphasis on the relationship among physiological, psychological and sociological factors and theoretical systems used to describe, explain, predict, and work with adolescents. Prerequisite: PSY 100. (3 crs.)

PSY 207. DEVELOPMENTAL PSYCHOLOGY. The patterns of physical, mental, social and emotional development throughout the life span. Prerequisite: PSY 100. (3 crs.)

PSY 208. EDUCATIONAL PSYCHOLOGY. The learning process is examined, with emphasis on learning in school settings. The application of current theories and research findings to classroom situations is stressed. This course examines cognitive development, intelligence, motivation, discipline, behavioral objectives, and measurement and evaluation. Prerequisite: PSY 100. (3 crs.)

PSY 209. INDUSTRIAL PSYCHOLOGY. This course is a comprehensive introduction to the field of Industrial Psychology. It demonstrates the application of psychological principles of behavior to people 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 every day problems that confront people in the world of work. Prerequisite: PSY 100. (3 crs.)

PSY 211. 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. Prerequisite: PSY 100. (3 crs.)

PSY 215. PSYCHOLOGY OF EXCEPTIONAL CHILDREN. The psychological problems of children who have hearing, speech, mental and personality deficits, and of children who are culturally disadvantaged are explored, as well as characteristics of children of superior ability. A major purpose is to gain a functional understanding of these problems and of the procedures for helping to cope with them. The student is given the opportunity to gain firsthand experience with exceptional children in an observation of a special class in the public schools. Prerequisites: PSY 100; PSY 205 for Psychology Majors; PSY 205 or PSY 207 for non-psychology Majors. (3 crs.)

PSY 222. 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. Prerequisites: PSY 100. (3 crs.)

PSY 225. PSYCHOLOGICAL STATISTICS. This course provides the student with an understanding of the basic concepts and techniques of descriptive and inferential statistics. The following statistical procedures are included: frequency distributions, measures of central tendency, measures of variability, z-scores and the normal curve, correlation, linear regression, probability and hypothesis testing, z-tests, t-tests, and one-way ANOVA (time permitting). Students may also gain some expertise in the use of SPSS, or other computer software packages. The emphasis is on comprehension, interpretation, and application, and not on memorizing formulae or calculation. Prerequisite: PSY 100 & MAT 181 (3 crs.)

PSY 235. PSYCHOLOGY OF LEARNING. The major areas of learning focused on are behavioral, (classical conditioning, operant conditioning and observational learning), cognitive and neurophysiological. In each of these areas, study progresses from basic research to applications. Historically influential theorists, such as Thorndike and Hull, are discussed briefly. Prerequisite: PSY 100. (3 crs.)

PSY 305. PSYCHOLOGY OF PERSONALITY. This course explores the essential factors that result in creating individual differences of 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. Prerequisite: PSY 100. (3 crs.)

PSY 310. 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. Prerequisite: PSY 100. (3 crs.)

PSY 311. PSYCHOLOGY OF GENDER ROLES. The ways in which gender-related behaviors and attitudes develop, are maintained, and influence the lives of men and women are explored. Gender differences are viewed from biological, psychological, sociological, and anthropological perspectives. Although what is know about the psychology of women is often consulted, the focus is on gender, and therefore this course should be of equal interest to men and women. Prerequisite: PSY 100. (3 crs.)

PSY 340. PSYCHOLOGICAL TESTING. The nature and function of measurement in psychology with concentration on test construction problems and procedures and an examination of some typical tests in the fields of intelligence, personality, aptitudes, abilities, and interests. Prerequisites: PSY 100 & PSY 225. (3 crs.)

PSY 345. HISTORY AND SYSTEMS OF PSYCHOLOGY. This course explores the evolution of psychological thought starting with its philosophical roots. The major perspectives of psychology explored are Structuralism, Functionalism, Behaviorism, Gestalt, Psychoanalysis, Humanism, and Cognitive. When looking at the impact of central figures in the field, a more inclusive approach will be utilized. Understanding the contextual forces which shaped the discoveries and thinking of the times on the course of the development of psychology as a science is emphasized. Prerequisite: PSY 100. (3 crs.)

PSY 350. 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. Prerequisite: PSY 100. (3 crs.)

PSY 360. EXPERIMENTAL PSYCHOLOGY. This is a survey course emphasizing the design of research strategies for evaluating hypotheses about behavior and the quantitative analysis of research results. The major content areas explored are psychophysics, perception, learning, memory, cognition, individual differences, social influences, environmental and human factors. Each of these content areas will be studied using the statistical and research techniques of scientific psychology. Prerequisite: PSY 100 & PSY 225. (3 crs.)

PSY 365. METHODS OF RESEARCH. Hands-on experiences in conducting research and the scientific study of behavior. Students apply a variety of methods to research problems in a number of content areas and are exposed to the research literature in these areas. Also included is instruction in the preparation of a formal research report. Students will be expected to conduct one research study and write one research proposal. Prerequisites: PSY 100, PSY 225 & PSY 360. (3 crs.)

PSY 370. INTERVIEWING SKILLS. For students who will soon be seeking employment in an organizational setting, providing knowledge and practical experience in several different and specific types of interviews, especially the selection interview for employment, the career planning interview, exit interview and the performance evaluation interview. Prerequisites: PSY 100 & PSY 209. (3 crs.)

PSY 375. PSYCHOPATHOLOGY IN CHILDHOOD. This course explores the various psychopathological disorders of childhood. The particular manifestation in children will be discussed for each disorder, with emphasis on the quantitative nature of clinical symptom characteristics as illustrated by case studies. The differentiation between similar diagnoses and symptoms, as well as the relationships between each disorder and other emotional familial problems, will be discussed. Prerequisites: PSY 100 & PSY 205. (3 crs.)

PSY 400. ABNORMAL PSYCHOLOGY. A survey of behavior pathology including psychoses, neuroses, and character disorders including drug addiction and psychophysiological disorder together with a general consideration of etiology, treatment, and prognosis. Prerequisites: PSY 100 and 12 credits in Psychology. (3 crs.)

PSY 410. CLINICAL CHILD PSYCHOLOGY. This course is a comprehensive introduction to the field of Clinical Child Psychology. It will explore the major concepts, research findings, and professional issues influencing the practice of Clinical Child Psychology. Prerequisites: PSY 100, PSY 205 & PSY 375. (3 crs.)

PSY 420. SCHOOL PSYCHOLOGY. This course is a comprehensive overview of the field of school psychology. It will explore issues related to the role and functions of school psychologists including the psychoeducational assessment of children and adolescents, therapeutic interventions for school-age children, consultation, and legal and ethical issues in the practice of school psychology. This course has relevancy for students pursing careers in education as well as for students pursuing careers in psychology. Prerequisite: PSY 100. (3 crs.)

PSY 421. CLINICAL METHODS IN PSYCHOLOGY. This course introduces students to the theory and practical application of 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. Prerequisites: PSY 100, PSY 305 & PSY 400. (3 crs.)

PSY 422. 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 also 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. This course is considered the applied companion course to PSY 421. Prerequisites: PSY 100, PSY 350, PSY 400 & PSY 421. (3 crs.)

PSY 425. INDEPENDENT RESEARCH. 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. Students will be required to present their work for presentation and defense in a public forum, and will be encouraged to submit the thesis for publication. Prerequisites: PSY 100, PSY 365 and senior standing. (3 crs.)

PSY 428. CURRENT TOPICS IN INDUSTRIAL PSYCHOLOGY. A more in-depth survey of several important issues considered in PSY 209, including organizational dynamics, psychological evaluations, employee rights laws, worker motivation, training and performance evaluation. Prerequisite: PSY 100, PSY 209, PSY 225 or equivalent. (3 crs.)

PSY 430. PHYSIOLOGICAL PSYCHOLOGY. The relationships between bodily processes and behavior. The relationship between psychological phenomena and the physiological functioning of the organism. Sensation and perception, reflexive behavior, motivation, emotional behavior, and critical functioning. Some laboratory experience is included. Prerequisite: PSY 100. (3 crs.)

PSY 469. PSYCHOLOGY INTERNSHIPS. 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. Eligibility requirements and procedures for application are available at the departmental office. Prerequisite: PSY 100. (Variable crs.: 1-6)

Sociology - SOC

SOC 100. 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. (3 crs.) Fall & spring.

SOC 110. ETHNIC, RACIAL AND SEXUAL MINORITIES. Disadvantaged, or powerless, not simply numerical, minorities are studied in terms of their demographic and ecological characteristics. Contemporary issues are studied in historical context. (3 crs.) Alternating spring.

SOC 125. MEN, WOMEN AND WORK. Through readings, audio-visual materials, panels and informal student reports, class members investigate the roles of men and women in the existing economic structure, the reasons for these roles and the development of trends and changes in the economic area. Discussion-centered. (3 crs.) Alternating spring.

SOC 155. CHARISMATIC LEADERS. The characteristics of charismatic leaders and the methodology used to study this phenomenon are central themes of this course. Discussion-centered classes. (3 crs.) Alternating fall.

SOC 165. MODERN FREEDOM MOVEMENTS. The study of social movements in American society. Basic focus is upon social change brought about by social movements. (3 crs.) Alternating fall.

SOC 205. CONTEMPORARY SOCIAL PROBLEMS. 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; attention also is given to the place of statistics in data reporting and analysis, what are 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. Prerequisite SOC 100 or the permission of the instructor. (3 crs.) Fall & spring.

SOC 210. SOCIAL STRATIFICATION. The student is made more aware of the class, status, and power inequities of our stratified society. Class, caste, and estate systems are compared. Prerequisite: SOC 110. (3 crs.) Alternating spring.

SOC 216. SOCIOLOGY OF WORK. An examination of work as a social institution and how it intersects and affects developments in other social institutions such as the family, education, religion, and politics and government. Special emphasis on technological developments affecting work are explored. (3 crs.) Alternating fall.

SOC 220. THE FAMILY. The institution of the family within the context of American culture. Prerequisite: SOC 100. (3 crs.) Fall & spring.

SOC 225. 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. Prerequisite: SOC 100. (3 crs.) Alternating spring.

SOC 235. URBAN SOCIOLOGY. Focuses on the relationship between the demographics of urbanization and the social-psychological characteristics of urbanism. Determinist, compositional, and sub-cultural theories are compared. Prerequisite: SOC 100. (3 crs.) Alternating fall.

SOC 240. 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. Prerequisite: SOC 100 or permission of the instructor. (3 crs.) Alternating fall.

SOC 260. CRIME. Types of criminal behavior, the epidemiology of crime in the United States, the social basis of law, and major etiological forces responsible for lawbreaking. General systems theory is the basic theoretical perspective used in this course. Prerequisite: SOC 100. (3 crs.) Fall & spring.

SOC 285. SOCIOLOGY OF SUBSTANCE USE AND ABUSE. The sociology of substance use and abuse, as well as the approaches for treatment. Special emphasis is given to alcohol and the more commonly abused drugs (e.g., nicotine, marijuana, cocaine). The course focuses on the social processes that influence substance abuse and the societal costs and consequences. Prerequisite: SOC 100 or permission of the instructor. (3 crs.) Alternating spring.

SOC 300. SOCIOLOGY OF DEVIANCE. 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 which result in behavior being labeled as deviant. How the criminal justice system copes with deviant behavior also is considered. (3 crs.) Alternating spring.

SOC 305. SYMBOLIC INTERACTIONISM. An in-depth study of one of the major theoretical perspectives in sociology. Its particular relationship with social psychology is considered. Prerequisite: SOC 100. (3 crs.) Alternate fall.

SOC 309. SOCIOLOGY OF SPORT. 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. (3 crs.) Alternate fall.

SOC 310. COLLECTIVE BEHAVIOR. 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. Prerequisite: SOC 100 or permission of the instructor. (3 crs.) Alternate fall.

SOC 320. INTERNATIONAL WOMEN'S MOVEMENT. A 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. (3 crs.) Every third spring.

SOC 329. SOCIOLOGICAL INTERNSHIP. 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 on site situations. Internships are intended to develop the major's professional competencies in observational, analytical and research skills. (Variable crs.)

Fall & spring.

SOC 330. RELIGION AS A SOCIAL PHENOMENON. The course is a descriptive and analytic, a scientific, study of religious phenomena. Although the course focuses on religion in American Society, it uses a comparative approach to understand the nature, forms and functions of religion in society. Prerequisite: SOC 100 or the permission of the instructor. (3 crs.) Alternate spring.

SOC 379. SPECIAL PROBLEMS IN SOCIOLOGY. (Variable crs.)

SOC 410. SOCIAL THEORY AND SOCIETY. 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 the understanding and analysis of classical theorists, including Marx, Weber and Durkheim. Prerequisite: SOC 100 or the permission of the instructor. (3 crs.) Alternate fall.

SOC 415. SOCIAL RESEARCH METHODS. Course develops the technical and analytical skills necessary for the conduct of social science research. Students will learn what methods are appropriate to various types of research inquires; and, they will learn how to evaluate research reports. (3 crs.) Alternate spring.

SOC 495. SEMINAR IN SOCIOLOGY. Capstone course for sociology majors. The seminar will center around a current theme in sociology. Students will be expected to demonstrate the use of major concepts, methods and theories in analyzing the theme. Prerequisite: Sociology major with junior or senior status. (3 crs.) Alternate spring.

Social Work - SOW

SOW 150. INTRODUCTION TO SOCIAL WORK. Social, political, economic and historical dimensions of poverty and welfare services in the United States. 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. (3 crs.)

SOW 208. MINORITY GROUP RELATIONS. Analysis of the historical, economic and political relation of American religious, ethnic, and racial minorities in terms of social change and social structure. Special attention 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. Prerequisite: SOC 100. (3 crs.)

SOW 215. HUMAN GROWTH AND BEHAVIOR I. Foundation knowledge, contribution of studies, research and theory in understanding human development. SOW 215 begins the life cycle from prenatal influence through middle school age. Emphasis is on both normal development/ behavior and on differences. Illustrates how diverse groups are affected in their development through the life cycle, with examples from rural experience. Prerequisites: BIO 103, PSY 100 & SOW 150; or permission of instructor. (3 crs.)

SOW 216. HUMAN GROWTH AND BEHAVIOR II. Foundation knowledge, contribution of studies, research and theory in understanding human development. SOW 216 continues the life cycle from adolescence through old age. Emphasis is on both normal development/behavior and on differences. Illustrates how diverse groups are affected in their development through the life cycle, with examples from rural experience. Prerequisites: SOW 215 or permission of instructor. (3 crs.)

SOW 231. FOUNDATION FOR FAMILY SERVICE. This course provides a foundation for the delivery of social services to children and families and emphasizes the knowledge, values and skills of the social work process. (3 crs.)

SOW 232. FOUNDATION FOR COMMUNITY SERVICE. This course integrates the abilities acquired in SOW 231 and strengthens macro skills for effective practice with individuals and families. The course refines and enhances the problem solving and case management skills of practitioners working with individuals and families. (3 crs.)

SOW 233. BASIC PRACTICAL EXPERIENCE. This course consists of exercises that require students to demonstrate their competence in the major intervention areas presented in SOW 231 and SOW 232 – working with families, communication skills, personal development, problem solving, group work, case management and advocacy/community development. (3 crs.)

SOW 256. SOCIAL WORK INTERVIEWING. Theory, value, and skill components necessary for effective interviewing with diverse client systems. Communication techniques and personal attributes which enhance problem solving are explored. Demonstration and practice of core skills are thoroughly integrated. Prerequisites: SOW 150, PSY 100 and ENG 102. (3 crs.)

SOW 265. JUVENILE DELINQUENCY. Causes, prevention, and treatment of deviancy among youth. Explores impact of sex, race, poverty, urban/rural context, and other social factors on deviance. Examines juvenile court system, its non-adversary role, changing attitudes toward treatment, and questions regarding change. Prerequisite: PSY 100. (3 crs.)

SOW 270. CHILD WELFARE. Welfare of children, rights, policies, problems, and programs. Historical and current practices, working with natural parents, supportive services, substitutes and residential care. Prerequisite: SOW 150 or permission of instructor. (3 crs.)

SOW 295. HISTORY AND PHILOSOPHY OF SOCIAL WELFARE. Historical trends and philosophical perspectives on social welfare programs and policy development. An overview of the relationship of cultural and professional values to social, political and economic institutions, with emphasis on the impact on oppressed and vulnerable client systems. Prerequisite: SOW 150. Recommended: POS 100 & ECO 100. (3 crs.)

SOW 296. POVERTY AND RELATED SOCIAL PROBLEMS. 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. Prerequisites: SOC 100, PSY 100 & SOW 150. (3 crs.)

SOW 302 MICRO PRACTICE METHODS. Assumes that human service workers perform varied tasks with basic skills, attitudes and knowledge, and that their 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 unique characteristics of the rural client. Prerequisite: SOW 215 & SOW 256. (3 crs.)

SOW 303. HUMAN SEXUALITY AND SOCIETY. Humans evolve as sexual beings from a continual interplay among biological, cultural and psychosocial psychologically healthy relationships, making responsible sexual choices, protecting reproductive health, preventing sexual disfunction and trauma. Accurate information and open discussion regarding the ways in which sexuality both contributes to overall health and well-being and is affected by it. Course is designed to ensure students' level of comfort with their own sexuality. Prerequisite: Junior status or instructor's permission. (3 crs.)

SOW 306. SOCIAL WORK IN THE RURAL ENVIRONMENT. This course exposes the undergraduate social work student to the unique problems and social needs of non-metropolitan communities, in particular small towns and rural areas. Students will come to understand the social structure of such communities and the pervasiveness of many social problems, especially poverty. Existent social welfare systems will be examined along with recommendations for program development, resource identification, and social planning. Prerequisites: SOW 216, SOW 295 and SOW 302. (3 crs.)

SOW 348. MEZZO PRACTICE METHODS. This course is the third in a four-course practice methods sequence. It builds on the skills developed in Interviewing and Micro Practice Methods, utilizing the ecological 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 families, and the principles and values for intervention and problem solving with groups and families. Prerequisites: SOW 216 and SOW 302. (3 crs.)

SOW 349. MACRO PRACTICE METHODS. 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. Prerequisite: SOW 348. (3 crs.)

SOW 350. SOCIAL WORK WITH THE AGING. Development and current status of policies and services related to the elderly, service delivery systems and implication for social work practice concepts for working with the elderly. Prerequisite: SOW 256 or permission of instructor. (3 crs.)

SOW 353. PSYCHOPATHOLOGY FOR SOCIAL WORKERS. Builds on psychosocial study, assessment and treatment introduced in Micro Practice Methods. Acquaints student with DSM-IV-R terminology and its use for generalist social work practice. Explores scope and depth of individual psychopathology, community concerns, prevention and intervention approaches. Prerequisites: SOW 216 and SOW 302. (3 crs.)

SOW 366. POLICY ANALYSIS/SERVICE DELIVERY. This course examines the basic process of policy development and helps social work students develop a conceptual framework for analyzing and evaluating policies and their consequences. Students pay particular attention to the impact of social policy on people and human service organizations. Built on an interdisciplinary base (economic, political science, and sociological theories), the course prepares students for policy practice skills taught in SOW 370. Prerequisite: SOW 295. (3 crs.)

SOW 370. SOCIAL CHANGE. Social change processes, strategies, reactions to change, the impact of change on social policy and social welfare institutions. Prerequisite: SOW 366. (3 crs.)

SOW 393. RESEARCH UTILIZATION FOR PRACTICE. This course enables students to utilize the concepts and principles of program evaluation as a form of research in the completion of a program evaluation project. (3 crs.)

SOW 402. ADVANCED PRACTICAL EXPERIENCE. A 150-hour internship in a community social agency. (3 crs.)

SOW 405. SOCIAL WORK RESEARCH METHODS. Social work scientific endeavor presented as a special type of problem-solving and analytical thinking activity. Thrust is toward becoming critical consumers of research reports, fundamentals for evaluating one's professional practice, and understanding critical importance of research as a professional endeavor. Prerequisites: SOW 302 and SOW 295. (3 crs.)

SOW 419. SOCIAL WORK PRACTICUM I. Supervised placement in a practice setting under a trained social worker. Application of theoretical knowledge and skills, demonstrating competencies in working with various client systems. Minimum of 480 clock hours. Prerequisites: Permission of the instructor, advanced senior standing, SOW 208, SOW 216, SOW 295, SOW 302, SOW 303, SOW 348, SOW 366 and SOW 349 or taken concurrently. This course must be taken concurrently with SOW 420. (6 crs.).

SOW 420 SOCIAL WORK PRACTICUM II. Supervised placement in a practice setting under a trained social worker. Application of theoretical knowledge and skills, demonstrating competencies in working with various client systems. Minimum of 480 clock hours. Prerequisites: Permission of the instructor, advanced senior standing, SOW 208, SOW 216, SOW 295, SOW 302, SOW 303, SOW 348, SOW 366 and SOW 349 or taken concurrently. This course must be taken concurrently with SOW 419. (6 crs.)

SOW 495 SEMINAR IN SOCIAL WORK. Selected topics of particular significance or current importance and interest to the social work profession. Prerequisite: Permission of instructor. (Variable crs.)

Spanish - SPN

SPN 101. ELEMENTARY SPANISH I. 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. Three class hours and one hour language laboratory per week. (3 crs.)

SPN 102. ELEMENTARY SPANISH II. A continuation of Spanish 101. Three class hours and one hour language laboratory per week. Prerequisite: SPN 101 or one year of high school Spanish. (3 crs.)

SPN 203. INTERMEDIATE SPANISH I. A review of 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. Three class hours and one hour language laboratory per week. Prerequisites: SPN 101 & SPN 102 or their equivalents. (3 crs.)

SPN 204. INTERMEDIATE SPANISH II. Develops control of the principal structural patterns of the language through dialogue and oral reading, as well as through written exercises based on selected readings. Three class hours and one hour language laboratory per week. Prerequisites: SPN 203. (3 crs.)

Culture courses are taught in English and are intended to satisfy General Education Humanities elective requirements as well as those in the major. One culture course is offered each regular semester.

SPN 240. ORIGINS OF SPANISH CULTURE. The style of art, literature and music of the twelfth and thirteenth centuries in Spain, in which the tendency to recount wars, weddings and conquests is evident. (3 crs.)

SPN 241. FOURTEENTH CENTURY SPAIN. This course examines the style of art, literature and music of the 14th century in Spanish culture. This is a period of consolidation, of gradual assimilation of many influences and of significant contributions to western culture. One of the outstanding books in literature, Libro de buen amor, and, in music, Las Huelgas Codex will be studied as well as Ferrer Bassa's murals and Luis Borrassa's three-dimensional works. (3 crs.)

SPN 242. GOLDEN AGE AND BAROQUE. Spain's golden epoch, its beauty and cultural significance, is the topic of SPN 242 which surveys the artistic and other intellectual developments that gave fame to this great century. The origins of the modern novel, 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 like El Greco and Valazquez, whose works embody the new forms and ideas of the Renaissance, come alive as their works are presented. This course also surveys the unfolding of secular theatre. It examines how plays of Lope de Vega revolutionized the entire concept of drama; how Tirso de Molina set the legend of Don Juan, "the heartless seducer," and how Cervantes through his character Don Quixote, influenced western culture. Examples of the Baroque style, evident in many of these works, will clarify the distinguishing features of this form. (3 crs.)

SPN 243. 1700-MID NINETEENTH CENTURY. This course will examine the style of Peninsular art, literature and music in the 18th and first half of the nineteenth centuries. Members of the House of Bourbon are on the Spanish throne and thereby there is a strong French influence upon artistic expression. This is the Age of Reason and the age of false and dictatorial sophistication of neoclassic standards which ends with the flowering of romanticism. (3 crs.)

SPN 244. GENERATION OF 1898 MODERNISM. This course examines the latter part of the nineteenth century, a time in Spain when a new literary and social awareness was being expressed in the arts. Developments in the arts set the atmosphere in which an entire generation of artists the generation of 1898, as they were referred to, set about the business of representing the heart and soul of Spain. This course closes by examining the work of the intellectuals who brought the Modernismo of Rubin Dario of Nicaragua to Spain. (3 crs.)

SPN 245. TWENTIETH CENTURY SPAIN : 1900-1939. This course examines the sudden flowering of culture in Spain at the turn of the 20th century. It reviews the accomplishments of a new talented group of artists who were university-trained. This unique group of poets, musicians,

cinematographers, dramatists and architects contributed in such a way that their impact and deep influence on the arts gained them international fame. Their works, created in the context of Romanticism, Symbolism and Surrealism, were instrumental in adding new dimensions to the already existing schools. This course also focuses on the fact that many of the works synthesized elements in the past often thought to be incompatible: Vanguardism and Popularism. (3 crs.)

SPN 246. TWENTIETH 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 post-war years. It will trace the various faces of that revolution of Spanish culture when the Spaniards decided to forget the Civil War, the World War, the atomic bomb and the desperate state of Spain. The course will also examine the relationships among different forms of artistic expression of the period (e.g. the surrealist mode in Spanish cinema, as well as in painting and music). It will present the two major tendencies among the intellectuals of the time: those who fostered an inclination toward social protest and those who manifested an attitude of avoidance of the Spanish reality and produced works of universal significance. (3 crs.)

SPN 247. SPANISH CARIBBEAN. The cultural achievements of contemporary Spanish Caribbeans. It reviews changes in Caribbean societies since the movement de avance (Vanguardism, 1927). A sampling of the countries' art, unique music, architectural styles and folk dances will be presented. (3 crs.)

SPN 248. 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. (3 crs.)

SPN 249. MEXICO IN THE TWENTIETH CENTURY. This course views the changes in Mexican society since 1910, the year of the revolution that marked the beginning of a new political and artistic life, not only for the Mexicans, but for all of Latin America. 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. Thhhe course will also present the opportunity to examine the social awareness of today's Mexicans and the effect that his consciousness will have on the country's relationship with the United States. (3 crs.)

SPN 250. 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 currents with such leading creative personalities as the ultraist writer and poet Jorge Luis Borges, the music composer Alberto Ginastera of striking originality, and the foremost South American cubist painter Emilio Pettoruti. The goal of SPN 250 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. (3 crs.)

SPN 311. SPANISH CONVERSATION, COMPOSITION, AND PHONETICS I. In this course, the 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. Prerequisite: SPN 204 or its equivalent. (3 crs.)

SPN 312. SPANISH CONVERSATION, COMPOSITION, AND PHONETICS II. Continuation of Spanish 311 on a higher level of proficiency accepted by educated speakers of the Spanish world. Prerequisite: SPN 311. (3 crs.)

SPN 401. ADVANCED COMPOSITION: GRAMMAR AND STYLISTICS. This course is intended to provide an in-depth grammatical analysis of the Spanish language, emphasizing shades of differences in the meaning of words and expressions as used in oral and written expression. (3 crs.)

SPN 421. SURVEY OF SPANISH LITERATURE. 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, the short story, and selections from novels and dramas. (3 crs.)

SPN 422. SURVEY OF SPANISH-AMERICAN LITERATURE. A study of representative selections from the Colonial period to the present, with emphasis on the salient characteristics and the distinctive contributions of each literary form in the period or movement under study. (3 crs.)

SPN 450. FOREIGN LANGUAGE COLLOQUIUM IN SPANISH. This course is intended to promote interaction, to stimulate critical thinking, to provide argumentative situations which will develop the student's capacity and ability in oral and written expression. (3 crs.)

SPN 469. STUDIES IN SPANISH LITERATURE. Subject matter to be arranged. Designed for Spanish majors who wish to take additional credits and/or study abroad. Prerequisite: 18 hours of Spanish (Variable crs.)

SPN 479. FIELDWORK IN SPANISH STUDIES. Study-travel program outside the United States or an internship usually in a Spanish-speaking country. This program is preceded by a semester-length course reflecting on the cultural elements of the region as well as its people. Courses for an internship are selected from those offered at an established educational institution. Prerequisite: Consent of the instructor. (Variable crs.)

Special Education - ESP

ESP 101. EXCEPTIONAL CHILD I. Exceptional Child I is the first of a two-course introductory sequence to handicapped children and to the field of special education. This course examines the range of handicaps 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 handicapped children, definitions and classification of children's handicaps, the impact of labeling children and mainstream programs, preschool and post-school programs for the handicapped, family services, prosthetic devices and program modifications for the physically handicapped and a behavioral analysis of normal child development. (4 crs.)

ESP 200. EXCEPTIONAL CHILD II. Exceptional Child II is the second of a two-course introductory sequence to handicapped children and to the field of special education. (4 crs.)

ESP 301. 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. (4 crs.)

ESP 401. BEHAVIOR PRINCIPLES II. Behavior Principles II is the second of a two-semester introduction to the professional discipline of Applied Behavior Analysis. (4 crs.)

ESP 461. STUDENT TEACHING AND SCHOOL LAW. The student teaching program is designed to ensure that Special Education majors are exposed to the full range of children covered under the comprehensive certification, i.e., mentally retarded, emotionally disturbed, learning disabled, brain damaged, and physically handicapped. The major practicum provides an intensive experience for the student in two of the handicapping areas for a period of 16 weeks. The practicum seminar component meets weekly to provide Special Education majors with an opportunity to discuss problems encountered by the students in their teaching experiences.

Students are provided with opportunities to demonstrate the effectiveness and functionality of their teacher-made devises, learning centers, and curriculum materials used in their classrooms. (12 crs.)

ESP 501. INTRODUCTION TO EXCEPTIONALITY. This course introduces the student to the physical, social, emotional and educational characteristics; incidence; prevalence and educational intervention for the major categories of exceptionality enrolled in public and private educational facilities in the K-12 grade range. In addition, the course will identify ancillary services and agencies frequently impacting special populations including the major professional organizations and those concerned with residential programming and vocational training. The course will also identify the major litigation and legislation that have significantly influenced the nature of service to exceptional populations. (3 crs.)

ESP 502. EDUCATION OF THE SEVERELY/PROFOUNDLY HANDICAPPED. This course prepares students to work with children and/or adults who possess severely or profoundly handicappping conditions. Students are required to do tutoring at facilities for this population. (Variable crs.)

ESP 503. DIAGNOSTIC TESTING AND PRESCRIPTIVE TEACHING. This course teaches students how to administer, score, and interpret both norm-referenced and criterion-referenced assessment devices and how to prescribe programs of remediation based on the results of these devices. (Variable crs.)

ESP 504. CURRICULUM PLANNING AND METHODS I. This course is offered to Special Education majors the semester prior to their student teaching experience. Curriculum Planning and Methods I is a materials and methodology course for pre-service special education teachers. An emphasis is placed on assessment, instructional techniques, and materials necessary to teach reading and language arts skills and concepts to children with disabilities. The course stresses a behavioral diagnosis of communication strengths and weaknesses, the development and implementation of intervention strategies for various populations of exceptional children, the selection and/or development of appropriate materials for instruction, and the procedures and techniques for continuous evaluation of the instructional process. (Variable crs.)

ESP 505. CURRICULUM PLANNING AND METHODS II. This course is offered to Special Education majors the semester prior to their student teaching experience. Curriculum Planning and Methods II is a methods course for Special Education teachers in training which emphasizes the assessment, instructional skills and materials necessary to teach arithmetic concepts to children with disabilities. The course stresses a behavioral diagnosis of arithmetic strengths and weaknesses, the development and implementation of intervention strategies for various populations of exceptional children, the selection and/or development of appropriate materials for instruction, and the procedures and techniques for continuous evaluation of the instructional process. (Variable crs.)

ESP 506. HABILITATION TRAINING. This course deals with special education programs for senior high school students as well as those persons who reside in the community. Emphasis is placed on vocational preparation and training. Specific techniques for task analysis of jobs, daily living skills, and social adaptation constitute a major portion of this course. Emphasis is placed on the development of functional skills that contribute to normalized development. (Variable crs.)

Sport Management - SPT

SPT 200. 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, which make direct application to the sport management field. (3 crs.)

SPT 299. PRACTICA IN SPORT MANAGEMENT. A supervised observation/work experience in a sport management setting. The practicum experience requires 70 hours of observation/work in an approved sport management environment. (3 crs.)

SPT 301. PSYCHOLOGY OF SPORT. This course is designed to cover a diversity of 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. (3 crs.)

SPT 302. ETHICS IN SPORT MANAGEMENT. This course will provide both 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. (3 crs.)

SPT 303. 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. (3 crs.)

SPT 304. 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. (3 crs.)

SPT 400. LEGAL ASPECTS OF SPORT. To enhance the student's knowledge about the legal system as it pertains to sport law. Basic legal concepts concerning both contract law and tort law in sport will provide the student a sound foundation so that the student will be better able to recognize legal liability exposure in the sport work place. (3 crs.)

SPT 401. ORGANIZATION AND ADMINISTRATION OF SPORT. A study of the application of organizational theory to the understanding and management of sport organizations. (3 crs.)

SPT 402. GOVERNANCE IN SPORT. A study of the growing spread and development of sport throughout the world, as well as how the governing bodies involved affect the structure, organization, and delivery of sport. (3 crs.)

SPT 403. SPORT FINANCE. A study of how sport organizations develop financial strategies and utilize financial indicators in developing organizational strategic plans. (3 crs.)

SPT 404. ECONOMICS OF SPORT. An analysis of how economic models are used to measure the impact of sport on various economies. (3 crs.)

SPT 405. 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. (3 crs.)

SPT 499. 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. (12 crs.)

Technology Education - TED

TED 100. INTRODUCTION TO TECHNOLOGY EDUCATION. The purpose of this course is to launch 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 and of pedagogy. Following extensive modeling activities within a campus-based classroom/laboratory environment, all students will participate in similar activities at selected field locations (K-12). Three lecture hours and one laboratory hour per week. (3 crs.)

TED 111. COMMUNICATION SYSTEMS This course provides a broad overview of communication 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 area of generating, assembly, processing,

disseminating and assimilating of a communicative message. Two lecture hours and three laboratory hours per week.. (3 crs.)

TED 125. MATERIAL PROCESSING I. This laboratory-based course is an introduction to basic wood and composite materials and processes of industry. Students will study and execute a variety of Industrial processes including forming, separating, fabricating, conditioning and finishing. Students will become proficient processing various Industrial materials. This course serves as a foundation for all other laboratory courses that require the processing of materials. The safe and efficient use of tools and machines is stressed. Six laboratory hours per week. (3 crs.)

TED 225. MATERIAL PROCESSING II. This course serves as an introduction to metallic, ceramic and plastic materials including the selection, preparation, conditioning, forming, shaping and finishing of these materials. These activities allow students to explore 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. Six laboratory hours per week. (3 crs.)

TED 310. STUDIES IN COMMUNICATION. In independent study course in which the student works in an area of interest under the guidance of an instructor with similar interests. The student prepares triplicate copies of a proposal that presents the objectives to be achieved, a procedural outline, special conditions, expected findings, and assessment methods. Students are entitled to a minimum of five hours of individual faculty time per credit. Proposals must receive instructor and department approval before the student registers in the course. (1-3 crs.)

TED 315. CONSTRUCTION SYSTEMS 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. Two hours of lecture and three laboratory hours per week. Prerequisites: ITE 110, TED 111, TED 125 and TED 225. (3 crs.)

TED 325. MANUFACTURING SYSTEMS The class begins with an introduction to manufacturing technology, technical systems, and a look at the historical evolution of manufacturing. Students will examine the organization and management of manufacturing endeavors. Finally, students will explore the various aspects of research and development and will work through the process of identifying, designing, selecting and producing products. This will be done in a production laboratory using current equipment and processes. Two hours of lecture and three laboratory hours per week. Prerequisites: ITE 110, TED 111, TED 125 and TED 225. (3 crs.)

TED 330. STUDIES IN TRANSPORTATION. In independent study course in which the student works in an area of interest under the guidance of an instructor with similar interests. The student prepares triplicate copies of a proposal that presents the objectives to be achieved, a procedural outline, special conditions, expected findings, and assessment methods. Students are entitled to a minimum of five hours of individual faculty time per credit. Proposals must receive instructor and department approval before the student registers in the course. (1-3 crs.)

TED 335. 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. Two hours of lecture and three laboratory hours per week. Prerequisites: ITE 110, TED 111, TED 125 and TED 225. (3 crs.)

TED 340. STUDIES IN CONSTRUCTION. In independent study course in which the student works in an area of interest under the guidance of an instructor with similar interests. The student prepares triplicate copies of a proposal that presents the objectives to be achieved, a procedural outline, special conditions, expected findings, and assessment methods. Students are entitled to a minimum of five hours of individual faculty time per credit. Proposals must receive instructor and department approval before the student registers in the course. (1-3 crs.)

TED 350. STUDIES IN MANUFACTURING. In independent study course in which the student works in an area of interest under the guidance of an instructor with similar interests. The student prepares triplicate copies of a proposal that presents the objectives to be achieved, a procedural outline, special conditions, expected findings, and assessment methods. Students are entitled to a minimum of five hours of individual faculty time per credit. Proposals must receive instructor and department approval before the student registers in the course. (1-3 crs.)

TED 425. MANUFACTURING ENTERPRISE. An advanced study course designed to provide laboratory based applications of a variety of content related to the field of manufacturing. Students will participate in the design and production of a product in a manufacturing enterprise situation which closely parallels the functions of a manufacturing corporation. Two hours of lecture and three laboratory hours per week. Prerequisites: TED 325 or Junior/Senior Status. (3 crs.)

TED 435. TRANSPORTATION RESEARCH & 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 transportation 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, as well as 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 transportation 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. Two lecture hours and three laboratory hours per week. Prerequisites: TED 335 and PHY 121. (3 crs.)

TED 450. TEACHING TECHNOLOGY IN THE SECONDARY SCHOOL. In this course, participants learn to apply pedagogical skills in developing curriculum materials, applying teaching techniques, assessing student achievement and designing laboratory layouts in the systems of communication, construction, manufacturing, transportation and bio-related technologies. Integrating math and science concepts in a technology learning activity is an integral component of the course as students learn to design, produce, use and assess technological systems. Two lecture hours and three laboratory hours per week. Prerequisite: TED 100. (3 crs.)

TED 460 HONORS STUDY IN COMMUNICATION (1-3 crs.)
TED 465 HONORS STUDY IN CONSTRUCTION (1-3 crs.)
TED 475 HONORS STUDY IN MANUFACTURING (1-3 crs.)
TED 480 HONORS STUDY IN TRANSPORTATION (1-3 crs.)
Honors courses are reserved for those with a "B" quality point average or better in the Technology Education curriculum specialty courses taken.

TED 461. STUDENT TEACHING - TECHNOLOGY EDUCATION. Student teaching is the culminating experience of teacher education majors in the Technology Education curriculum. The student teacher is assigned to and works under the supervision of 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 each student teacher. Specific teacher-learning skills which 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 weekly practicum. The practicum serves as a means of coordinating activities and interchanging ideas and experiences of the student teachers. (12 crs.)

TED 500. TEACHING TECHNOLOGY IN THE ELEMENTARY SCHOOL. This course is designed for students who are elementary education majors as well as technology education majors. It is designed to offer each student the opportunity to design and build teaching/learning activities that integrate concepts relating to mathematics, science, communication, and social science, with technology. Two lecture hours and three laboratory hours per week.. . Prerequisite: PSY 208 and Junior Standing. (3 crs.)

TED 565. SPECIAL PROBLEMS IN TECHNOLOGY EDUCATION (1-3 credits) This course provides the student with the opportunities to

experience and research various technology, techniques and teaching methodologies in the discipline areas of Technology Education. An intense in-depth study will be made in relation to selected topics on an Individual basis or as a short-term concentrated study session for a group. Credit is variable (1-3).

Theatre - THE

THE 100. INTRODUCTION TO THEATRE. A study of the art and craft of theatre from play script to play production. The course surveys theatre history, literature, architecture, acting, directing, and design for the student who wants to know what goes on in theatre and what it means. Students can expect to participate in classroom performances. (3 crs.)

THE 101. VOICE AND SPEECH. A practical and useful course for the performer or anyone who wants a flexible, strong, controlled voice. The Lessac method involving the natural ways in which the body produces vocal sounds is primarily studied for clear and articulate speech which is free of regional qualities, affectation, imitation and annoying physical habits. The course also involves transcription of the International Phonetic Alphabet for correct pronunciation. (3 crs.)

THE 126. MAKEUP. This course covers modeling the face and the body with makeup and with three dimensional prostheses. Historical, character, fantasy, corrective, street, and fashion makeup will be researched and applied. Students with an advanced interest will construct three-dimensional prostheses and hair pieces. (3 crs.)

THE 131. 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, theatre games, and improvisation. (3 crs.)

THE 132. BALLET TECHNIQUE I. Introductory instruction in the basic techniques applicable to ballet as practiced in western Europe and in the United States. Basic techniques include barre exercises, port de bras, and center practice with jumps, beats, and turns. This course is only suitable for the student who has no previous experience. (3 crs.)

THE 133. JAZZ TECHNIQUE I. Introductory, entry level experience instruction in the basic techniques applicable to American jazz dance. The focus is on lengthening muscles and developing isolation techniques necessary for most forms of jazz dance. The Luigi Technique which includes standing floor, warm-up/stretch, and center practice jumps, turns, and isolations is studied. (3 crs.)

THE 141. STAGECRAFT I. Introduction to the theory and practice of stagecraft, involving basic set construction, painting, and play reading. Practical experience for students majoring in all performance media (e.g., television, film). (3 crs.)

THE 201. VOICE AND INTERPRETATION. Introduction to the basic vocal and analysis techniques necessary for effective interpretation and presentation of non-dramatic literature; poetry, prose, and narrative literature. (3 crs.)

THE 211. LIGHTING I. The basic theory and practice of lighting for the stage primarily, as well as film, and television. Practical experience for students majoring in performance media (stage, television, film) is stressed. (3 crs.)

THE 225. COSTUME CONSTRUCTION. Basic pattern drafting and sewing techniques applied to the construction of costumes. (3 crs.)

THE 231. 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. Prerequisite: THE 131 Fundamentals of Acting or permission of instructor. (3 crs.)

THE 232. BALLET TECHNIQUE II. The development of strength and fluidity through an extension of techniques demonstrated in specialized study and drill. Emphasis is placed on quick retention of complex combinations. Further emphasis is placed on center work to develop the student's artistry in the dance form. Prerequisite: THE 132 or permission of instructor. Variable credits are awarded depending on the student's experience and abilities. (1-3 crs., repeatable only for a maximum of 7 credits to count toward graduation.)

THE 233. JAZZ TECHNIQUE II. The development of strength and fluidity through an extension of jazz techniques demonstrated in specialized study and drill. Emphasis is placed on quick retention of complex combinations. Further emphasis is placed on center work to develop the student's artistry in the dance form. Prerequisite: THE 133 or permission of instructor. Variable credits are awarded depending upon student's experience and abilities. (1-3 crs., repeatable only for a maximum of 7 credits to count toward graduation.)

THE 240. CREATIVE DRAMATICS. The stimulation and development of creativity through playmaking exercises, storytelling, improvisation, and sensitivity techniques useful for potential teachers and parents. (3 crs.)

THE 245. CHILDREN'S THEATRE. The selection, direction, and production of plays for children. This course includes matching the proper plays with the stages of child development. Excellent class for potential teachers, parents and recreational personnel. Prerequisites: ENG 101, ENG 102 are suggested. (3 crs.)

THE 255. PUPPETRY. The planning and production of puppet plays. (3 crs.)

THE 271. SCENE DESIGN I. Introduction to the theories and practice of designing scenery with emphasis on designing for various environments. Prerequisite: THE 141 or permission of instructor. (3 crs.)

THE 300. THEATRE DANCE I. Introductory instruction in the basic techniques applicable to the various dance forms used in the musical theatre. Basic forms include tap, jazz, ballet, ethnic, and modern dance. Choreographic styles originated by Agnes DeMille, Jerome Robbins, Bob Fosse, and Jack Cole will be demonstrated and applied. Prerequisite: THE 232, THE 233 or permission of instructor. (3 crs.)

THE 301. THEATRE DANCE II. The development of strength and fluidity through an extension of techniques demonstrated in specialized study and drill. Emphasis is placed on the principles stressed in Theatre Dance I with the addition of character shoes for the women, and partnering work. Prerequisite: THE 300 or permission of instructor. Variable credits are awarded depending upon student's experience and abilities. (1-3 crs., repeatable only for a maximum of 7 credits to count toward graduation.)

THE 302. HISTORY OF THEATRE I. The development of theatre from the Classics through the Baroque, including representative plays. Prerequisites: ENG 101, ENG 102 are suggested. (3 crs.)

THE 303. AMERICAN THEATRE HISTORY. A survey of the American theatre from colonial times to the present, including representative plays. (3 crs.)

THE 304. WORLD DRAMA. Classical to 19th century plays (excluding Shakespeare) studied as blueprints for theatrical presentation. Prerequisites: ENG 101, ENG 102 are suggested. (3 crs.)

THE 305. SHAKESPEARE IN THE THEATRE. Representative Shakespearean plays studied as theatrical presentation. Prerequisites: ENG 101, ENG 102 are suggested. (3 crs.)

THE 306. MODERN DRAMA. 19th and 20th century plays studied as blueprints for theatrical presentation. Prerequisites: ENG 101, ENG 102 are suggested. (3 crs.)

THE 308. HISTORY OF COSTUME. A survey of the history of costume in the western world. (3 crs.)

THE 309. 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. Prerequisite: THE 201 or COM 224 or permission of instructor. (3 crs.)

THE 311. LIGHTING II. Advanced theory and practice of lighting design for stage, television and film. Practical experience is stressed. Prerequisite: THE 211 or permission of instructor. (3 crs.)

THE 312. HISTORY OF THEATRE II. The development of western theatre from the Baroque to the present, including representative plays. Prerequisites: ENG 101, ENG 102 are suggested. (3 crs.)

THE 320. 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. (3 crs.)

THE 325. COSTUME DESIGN. Basic principles of costume design. Students complete various design projects for specific plays selected from a variety of historical periods. (3 crs.)

THE 328. SCENE PAINTING. The practice of scenery painting for the theatre. 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. (3 crs.)

THE 331. 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. Prerequisite: THE 231 or permission of the instructor. (3 crs.)

THE 341. STAGECRAFT II. Advanced practice and principles of scenery and property construction. Practical experience with plastics, metals, drafting, and advanced woodwork is stressed. Prerequisite: THE 141 or permission of instructor. (3 crs.)

THE 350. THEATRE PRACTICUM: ACTING. (Variable crs.)
THE 351. THEATRE PRACTICUM: DANCE. (Variable crs.)
THE 352. THEATRE PRACTICUM: DIRECTING. (Variable crs.)
THE 353. THEATRE PRACTICUM: DESIGN. (Variable crs.)
THE 354. THEATRE PRACTICUM: MANAGEMENT. (Variable crs.)
THE 355. THEATRE PRACTICUM: TECHNICAL DIRECTOR. (Variable crs.)
THE 356. THEATRE PRACTICUM: TECHNICAL PRODUCTION. (Variable crs.)
THE 357. THEATRE PRACTICUM: TOURING THEATRE. May be repeated only to a maximum of 10 credits. (Variable crs.)

THE 358. THEATRE PRACTICUM: SUMMER THEATRE. May be repeated only to a maximum of 10 credits. (Variable crs.)

Theatre Practicum courses are the application of learned skills in specific areas of theatre and dance. Credit is variable to a maximum of five credits per term and a maximum of eighteen to be counted toward graduation. (Variable crs.)

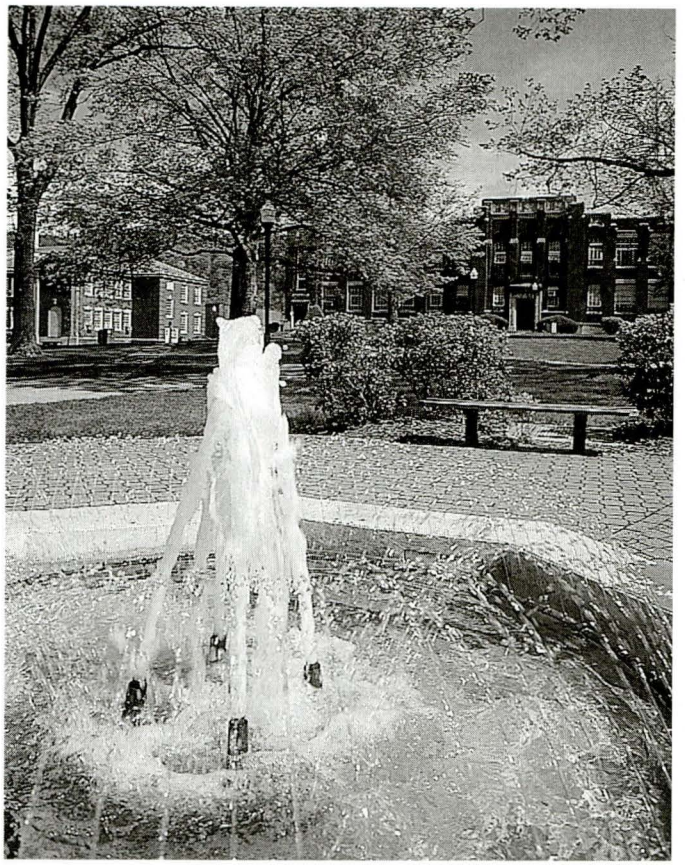
THE 359. THEATRE PRACTICUM: SENIOR THESIS. Special acting, directing, management, and design or technical involvement in a play production. Prerequisite: Senior level only. (3 crs.)

THE 371. SCENE DESIGN II. Advanced theory and practice of designing scenery and lighting, with emphasis on designing for various environments. Prerequisite: THE 271 or permission of instructor. (3 crs.)

THE 439. SPECIAL PROBLEMS IN TECHNICAL PRODUCTION. An introduction to the rigor of professional work. This course will acquaint the student with immovable deadlines and budgets in preparation of graduate or professional work. (3 crs.)

University College - UNI

UNI 100. 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. (1 cr.)



UNI 200. 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. (1 cr.)

Women's Studies - WST

WST 200. INTRODUCTION TO WOMEN'S STUDIES. An overview of a fast growing multi-disciplinary field, focusing on the effect of gender on human lives, including cultural beliefs about women's nature, abilities, and role; the realities of women's personal family, economic and political lives; and the dynamics of change. Western and especially US materials predominate, but diverse situations of women internationally will be considered. (3 crs.)

WST 300. SELECTED TOPICS IN WOMEN'S STUDIES. Discussion and research on selected topics in women's studies. Topics may be developed on an experimental basis according to the instructor's expertise and student interest. (3 crs.)

WST 400. FEMINIST SCHOLARSHIP AND RESEARCH: A SEMINAR. An exploration of classic and current controversies in feminist theory and the impact of feminist scholarship on the pursuit of knowledge, particularly in terms of method. The emphasis will be on individual research on topics relevant to the student's major field. (3 crs.)

WST 430. INTERNSHIP IN WOMEN'S STUDIES. Provides practical experience in women's studies related work. In consultation with the advisor, a student may seek placement in such situations as women's centers, shelters, health clinics, political organizations, special interest organizations, or newspapers. Coursework may include individual student-instructor consultations, presentations, reading discussions, guest lectures, field trips, research, and experiential papers. (3 crs.)

University Services

Louis L. Manderino Library

The Louis L. Manderino Library houses a collection of some 377,000 volumes, 1.4 million microforms, 60,000 audiovisual materials, over 46,000 US Government Documents, and subscribes to over 800 serial publications.

PILOT: The Library Catalog

Computerized information retrieval has made library research faster, more thorough, and more efficient. PILOT, the library's online public access catalog, is a user-friendly resource that can be used to quickly locate books, audiovisual materials, or government documents in the library's collection, and also to print, download, or email the retrieved information. PILOT uses a Web interface and is accessible from any computer connected to the World Wide Web, whether in the library, on campus, or elsewhere in the world. All of the university libraries in the State System of Higher Education use the same system, so users at California University may search any of the other State System university libraries.

PALCI Virtual Union Catalog

The ability to search the vast amount of material contained in other library catalogs took a major step forward in 2000 through the implementation of the PALCI Virtual Union Catalog. This service allows patrons from almost two dozen Pennsylvania universities and colleges not only to search each others' catalogs, but to initiate their own interlibrary loans online—without mediation. The PALCI Catalog provides California University students and faculty with online search and retrieval access to major resources in the state, including the libraries of: Carnegie Mellon Univ., Penn State Univ., Univ. of Pittsburgh, Univ. of Pennsylvania, Villanova Univ., Bryn Mawr College, Dickinson College, Haverford College, Swarthmore College, and others.

Electronic Resources

Library patrons have access to over 7,000 full-text periodical titles through the library's collection of online databases. Several thousand more periodical titles may be searched online for citations and abstracts. Users may view the table of contents from over 20,000 periodicals using the CARL UnCover and EBSCO Online resources. To supplement the research potential of students, trained librarians will, on request, conduct mediated online searching of the extensive resources found in the *DIALOG* and *FirstSearch* databases.

The Louis L. Manderino Library provides access to the following electronic resources:*

Britannica Online:
The entire Encyclopedia Britannica *available via the World Wide Web.*

Buckmaster Annual Stockholder Reports:
Fortune 500 company annual reports.

CIOS: Communication Institute for Online Scholarship
Resources specifically for communication studies research.

EBSCOhost:
A collection of indexing and reference databases providing access—much of it in full-text—to a wide range of information. Databases include: *Academic Search Elite, Business Source Premier, Newspaper Source, Health Source Plus,* and others.

Lexis-Nexis Academic Universe:
Almost completely full-text access to a wide range of news, business, legal, medical, and reference information.

Proquest Direct:
Some full-text coverage of ten national newspapers.

Subject-specific Resources:
General –*Current Biography, Essay & General Literature Index*
Education – *ERIC, Education Abstracts Full Text*
Health and Sports **- CINAHL, SPORT Discus**
Humanities – *Art Abstracts, MLA International Bibliography*
Science – *Applied Science & Technology Abstracts, Biological Abstracts, GeoRef*
Social Science – *Criminal Justice Abstracts, NASW Clinical Register, PAIS International, PsycINFO, Sociological Abstracts, Social Work Abstracts, Mental Measurements Yearbook*

* Manderino Library is committed to offering quality on-line resources. This list reflects our offerings as of Spring 2000. Given the dynamic nature of electronic resources, changes may occur—including the addition of more resources. For current information, please visit the library's Web site: http://www.library.cup.edu.

Reference Services

The library is committed to providing students the assistance they need in order to use our resources effectively. Reference librarians are available in the library, by telephone, or through e-mail to provide guidance. Students may ask for brief, impromptu tutorial sessions, or may schedule longer and more in-depth appointments. Help in using the electronic resources is also available online. The library faculty presents a number of classes each semester which are designed to teach effective researching skills for the specific content of particular university courses.

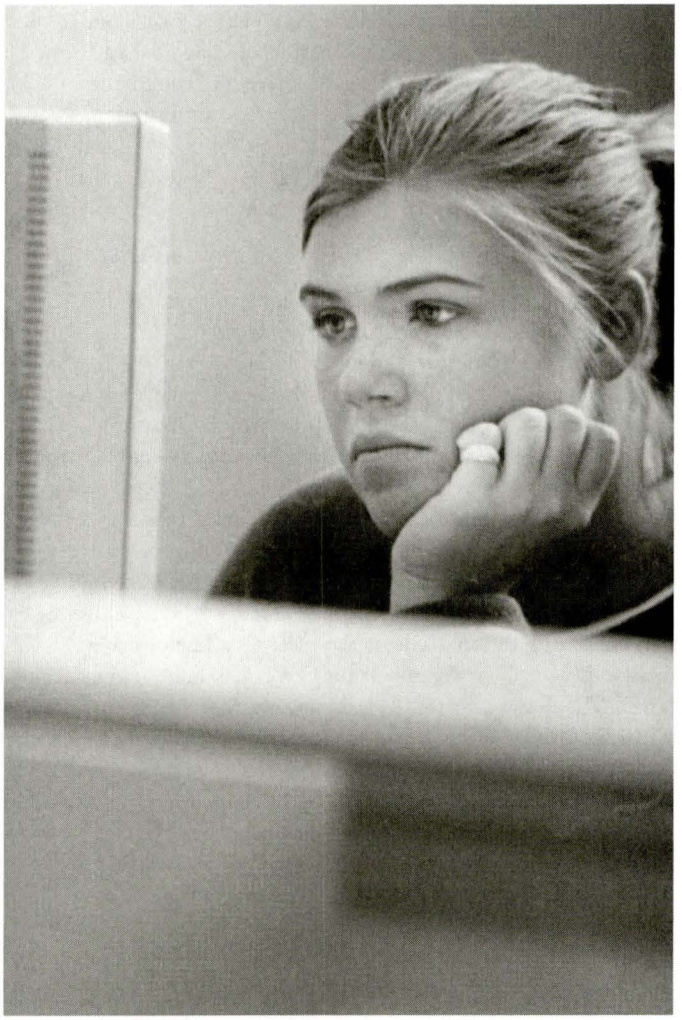
Interlibrary Loan

When research uncovers needed materials that are not available in our library, patrons may place a request for them through the

Interlibrary Loan office. Using a network that literally searches the globe, even hard to find items can be located. Although various factors may affect the duration of this process, journal articles are typically received within a day, and books within a week. The library does not charge any fees for journal articles retrieved through Interlibrary Loan, and only very rarely for very unusual books.

Other Services

The library offers users a number of other services, including: a large reference collection, access to the World-Wide Web, photocopiers, syllabi for California University courses, computer software, a collection of art slides, a curriculum library for teacher education students, a media services center with equipment and audiovisual materials, and lamination and binding services. In addition, the Louis L. Manderino Library is an official Federal Government Documents Depository and regularly receives large numbers of government documents, such as census data, reports, maps, and the *Congressional Record*. The Documents Librarian is available to provide assistance with the use of these important resources. The staff of the Louis L. Manderino Library is "user-friendly" and eager to be of service.



Computing Services Center

The University Computing Services Center is located in the basement of Manderino Library. Staff offices are open Monday through Friday from 8:00 A.M. until 4:00 P.M. User facilities in the World Culture Building are available for student use.
The computer facilities at the university are separated into two distinct functional areas. One area deals with providing computer resources to meet the instructional and research needs of the university, such as student access for coursework and the Manderino Library on-line catalog. The other area deals with providing resources to meet the administrative needs of the university.

Computer Accounts

Students who register for classes automatically have a VMS and Windows/NT computer account created for their use during the semester. There is no charge for the service or for the use of the computer network.

Campus Network

The university campus buildings are connected together via a high-speed state-of-the-art ATM local area network. Fiber Optic ATM connects every floor to the campus backbone and each floor has switched Ethernet to every room including offices, classrooms, labs and dorm rooms. Southpointe Center is connected via a high-speed ATM WAN which extends all computer resources to Southpointe. The network also provides the capability for distance learning programs. The university is connected to the Internet via SSHENET II. This statewide network includes all of the State System of Higher Education Universities and the Office of the Chancellor.

Instructional Computing Facility

The Instructional Computing Facility (ICF) located in the basement of the World Culture building, is the main center for student campus network access and general use desktop computing. This facility contains various personal computer systems and printers in the laboratories and classroom. The facility provides access to adaptive technology systems. Entrance to the ICF is through the University Avenue (west) entrance or via the elevator. Generally, the labs are open seven days a week during fall and spring semesters and five days a week during summer sessions. However, schedules may change and the hours are posted each semester in the ICF and can be requested by calling 724-938-4335 or by typing HOURS at the system prompt. The labs are closed during holidays and session breaks.

Distance Education via Interactive TV (ITV)

As a leader in technology instruction, California University of Pennsylvania has numerous courses that are currently delivered via distance learning. Classes can originate, and be received at, the main campus and from off-campus sites like the Southpointe Center. These courses are delivered instantly using state-of-the-art videoconferencing systems across the university's data network. Distance Education equipment allows the transmission of audio and video between two or more locations for the purpose of delivering instruction, enhancing educational experiences, conducting meetings, and participating in conferences. Some of the equipment includes a multimedia projection system; document stand for displaying documents, photos, and objects; automatic tracking camera; and computer for demonstrating software, accessing the Internet, and making multi-media presentations.

Distance Education classrooms contain video cameras and sensitive microphones that can be controlled from a remote site. Always assume what you are doing and saying is being seen and heard ANYTIME you are in or near a classroom. Also, be aware that transmission of audio and video can occur with the monitors off, and conversations in the hall outside of classrooms may be heard. Private conversations should occur at some other location than the Distance Education classroom.

Other Campus Facilities

Many departments have microcomputers for student and staff use; only some of the facilities are listed here.
Additional campus microcomputer laboratories are located in and operated by various departments on campus including: Applied Engineering and Technology, Business and Economics, Mathematics and Computer Science, College of Education, and the English Department's Word Processing Laboratory and Computer Center. The College of Education and Human Services maintains a Teacher Education Computer Lab in the Keystone Education Building. There is also a Student Access Center Computer Lab located on the first level of the Natali Student Center. The Office of Life Long Learning also features a microcomputer laboratory. The Southpoint Center provides a laboratory for instructional use. Contact your department for specific information about laboratory facilities available for educational purposes.

Campus Learning Labs

Mathematics Lab

The following services and resources are offered free in the Mathematics Laboratory:
1. tutorial support in math and math-related courses
2. video tape tutorials on most algebra topics
3. computer-directed instruction software for many topics
4. math anxiety software and reference books

Success in a math course is achieved by working on assignments as soon as possible after class and by making accomplishments each day. Students who have difficulty with math courses should call 724-938-5893 to schedule a 30-minute appointment. They should bring attempted homework with them.

The Lab's video tape tutorials are written by one of the authors of the Introductory Algebra text. They are informative to students who need algebra assistance in any course. The tapes, 15-30 minutes long, are available for use in the Math Lab and on overnight sign-out basis.

One hundred fifty computer-directed instruction software disks are available. The disks give two to three screen overviews, three or four worked problems, and three or four practice problems. Software is available for topics from basic mathematics to calculus. Most computer software lessons can be completed in 15 minutes.

Nationally renowned authors claim that half of all college students are math anxious. Many math anxious students have physiological symptoms, including headaches or stomach aches. Students with these symptoms only in math environments should discuss this with a Math Lab tutor or with the Math Lab Director.

Reading Clinic

When your reading assignments make you feel as if you are lost in the university jungle, come to the Reading Clinic for a free one-hour tutoring session. Staffed by one faculty member and two graduate assistants, the Clinic teaches techniques to improve reading comprehension and vocabulary.

The Clinic offers help in identifying main ideas, making inferences, drawing conclusions, understanding concepts and facts, test-taking skills and building vocabulary. In addition, education majors can be tutored in preparation for taking the Communications and General Knowledge sections of the National Teachers' Examination. Students make appointments to work privately with a tutor or schedule an independent lab session that is staff-directed.

The Reading Clinic is housed in the Keystone Building, Room 200A and is open from 9:00 a.m. to 4:00 p.m., Monday through Friday.

Writing Center

The Writing Center is a non-credit English language resource provided by, and administered through, the English department. An integral part of the three-course Composition Program, the Writing Center's main purpose is to assist students at every level and from every academic discipline with their writing projects. Students visit the Writing Center for various types of assistance, including help in getting started on a writing assignment; consultation about thesis, organization and development; assistance with grammar; information about bibliographies and footnotes; and help with proofreading and editing. Proceeding entirely on a one-to-one basis, visitors receive the optimal amount of individual attention from trained tutors who use a collaborative model tutoring method. In this model, tutors function not as authoritarian experts who take over a student's paper in order to "fix it up," but rather as coaches and guides who collaborate with writers in ways that facilitate the process of writers solving their own writing problems and developing their own ideas.

The Center is open during the regular academic year from 9:00 a.m. to 9:00 p.m., Monday through Thursday, 9:00 a.m. to noon on Friday, and 4:00 p.m. to 9:00 p.m. on Sunday (a variable summer schedule is also offered). In addition, the Center provides on-line tutorial services via its "Virtual Writing Center," accessible at the following URL: **www.english.cup.edu/wcenter/wcenter.html**

At this web site, students can utilize the "Virtual Library," a collection of eight rich links dealing with just about any writing subject imaginable, from scores of grammar handouts, to on-line dictionaries and search engines, to the broad world of publishing and more. In addition, students can receive on-line tutoring assistance with their writing via the OWL (On-line Writing Lab). The OWL allows a writer to electronically pose a question about her writing, or to electronically send a portion of her writing, to which she will receive an e-mail answer or response from one of the Writing Center tutors.

A completely free service, anyone is welcome to walk in, call 724-938-4336 for an appointment, or visit via the Virtual Writing Center.

Career Services

The primary purpose of Career Services is to assist students in developing, evaluating, and effectively implementing appropriate career plans. Undergraduates, seniors, graduate students, and alumni may obtain general advice and information on career and job search strategies.

On-campus interviews and informational sessions are scheduled for students interested in meeting with representatives from business firms, government agencies, industries, and school districts seeking candidates for employment. The "career center" houses career planning and company literature as well as information on current job opportunities. The Career Services Department provides evening hours three days a week while classes are in session.

Students are encouraged to visit Career Services to:

- schedule a session on the computerized guidance system, DISCOVER;
- one-on-one career guidance;
- use the career center media, including: videos, audiotapes, and computerized software resources;
- see a staff member about any career issues, including graduate and professional schools;
- attend career workshops, job fairs, and special programs;
- learn about alumni who will discuss their careers;
- investigate cooperative education, internships, and service learning opportunities;
- register for undergraduate one-credit CAREER READINESS course;
- register for graduate one-credit CAREER TRANSITION SEMINAR course
- make an appointment for a "mock" interview;
- access "Career Connections" Job Hot Line for full-time, part-time, co-op, internships, and seasonal jobs;
- information guides for resume writing, interviewing, cover letters, and job search;
- get the most up-to-date information on company recruiting visits;
- check out the new computer resources lab dedicated to career development; and
- sign-up for campus interviews and information sessions; search the "web" for job opportunities.

Please visit our website at **www.cup.edu/career .**

Cooperative Education

Cooperative Education (CO-OP) allows students to be employed—whether in business, industry, government, education or service organizations—in paid positions directly related to their academic majors or career plans. Cooperative Education positions are pre-professional, monitored by faculty members, and coordinated by the university. Students may be employed part or full-time, and may choose to work during the fall, spring and/or summer semester. Undergraduates, as well as graduate students, in all academic majors are encouraged to participate provided they meet the eligibility requirements. It is expected that the student's cooperative education experience(s) will span two semesters or summers while enrolled at California.

CO-OP Eligibility

- Completion of Career Readiness, a 1 credit course.
- Completion of 30 credits (Associate's - 15; Master's -6) Student must have at least a 2.0 overall quality grade point average (3.0 for Master's).
- Agreement to complete 2 co-op experiences (experiences can be completed in the summer) 1 semester for Associate's or Master's.

Three Ways to Fit CO-OP Into an Academic Program:

1. Work part-time while still enrolled full time in classes.
2. Work full time with no classes scheduled for the summer.
3. Work full time or part-time in the summer.

Where Can I Work?

- Students can work either locally or nationwide.
- Last year, CO-OP advertised 747 positions throughout the U.S. and abroad.
- The CO-OP staff also assists students in developing CO-OP sites in any location.

How Does CO-OP Differ from Internships?

- All CO-OP positions are paid - Internship positions can be either paid or unpaid.
- CO-OP is administered through Career Services - Internships are administered through Academic Departments.
- Students do not receive credit for CO-OP experience—All internship experiences are for credit.
- (Students do receive notation on their transcript for their CO-OP experience.)

Cooperative Education positions are advertised on the Job Hotline. Students who enroll in Cooperative Education are eligible to apply for advertised positions. Additional information and appointments with members of the Cooperative Education staff are available in the Career Services Department.

Visiting Student Program

Students at California University may choose to enroll for a time at any of the other 13 institutions in the Pennsylvania State System of Higher Education; and similarly students from those 13 may enroll at California. These institutions are Bloomsburg, Cheyney, Clarion, East Stroudsburg, Edinboro, Indiana, Kutztown, Lock Haven, Mansfield, Millersville, Shippensburg, Slippery Rock, and West Chester Universities of Pennsylvania.

The purposes of this program are to allow students at one institution to participate, for a limited period of time, in courses, programs or experiences not available at their home institution, without loss of institutional residency, eligibility for honors or athletics, or credits toward graduation; and to expand options available to students in such matters as student teaching, clinical experiences, internships, and international exchange programs.

Further information may be obtained from the Office of the Provost. Catalogs of the participating institutions may be consulted in the offices of the college deans, or in Manderino Library.

The procedures and standards for this Visiting Student Program are as follows. (They apply equally to students in any of the 14 SSHE institutions.)

1. The student must have satisfactorily completed at least 27 credits at California, and be in good academic standing.
2. The student must obtain advance approval from California University to complete specified studies at a sibling university under this program. Each university specifies the approval procedure for its own students' participation and for students from SSHE universities.

3. The student must present evidence of approval from California University and evidence of visiting university acceptance at the time of registration at the sibling university.
4. A student may complete up to 18 credits in a single semester and up to 16 credits of summer work as a visiting student.
5. All credits and grades accrued at the sibling university will be accepted in full by California University, and thereafter treated as California University credits and grades.
6. The student registers at, and pays tuition and fees to, the State System university visited. A student wishing to divide a courseload between two institutions during the same term registers and pays appropriate tuition and fees at both universities.

Public Safety

The Department of Public Safety and University Police at California University 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 Statutes, (Crime and Offenses) and 24 P.S. 20-1006-A(14) 20-2010A (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, and secretarial staff, provides continuous 24 hour assistance to the university community.

The staff includes a director, assistant director, two shift supervisors and ten additional commissioned police officers who have received training at the Pennsylvania State Police Academy. Three public safety communications officers and one departmental secretary contribute to the operation of the department. Public safety personnel are certified in CPR, basic first aid procedures, and the emergency medical airborne evacuation policy and procedure for transportation of the seriously ill or critically injured.

Additional services offered to university students, faculty, and staff consist of 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, post-secondary institutions, including colleges and universities, must provide information with respect to campus crime statistics and security policies of the institution and prepare, publish and distribute to all applicants, students and employees, annually, information with respect to these areas.

The information is compiled by California University and made available through the Office of Admissions, the Office of Student Development and Services, and the Office of Public Safety, and on the University website at **www.cup.edu/public_safety/.**

Character Education Institute

The California University Character Education Institute opened in January 1995, in response to a report from the Pennsylvania State System of Higher Education urging the system's universities to give increased attention to values during the 1990s.

Goals of the Institute

The Character Education Institute has three broad goals:

- To serve as a resource to the university's colleges, departments, and student organizations as they contribute to the moral development of California University students.
- To provide an outreach to local school districts and parents as they influence the moral development of their children.
- To help prepare education majors for their unavoidable role as character educators.

The Character Education Institute also serves to focus attention on the University's core values of integrity, civility and responsibility.

Services

The institute maintains a resource center that contains character education curriculum materials, books, journals, newsletters, audio and videotapes, and a clipping file on special subjects; e.g., values in athletics. These materials are available to university faculty, staff, administrators, and students and to staff and school directors from local school districts.

The director of the Character Education Institute provides consultant help to members of the university community as they give increased attention to moral reflection and dialogue. These services include a series of presentations to all education majors about their future role as character educators. The Institute also offers an undergraduate course (Schools and Values), a graduate course (Character Education), and a fifteen-credit focused concentration in the MAT program.

Consultant services are also available to local school districts that want to study formal character education programs. The director also provides parenting programs to school districts and other organizations concerned with moral development.

The Character Education Institute is located in 409 Keystone Education Center, on Third Street across from Natali Student Center. To obtain additional information about the California University Character Education Institute, please contact:

Director, Character Education Institute
California University of PA
250 University Avenue
California, PA 15419-1394
Telephone: 724-938-4500
Fax: 724-938-4156
www.cup.edu/education/charactered

University Advancement

University Advancement

The Office of University Advancement for California University of Pennsylvania was formed in 1992 to provide a full range of internal and external communication services to California University of Pennsylvania. It works to enhance relations with alumni and friends, the general public, prospective students, foundations, businesses, policy makers and others. Advancement also provides liaison with the Foundation for California University of Pennsylvania, the California University Alumni Association, university administrators and others. The office of the Vice President for University Advancement is located in Old Main, Room 114, telephone number: 724-938-5938.

Foundation for California University of Pennsylvania

The Foundation for California University of Pennsylvania, located on the second floor of Old Main, receives funds from foundations, businesses, alumni, staff, faculty and friends to benefit the university and its programs. The Foundation conducts annual fund-raising campaigns, including a phonathon. It also is responsible for deferred or planned giving, and for capital campaigns. The Foundation administers dozens of endowment funds that provide students with scholarship support.

Alumni Relations

The Office of Alumni Relations, located in Old Main under the twin towers, is the liaison between the university and its 38,000 living alumni, who receive copies of *The Cal U Review* (alumni magazine), and notices about various special events. The office coordinates Move-In Day, Homecoming, Alumni Day, and numerous social and cultural programs for alumni both on and off campus. Alumni Relations manages the network of alumni chapters across the nation and works closely with the Alumni Association (see below). In addition, the office of Alumni Relations is home to the Student Ambassador Program and maintains a toll-free telephone hotline with information changing daily (1-800-4-CAL-NEWS or 938-4507 locally).

Alumni Association

The California University Alumni Association serves California University and its alumni by fostering beneficial relationships among alumni, students and the university. The university's alumni have been organized since 1939. Today, nearly 38,000 graduates and numerous former students are members of the Association. A board comprised of four classes of alumni directors is elected for four-year terms. The board officers work closely with the university's President and the Office of Alumni Relations.

Mon Valley Renaissance

The Mon Valley Renaissance, located on the first floor of South Hall and with satellite offices in Pittsburgh and Slippery Rock, is the university's unique, public service agency dedicated to regional economic development. Its mission is to foster and support job creation and job retention in southwestern Pennsylvania. It assists individuals and businesses through counseling, training, consulting, and government contracting/export assistance and has been in existence since 1984.

Public Relations

The Office of Public Relations serves as the University's liaison with the media, distribuitng news releases and media advisories. A representative from the PR Office oftens serves as University spokesperson. The PR Office gathers information from the California University community about upcoming events and other items of interest and distributes it to the print and electronic media. The Office of Public Relations is also reposnbile for marketing and publications. Working closely with other constituients, the PR office takes the lead in developing recruitment material and in working with agencies and off-campus entities regarding advertising, printing, mailing, etc.

Student Development and Services

Inherent in the university's mission is a commitment to the total development of all students. The Office of Student Development and Services, under the direction of the vice president for Student Development and Services, is administratively responsible for the implementation of this commitment.

The central focus of the program is personalization of the university experience, with concern for not only individual intellectual development but also other aspects of personal growth. In order to foster this holistic development of students, the division designed and implemented student learning outcomes. It is Student Development and Services' objective to enable students to achieve the seven learning domains listed below through a variety of programs and services.

- Values, Moral and Ethics
- Self-Awareness/Intrapersonal Development
- Interpersonal/Social Development
- Leadership and Citizenship
- Preparation for Lifelong Learning
- Purpose/Vocational Competence
- Physical Development

Different departments in the division support these areas in different ways and to varying degrees. Collectively, Student Development and Services helps all students have a better educational, and thus, human experience.

For additional information and regulations governing student life and conduct besides what is presented here , students should refer to the current edition of The Student Handbook.

Opportunities for work-study jobs, graduate assistantships, internships, and volunteer work assignments are available for qualified students. Check with the various offices or departments to inquire about openings. This can be an opportunity to enhance curriculum studies.

California University has three offices on campus responsible for providing services to students with disabilities. Detailed information regarding these offices can be found in the services section of this catalog.

Student Development Departments

ADA Compliance
Adult Student Organization
Athletics
Bookstore
CalCard Services
Camps/Conferencing
Campus Ministry
Commuter Center
Counseling Center
Dining Services
Drug/Alcohol Programs
Greek Life
Health Center
Herron Rec and Fitness Center
Housing
International Students
Judicial Affairs
Leadership Development
Media/Publications
Minority Affairs
National Student Exchange
Off-Campus Housing
Residence Hall Programming
Services for Students with Disabilities
Student Association, Inc.
Student Center and Activities
Student Government
Student Life Studies
Study Around The World
Underground Café
Victim Advocacy Center—PEACE Project
Veterans Affairs
Website Development
Wellness/Awareness
Women's Center

Academic Honorary Fraternities

Many academic departments at California University feature honorary fraternities for outstanding students. Please see the department description or talk to your advisor about an honorary fraternity in your major.

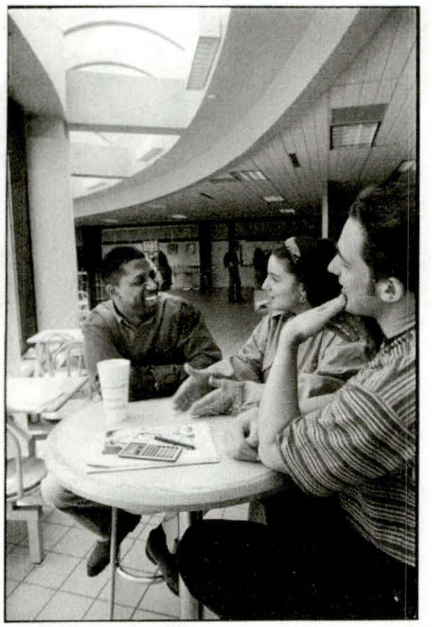
CalCard—University ID Card

The CalCard is both a campus identification card and a convenient and safe way to make purchases and use services on campus. The CalCard is available to all California University of Pennsylvania students, faculty, staff and eligible guests. The CalCard comes ready to use, pre-programmed with basic services, and then enhanced based on your needs.

CalCard Services

AAA - Part of the basic service of each student CalCard is the AAA - Roadside Assistance Program. California is first and only school in the country to offer this service. Under this program, Cal U students can receive two free limited roadside assistance calls from AAA per academic year. To use this feature, simply call the toll free number on the back of your CalCard. For more details, stop by the Information Desk for a AAA brochure.

Manderino Library - The CalCard is the key to checking out materials. This basic service is included on every CalCard. Your CalCard is also used to check out materials online through the library's PILOT system.



Tickets* - Cal U students receive free admission to all home, regular-season intercollegiate sporting events. Tickets for other events can be purchased using Shop dollars at the Information Center.

Fitness Center* - Cal U students receive unlimited access to the Herron Recreation and Fitness Center. Faculty, staff, alumni and Southpointe students who have purchased a membership use their CalCard to gain admission to the fitness center.

Entertainment* - Cal U students receive free admission to most entertainment events sponsored by the Student Association, Inc. Your CalCard provides free admission to the Vulcan Theater, Underground Cafe, as well as dozens of other events each semester.

Access - Students who reside in Johnson, Binns, Stanley, and Clyde Halls use their CalCard to access these halls.

*Students matriculating at Cal U Southpointe Center must purchase membership or tickets for recreational and entertainment events on campus.

CalCard Accounts
CalCard works like a credit card; you don't have to carry cash. But it's better than a credit card because you deposit money in your account in advance so you don't have to worry about paying a bill at the end of the month. Finance charges are eliminated.

CalCard works like a checking account; your account is debited each time you make a purchase. But it's better than a checking account because you don't have to carry your checkbook, replace checks, or carry several forms of identification for check approval.

Meal - Everyone enrolled in a meal plan will use the CalCard to pay for their meals. Whether eating at the Gold Rush, using the meal exchange or cash equivalency options at the Metropolitan Cafe or the food court, just give your CalCard to the cashier. Your meal account is automatically reduced by one meal. Everyone enrolled in a meal plan will automatically receive a Dine account with an amount of $100, $125, $200 or $250 depending on the meal plan purchased.

Dine - Opening a declining balance dine account is as simple as making a deposit by check or credit card at the Bursar's Office. Your dine account can be used to pay for food at the Gold Rush, Herron Patio, the Metropolitan Cafe, Market Place Convenience Store, and the Washington Food Court.

Shop - A CalCard shop account is the master debit account. Just make an initial deposit at the CalCard office by check or credit card, or by cash at a Value Transfer Station, located in the Natali Student Center or Manderino Library. Your shop dollars can be used at all food service locations, Cal U Student Bookstore, vending machines, laundry facilities, Manderino Library for photocopies and overdue book fines, pool hall, information center for tickets, manuals, stamps, CalCards, and at the Hamer Hall concession stand. Shop dollars are carried from semester to semester and can be refunded through complete withdrawal from the University.

Along with the various campus services, your CalCard can be used to receive discounts. This is available to all University students, faculty and staff. Stop by the Information Center for details, Monday through Friday, 8 a.m. to 4 p.m., call the CalCard Office at 724-938-4300, or e-mail CalCard@cup.edu. Be sure to check the CalCard website for information at http://sai.cup.edu/calcard.

Cal U Student Bookstore

The Cal U Student Bookstore, located on the first level of the Natali Student Center, offers varied services to all students, faculty and staff. Students can purchase new or used textbooks for their classes, with used books representing a 25% savings. A textbook reservation service is also available, allowing students to pre-order books before the first week of class. The bookstore also offers on-line service at www.calupa.bkstr.com.

The Cal U Student Bookstore offers a variety of other items including Cal U clothing and giftware, magazines, newspapers, CDs, greeting cards, and computer software. School supplies, general reading books, and health and beauty aids are also available. Free special orders for any book that is not in stock.

Convenient store hours:
Monday - Thursday 7:45 a.m. - 7 p.m.
Friday 7:45 a.m. - 5 p.m.
Saturday 11 a.m. - 5 p.m.
To place telephone orders or make inquiries, call 724-938-4324 during business hours.

Campus Ministry

Spiritual development is an integral part of the process of education and of human growth. A campus ministry, staffed by professional campus ministers, fosters the development of spiritual and religious student life.

The Campus Ministry of California University of Pennsylvania is located in the Natali Student Center, room 143. Office hours are 10 a.m. until 4 p.m. on weekdays while the university is in session. Campus ministers are on call 24 hours. Campus ministry offers worship, pastoral counseling, spiritual direction, information about local churches, and literature from participating faiths. It sponsors or cosponsors a variety of religious or service programs.

Students and their families, faculty and staff of the university are always welcome to come to the Campus Ministry office. They may also call the Campus Ministry at 724-938-4573. Campus Ministry cooperates with Student Development and Services and with other university departments for the well-being of the students.

The Catholic chaplains are funded by the Catholic Diocese of Pittsburgh. The Protestant chaplain is funded by the United Campus Ministry Council of California, which also places members of the Coalition for Christian Outreach. Although the chaplains are members of particular denominations, they serve all students, regardless of church affiliation. The chaplains will put students in touch with a priest, minister, cleric or rabbi of their chosen denominations.

The California Times (California Student Newspaper)

The California Times is the university's student newspaper, owned and operated by the Student Association, Inc. The purpose of The Times is to support the educational mission of California University and the State System of Higher Education by providing educational opportunities in publishing, utilizing students in leadership, production and reporting roles. These "hands-on" roles will give students measurable educational experiences in technical areas such as desktop publishing, graphics, ad sales, layout and photography, as well as newspaper reporting. All these skills will be acquired, practiced and measured through a weekly newspaper. This paper will also be a service to the area by providing information of campus and regional community interest. Students will also get experience working on other various publications produced by the area including sports media guides, handbooks,

brochures and the annual yearbook. For further information call 724-938-4303 or e-mail wheeler @cup.edu.

Clubs and Organizations

A large array of active clubs and student organizations are offered through academic departments and the Student Association, Inc. These groups provide social, educational, community service and leadership opportunities for students. They are advised by student-selected members of the faculty and staff. Students are encouraged to initiate and support new groups which reflect interests not represented by existing organizations. A complete list of SAI-funded organizations, their current advisors and phone numbers may be found in the Student Handbook.

Code of Conduct

Responsibility for administering the Student Code of Conduct rests with the Office of Judicial Affairs and designated hearing officers in Residence Life and Greek Life who are part of Student Development and Services. The purpose of the Student Code of Conduct and its enforcement is the development of an environment based on the University's core values—integrity, civility and responsibility. It also fosters students' academic, social and personal growth and development. The Code of Conduct outlines on and off-campus behavioral expectations of students. Hearing officers are charged with investigating complaints of possible violations of the Code of Conduct, informing students of their rights and responsibilities, and either adjudicating the violation informally or referring it to a formal hearing. The Code of Conduct is printed in the student handbook, and is also on the student handbook section of student life on the university's homepage.

In the interest of its students and the university community, the university reserves the right to decline readmission, to suspend, or to require the withdrawal of a student from university housing and/or the university after all appropriate university judicial procedures have been followed.

Registration to the university assumes the student's acceptance of responsibility for compliance with all regulations published in the catalog, as well as rules found in any official publication.

Commuter Center and Services

Commuter students comprise approximately two-thirds of the total student population. The commuter center, located on the first level of the Natali Student Center, offers a host of services and opportunities for involvement to commuter students.

The Commuter Center provides lounging areas, general information, computers, lockers, microwaves, a refrigerator, and cable television. In addition to providing a comfortable place away from classes, the Center is also a place for commuting students to make friends.

The Office of Student Development and Services and the Student Association jointly support commuter students at Cal U. All are encouraged to visit the Commuter Center and to visit both the Commuter Center and Commuter Council web pages at www.cup.edu.

Counseling and Psychological Services

The Counseling Center staff provides personal, social and psychological services to students with problems that interfere with their adjustment and effective educational performance while at the university.

Students having trouble understanding their feelings, maintaining satisfactory social and interpersonal relationships, or coping with academic demands, may benefit from seeing a counselor or psychologist at the Counseling Center.

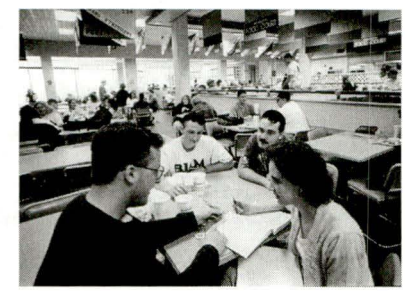
Students can call the Center at 724-938-4191 for an appointment with a licensed psychologist or counselor. They can make the appointment themselves or be referred by a professor, fellow student, staff person or management personnel. Services are confidential. Office hours are 8 a.m. to 4 p.m. daily, Monday through Friday. Evening sessions are by appointment

CUTV (California University Television)

California University Television (CUTV) is the university's cable television station which is owned and operated by the Student Association, Inc. CUTV is seen in over 80,000 homes, 24 hours a day on the Charter Communications, Armstrong and AT&T Cable systems. It also provides local sports programming to millions of other homes through various cable/satellite networks. The mission of CUTV is to produce and provide programming of regional community interest, while providing valuable "hands-on" educational experience for interested students. This applied learning supports the mission and goals of California University, as well as the priorities and imperatives of the State System of Higher Education. Students can develop skills television technology through experience in a variety of technical areas including camera work, editing, direction and other production roles, as well as on-air talent positions.

CUTV produces a variety of informational, educational and entertainment programs. For example: CUTV Newscenter - a weekly news show; Pride and Progress - a news magazine show focusing on Fayette County; a variety of local government meetings, including the Washington County Commissioners; Fright Night Fridays - a skit-oriened horror movie show; and Outtakes with Fiore - a show dedicated to previewing and reviewing new movies. CUTV is heavily involved with university and area high school sports coverage. Over the past several years, CUTV has produced all of Cal U's football and basketball contests. Many of these games were rebroadcast by Fox Sports Pittsburgh and WBGN-TV, to a multi-state audience of over four million homes. A weekly coach's show for the sport in season, as well as our popular high school football game of the week are also produced. Finally, CUTV has been responsible for producing several distance learning courses. These classes provided area viewers with the opportunity to earn college credits from the comfort of their homes.

To our credit, CUTV has been recognized by several national organizations. The National Association of Collegiate Broadcasters (NACB) has presented CUTV the "Best in the Nation" award in 1998, and awards for news, sports and news magazine shows. These awards were judged by representatives from CNN, ESPN and A&E. The station received multiple TELLY awards for our sports, news and documentary coverage. In addition, CUTV has received awards from the Society of Professional Journalists, and was named the best collegiate station in the nation for 1997-98.



Offices and studios are located in the Natali Student Center. CUTV maintains a fully-loaded

production truck, capable of producing multi-camera field events. The program employes a staff of three professionals, and enjoys student membership of more than 50. For more information stop by room 150, Natali Student Center, 724-938-4303, or e-mail wheeler@cup.edu.

Dining Services

The goal of 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.

Do you want an all-you-care-to-eat, one-price-at-the-door Concentration? The Gold Rush Room offers something for everyone, and even provides takeout. Are you looking for fast food with friends between classes? The staff at Herron Patio and the Washington Food Court aim to please. What about an early morning bagel, gourmet coffee or late night munchie? The Metropolitan Cafe provides those items, and much more. Need advice on special dietary concerns? The dining service management team provides dietary service for all your needs.

Students living in the residence hall have the opportunity to choose from three meal plans:
Plan A: 19 meal plan with $100 dine dollars.
Plan B: 14 meal plan with $100 dine dollars.
Plan C: 10 meal plan with $200 dine dollars.
Plan D: 125 meal/$250 dine Block Plan.

Commuters may choose from the three meal plans above, or select from the following additional options offered specifically to meet the needs of the busy off-campus resident:
Plan E: 7 meal plan with $100 dine dollars.
Plan F: 75 meal/$125 dine Block Plan
Plan G: 125 meal/$125 dine Block Plan
Plan H: Dine dollars only plan, with initial minimum balance of $50 dine dollars.

All students who live in a university residence hall must participate in the meal program. The off-campus and commuter plans are for one full semester and may not be terminated. Dine dollars are included in each meal package and are non-refundable. The meal package refund policy for students who withdraw from the university is based on the Refund/Repayment Schedule published by the bursar's office under the refund section of this catalog. A detailed dining service brochure may be obtained from the assistant dean for student services, Natali Student Center, 724-938-4513.

Drug and Alcohol Programs

The university drug and alcohol education and prevention program is located in Downey Garofalo Health Center. It provides educational programs for the university aimed at increasing awareness of alcohol and drug-related issues. This program includes consultation, intervention, counseling, education, awareness programs and substance-free activities.

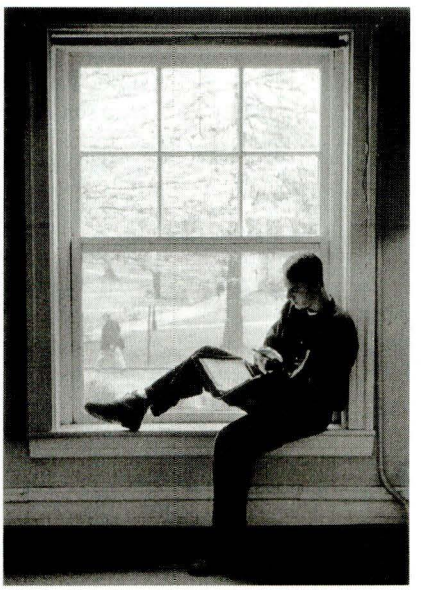
CHOICES is the assessment and intervention program designed to assist those whose behavior may be harmful to themselves or others because of alcohol or drug use. This educational program offers an opportunity for students to learn facts and to dispel myths concerning the use of alcohol and other drugs. This program consists of two individual sessions and eight hours of education. It is one part of California University of Pennsylvania's efforts to provide a drug- free community. For more information call 724-938-4191.

CHEERS (Collegians Helping Educate Each Other Regarding Substances) is an educational component of the drug and alcohol program. Awareness, alternatives, peer education and other programs are offered through CHEERS. For more information call 724-938-4191.

BACCHUS (Boost Alcohol Consciousness Concerning the Health of University Students) is the local chapter of a national student organization, and is under the guidance of advisors from Student Development and Services. BACCHUS advocates informed, independent decision-making and respect for the choices of others. The Bacchus philosophy is that students can be uniquely effective in encouraging their peers to develop responsible habits about alcohol use or nonuse. BACCHUS operates a weekly coffeehouse, "The Underground Cafe," in Herron Patio which showcases the talents of Cal U students and promotes a responsible and healthy lifestyle. For more information check out their web page at www.cup.edu/~bacchus/.

California Campus Community Coalition, which is a committee comprised of both the university and community, addresses underage and dangerous drinking on campus and in the community. For information, call 724-938-4191.

Southwestern Pennsylvania Drug and Alcohol Consortium is a combined effort by California and neighboring universities to provide a forum for discussion of relevant and current issues in drug and alcohol prevention and education, as well to share developmental programming ideas. The Consortium offers California and other universities access to a resource library consisting of videos, books, pamphlets and other information related to drug and alcohol use and abuse.



Emerging Leaders

The Emerging Leaders program equips potential student leaders with skills including public speaking, team building, goal setting, and event planning. Participants are introduced to several styles and theories of leadership. Speakers host sessions on their area of expertise. This program uses experiential exercises, to encourage students to put new skills into action. This program is limited to 25 first-year students, and is conducted during the fall semester. For more information call 724-938-4303. A similar program specifically designed for members of he Greek system is held in the spring semester of each academic year.

Health Services

The mission of the Student Health Services Department is to

provide high quality health care to our students; to direct students to other health care providers when appropriate; to provide emergency care for all members of the university community; to address the specific health needs of those members of the student population with special problems; and to conceive, develop and implement relevant health education programs for the university community.

The Downey-Garofalo Health Center is open 24 hours, seven days a week while the university is in session. A staff of full-time registered nurses is on duty at all hours. A qualified physician is on duty Monday through Friday during specified hours.

Students must submit completed health forms as part of the admissions process. University health services are available to all registered undergraduate and graduate students. Employees, both faculty and staff, conference participants, visiting athletes and other visitors will be given emergency treatment, if the emergency occurs on the university campus. The physician will also refer students to local hospitals in emergencies and for other treatment beyond the capabilities of the Health Center. The Health Center does not assume responsibility for doctor bills, hospital bills or prescription costs accrued by the students for treatment beyond capabilities of the Health Center. The final decision in hospital selection is the student's.

Medical Absences

Students who are unable to attend classes because of illness should contact their professors, explain their absences, and arrange for completion of any work that may have been missed. The Student Health Center does not issue medical excuses, but will send a written notification to the professors only in the following circumstances, provided the student initiates the request:

(1) If a student consults a health care professional at the Health Center, and the health care professional determines that the student has or had sufficient medical reason not to attend class (or to fulfill other academic obligations), notification will be sent to the student's professors, but only if the student makes a request at that time.

(2) If a student has consulted a private physician, who has determined that the student has or had sufficient medical reason not to attend class (or to fulfill other academic obligations), and the physician notifies the Student Health Center to that effect in writing, notification to this effect will be sent to the student's professors.

(3) If a student is confined for longer treatment or care at the infirmary section of the Student Health Center, verification of the confinement will be sent to the student's professors. If a student is hospitalized elsewhere or requires extended recovery with bed rest, written notification should be sent from the attending physician to the Student Health Center, which will notify the student's professors.

Upon notification from the Student Health Center or any other health care professional, the professor may decide whether to consider the notification as a valid excuse from class or other academic obligations.

A professor may call the nurse supervisor of the Student Health Center for verification of a student's visit, but a visit can be verified only if a student was actually seen by a health professional.

Housing

The university provides residence hall accommodations for approximately 1300 students in six separate facilities. The residence hall accommodations include a required food service (board) plan.

Women reside in Clyde Hall and Stanley Hall; men reside in Binns Hall, Longanecker Hall and McCloskey Hall. Men and women are accommodated on separate floors in Johnson Hall. Johnson has been designated the Honors Hall (see specialty housing).

Application for Housing

Freshmen students matriculating fall 2001 are required to live in the residence halls for the first four semesters of their college career with the following exceptions:

1. students commuting from the residence of their parents or legal guardians,
2. married students,
3. students who are 21 years of age or older by the date of registration.

Freshmen and transfers who indicate the need for on-campus housing receive room and board contracts with their acceptance letter. On-campus housing is at a premium and there are a limited number of spaces available. Freshmen are given priority as long as available space exists. Students are encouraged to apply no later than May 1, but housing contracts are accepted on an ongoing basis.

Upperclass students interested in on-campus housing should contact the housing office in Johnson Residence Hall.

Mailing address
Residential Facilities Office
Johnson Residence Hall - Box 39
250 University Avenue
California University of Pennsylvania
California, PA 15419-1394

Upperclass students are given specific instructions for securing a space in the residence halls for the fall semester. The instructions and the contract are distributed in the halls during the spring semester. An upperclass housing sign-up is conducted in April. The university retains the right to assign all students to certain residence halls, floors and roommates in the best interests of the university.

Room and board contracts are for one academic year, September through May. The contract commits the student to university room and board for both the fall and spring semesters. Contracting for on-campus housing this academic year does not obligate the university to offer on-campus housing in future semesters. Room and roommate assignments shall be made by the university. The student may request a room and a roommate(s) and

the university will attempt to honor this request, but will not be obligated to do so. The university will not guarantee any student a given room, roommate or residence hall based on class rank, previous occupancy or any other criteria. Phone 724-938-4444

Room Deposit
An advance room deposit of $100* is required with the room and board contract in order to reserve a room for the following academic year. The deposit is held in the student's account and applied toward the spring semester. First-year students who wish to reside in a residence hall will receive a contract with their welcome letter from the Housing Office. The contract and card must be signed and returned to the Bursar's Office, 250 University Avenue, California University of Pennsylvania, with the $100 deposit. Upperclass students receive specific instructions on obtaining a room and board contract from the Director of Housing, Residential Facilities Office, Johnson Residence Hall. Schedules are posted for each academic year.

Withdrawal from the contract will result in partial or total forfeiture of the deposit. In addition, the student may be held liable for that semester's room and board charges. The refund policy for students who withdraw from the university is based on the Refund/Repayment Schedule published by the bursar's office under the refund section of this catalog.

*Student who experience difficulty paying this advance deposit should contact the housing office.

Damage Charges
Students are held responsible for the cost of damage, breakage, or loss and/or the return of university property.

Residence Life
Each residence hall is supervised by a staff which is headed by an on-site director. Residence hall directors are readily available to students who may request direction or assistance. The director, with the help of graduate and undergraduate resident assistants, has charge of the facility, including programming activities.

Video Monitoring System
Every residence hall is equipped with a video recorder-monitor system. All entrance and exit doors, main lobby and computer labs are fitted with video cameras. The system monitors the facility and is helpful in curbing vandalism, protecting students and property.

Inter-Residence Hall Council
This elected body represents the interests of students who live in the residence halls. The Council provides a forum for residential life issues and cosponsors various service projects.

A detailed description of the university's residence life program, residence facilities, and residence hall rules and regulations is included in the Student Handbook.

Specialty Housing
Residence Life offers students the opportunity to live in a wellness community made up of students who share a concern for personal health issues. Although possession or consumption of alcohol and drugs on state property is not permitted, students who abstain from any use of tobacco, alcohol or other chemical substances may request a space in one of these areas. Please check the front of the housing card to make this request and return all information as early as possible to ensure the best chance of your request being honored.

Johnson Hall is designated as the University Honors Program residence hall. Incoming freshmen must be admitted in the University Honors Program in order to be housed in Johnson Hall. Honor students must maintain honor program standards to remain in Johnson Hall.

Residence Life also offers students the opportunity to live in other designated specialty housing. Those requesting an assignment to a specialty housing area reside in a community of students who share a common interest in a variety of student organizations such as athletics, band, choir or clubs and organizations. Any group of students interested in living together can follow a simple procedure to secure a location in the residence halls. Please indicate your desire to live in a special housing area on the front of the housing card under the special interest section. All contracts received by the April deadline will be reviewed, and those groups and organizations that have shown a desire to live together will be contacted for further details concerning their specific housing needs.

Residence Life Tech Support
California University provides 27 residence hall computer labs with a total of 126 computers and 27 printers. All residence halls on campus have a computer lab on each floor for residence hall students to use. The labs are fully integrated into the university's network. Students have access to any of the network services on campus, including Manderino Library, other State System libraries, students' email and webspace, the internet and other services. All computers have Microsoft Office Professional, Visual Basic, internet browsers, and various picture and html editors. All labs are open 24 hours, seven days a week during the school term and are accessed by using the students' own room keys.

All university computer policies must be followed while working in the labs. The residence hall labs are available for residents and their guests with valid IDs (residents have priority). Any rules posted by the residence hall staff must be followed. Each lab has a laser printer, but students must supply their own paper.

If you bring your own computer:
All residence hall rooms have two Cat-5 connections for computer hookup to the network. There is no need to use a modem or contract with an outside internet provider. This service is provided at no additional cost, but students must complete an application for service and meet certain requirements.

For more information as well as computer equipment requirements, visit www.cup.edu/~calhousing/services.htm or call residence life tech support at 724-938-4444.

Evening Tutoring Program
In cooperation with the Academic Services Department, an evening tutoring program is available in four of the residence halls. This

program is available to all students. A detailed schedule of evening tutor sites and hours is posted throughout the campus each semester.

Residence Life Support Services Program (STEP)
The initial objective of the Residence Life Support Services Program is to assist new students with the transition from home to college. The voluntary "Buddy Program" matches a new student with an upperclass resident student in the same residence hall in order to assist in the transition. The upperclass mentor is available to guide, direct, encourage and support the new student throughout the first year. The Residence Life Support Services Center in Stanley Hall is available to assist students in finding university support programs suited for the individual's needs.

University Off-Campus Housing Disclaimer
The information contained in the off-campus list is provided as a service to students. The data collected or transcribed may at time be inaccurate. The university, its employees or students are not responsible for any claims or damages that may be incurred. The Office of Off-Campus Housing and Affairs makes no warranty on the conditions, terms, prices, or other information contained therein. This information is to be used as a guide to help students locate off-campus housing and is not to be taken as approved or sanctioned off-campus housing. This does not create an enforceable obligation to any party from California University of Pennsylvania, the Pennsylvania State System of Higher Education, or the students of California University.

Off-Campus Housing
The Office of Off-Campus Housing and Affairs works with students, landlords and borough officials to educate and promote the safety and welfare of all students residing in off-campus facilities. The office also assists students in their search for off-campus housing by providing an updated, borough-sanctioned, off-campus housing list, as well as various resource materials such as the Student Educational Guidebook for Off-Campus Living. For more information call 724-938-4439 or our website at www.sai.cup.edu/housing/och.

Intercollegiate Athletics

The university sponsors a comprehensive athletic program for both men and women. The athletic program is regulated by the policies of the athletic council and administered by the director of athletics. It is governed by the Office of Student Development and Services with the vice president as the senior administrative officer.

Thirteen varsity sports are available to students who desire to participate in intercollegiate athletics and who meet the academic standards of the university, the PSAC and the NCAA. Freshman students must apply to the NCAA Clearinghouse to be eligible to compete in intercollegiate athletics during their freshman year. Specific requirements may be obtained from the high school counselor, the university athletic director or the admissions office.

Academic progress for athletes is monitored and a professional staff of athletic trainers is always available. Many assistant coaches and graduate assistants help to coordinate the varsity sports program.

Thirteen varsity sports are available to students. For men, California offers baseball, basketball, cross country, football, soccer, track and field; for women California offers basketball, cross country, softball, soccer, tennis, track and field and volleyball.

The athletic department participates in the NCAA CHAMPS/ Lifeskills program. Each student athlete is encouraged to participate in the athletic CHAMPS leadership development program at sometime during their athletic career. The program combines student athletes from all sports to discuss values, communication, career services, resume writing, manners, etiquette and diversity. Since spring 2000, more than one-third of California student athletes have gone through the program.

International Student Office

California University welcomes international students because they have a positive impact on the entire university community. International students from 20 countries currently provide cultural diversity and furnish the institution and the surrounding community with an expanded and enlightened perspective.

The mission of the International Student Office is to meet the unique needs of the international students enrolled at the University and to provide each one with a sense of "belonging." In addition, the International Student Office strives to provide opportunities for the international student to experience not only the American culture, but other representative cultures as well.

The International Student Office, located in the Downey-Garofalo Student Health Services building, is open 8 a.m. to 4 p.m. Monday through Friday.

Intramurals

The intramural program is designed to provide students with a flexible, yet structured environment in which to participate in sports. Activities are administered in league format with various divisions servicing men's, women's, open and co-ed recreational teams. Teams and individuals must formally register for activities. The program is open to all current students, faculty and staff. For more information contact Recreational Services, 724-938-5907.

Multicultural Student Programming

The Office of Multicultural Student Programming provides programs and activities which support the ideals of a culturally diverse student population. It serves as an advocate for students from various backgrounds and offers consultation to other members of the university community when planning programs or activities.

The office of Multicultural Student Programming is located in the Center for Student Growth and Development, 724-938-4056. Hours are 8 a.m. to 4 p.m. Monday through Friday.

Multi-Media Access Center

Located on the first level of the Natali Student Center, the access center houses a Macintosh Computer Lab.

The computer lab permits student access to a number of computers provided for personal use. The lab is open seven days a week (including evening hours) and remains open 24 hours a day during "finals" week. The Student Association, Inc., supports and maintains the computer lab.

Non-Traditional Student Organization

The University has a long-standing tradition of serving our region by providing educational opportunities to non-traditional students. These students may be seeking a degree following a hiatus from schooling; seeking a second degree; seeking career skills enhancement; or taking non-degree or continuing education courses. Many non-traditional students carry family and work responsibilities in addition to being students.

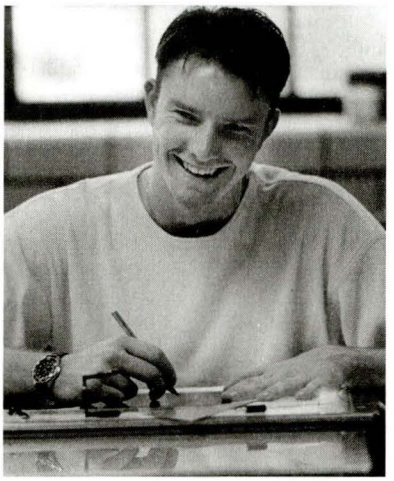
The Office of Student Development and Services advocates better service to non-traditional students across campus and sets an example through services and support for these students. All non-traditional students are encouraged to visit the Non-Traditional Student Organization (N.S.O.) web page via the Cal U website at www.cup.edu. The N.S.O. web page provides useful information and convenient opportunities for networking and meeting other students.

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).

Requests for accommodation should be submitted directly to the Office for Students with Disabilities (OSD). Students requesting accommodations must provide the university with documentation to substantiate the request.

Students with disabilities follow the same admission procedures and standards as required by California University's Admissions Office for all students. Questions regarding admission procedures and acceptance status should be directed to the Admissions Office 724-938-4404. Questions regarding available services for students with disabilities and required documentation should be directed to the Office for Students with Disabilities 724-938-5781.



The PEACE Project (Sexual assault, dating/domestic violence, stalking)

The PEACE Project (Prevention, Advocacy for Change and Empowerment) educates the campus and community to prevent sexual assault, stalking, and dating/domestic violence. PEACE offers survivors and their loved ones advocacy, counseling and support on their journey to healing. The PEACE Project is funded by a grant from the United States Department of Justice through the Violence Against Women Act. PEACE is located at 430 Park Street (behind the library). Members of the campus and the larger community are welcome to stop by, call 724-938-5707, or e-mail peace@cup.edu for more information.

Recreational Services

The mission of the Department of Recreational Services is to provide recreational facilities, programs, and developmental opportunities for the university community. Recreational Services provides exposure to a variety of activities that contribute to individual physical fitness. The department also creates opportunities for cooperative and competitive play in the game form. Recreational Services instills in participants a lifelong appreciation for physical activity as well as, enhancing the social, psychological and physiological development of the university community members it serves.

The department is comprised of seven service areas: extramurals, fitness, informal recreation, instructional programs, intramural sports, outdoor recreation and sports clubs.

Extramural sports programming provides structured tournaments, contests and meets between participants from different institutions. The champions from intramural events are the teams or individuals competing in these programs.

Fitness programming provides opportunities and assistance to participants who wish to be involved in a personal exercise program. This voluntary program is designed to motivate individuals, assess their level of fitness, and influence their decision to maintain a positive fitness lifestyle.

Informal recreation programming provides a self-directed approach to participation. This program area accommodates the desire to participate in sport for fitness and fun, often with no predetermined goals except that of participation.
Instructional programming provides learning opportunities, knowledge and skill through lessons, clinics and workshops. These programs are designed to enhance participant performance and enjoyment.

Intramural sports programming provides structured contests, meets, tournaments and leagues limiting participation to individual members of the university community.

Outdoor recreation programming provides participants with opportunities to interact and gain experience in a variety of natural settings.

Sport club interaction provides for individuals to organize based on a common interest in a specific sport activity. The basic nature of sport clubs allows members to direct their interest both within and outside the university setting.

Social Fraternities and Sororities

A sorority or fraternity is an organization whose members have chosen to establish a close affirmation and friendship with each other. Membership helps to provide leadership opportunities and career preparation.

There are 16 sororities and fraternities to choose from at California University. Every chapter encourages and expects above average scholarship and participation in various activities which offer valuable experience. Community service is also encouraged.
The decision to join a sorority or fraternity is up to the individual and should not be taken lightly. The Panhellenic and Interfraternity (IFC) councils and the Black Greek Alliance (BGA) suggest that individuals who may be undecided about Greek membership consider participating in Rush before making that decision.

Rush is a series of open houses, informal gatherings, parties and other social events which potential members attend to help them choose membership in a particular fraternity or sorority.

Initiates are expected to pay for initiation and social dues. New member fees are used to purchase manuals, notebooks, materials and new member pins. Initiation fees pay for national dues, subscription to the national magazine, lifetime membership dues and the initiation ceremony. Social dues help to pay for officer budgets and for Rush, recruitment, special events and social service projects.

California University of Pennsylvania adheres to state, local, and federal guidelines in all hazing matters. The University's position on hazing is consistent with state prohibition on hazing activities. This prohibits all forms of hazing by all members of fraternities and sororities. Any infraction of state, local, or federal guidelines reported to a Greek advisor or to the Office of Student Development and Services will be dealt with accordingly. Cal U has recognized the dignity of every individual and has expressed strong opposition to all forms of hazing.

For more information call the Greek Development Office at 724-938-4303.

Fraternities	Sororities
Acacia	Alpha Kappa Alpha
Alpha Chi Rho	Alpha Sigma Alpha
Alpha Phi Alpha (Inactive)	Alpha Sigma Tau
Delta Chi	Delta Zeta
Kappa Alpha Psi (Inactive)	Theta Phi Alpha
Phi Beta Sigma (Inactive)	Phi Sigma Sigma
Phi Kappa Theta	Sigma Kappa
Phi Kappa Sigma	Zeta Phi Beta
Tau Kappa Epsilon	
Theta Xi	

Student Activities Board (SAB)

Many diverse forms of cultural and contemporary entertainment are offered to our students primarily through the Student Activities Board (SAB.) This organization is composed entirely of full-time students who meet weekly to view and discuss the possibilities of hosting different entertainment and cultural programs for the entire university community. These activities provide a significant opportunity for students to become more involved with their campus as well as to experience the growth and personal development.

The type of programs that SAB sponsors or co-sponsors with other university organizations include the weekly movies shown in the Vulcan Theatre, the series of events surrounding our Homecoming theme, novelty events such as laser tag and "make your own music video" sets, many popular pay-per-view events and others. In addition, SAB sponsors and co-sponsors several off-campus trips to Pittsburgh sporting events, performances at the Pittsburgh Public theatre and opportunities to see national and local recording artists in concert venues in the Pittsburgh area.

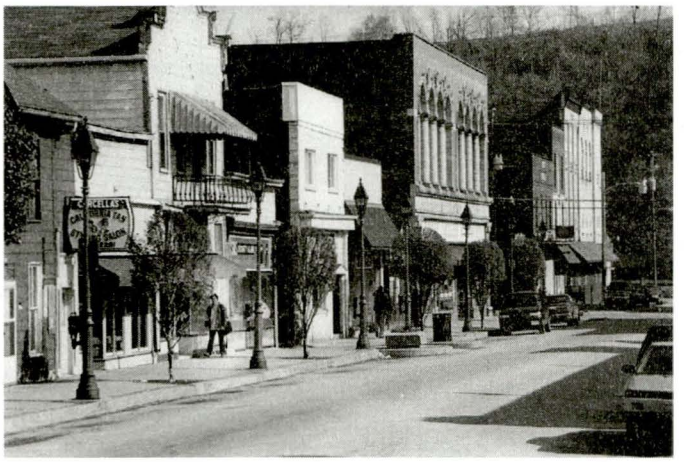
Participation in these and other groups is strongly encouraged. To find out more about SAB, the types of entertainment and programs they provide, and how you can become a member, call 724-938-4303 or stop by the office located on the third floor of the Natali Student Center.

Student Association, Inc.

The Student Association, Inc. (SAI) is a non-profit corporation financed in part by the Student Association Fee, which is paid each term by every student. The executive serves as the liaison between SAI and the university.

Programs provided by the Student Association, Inc., are determined by the student congress and by the Student Association, Inc., board of directors. Student Association fees are budgeted, appropriated, disbursed and accounted for by SAI with the concurrence of the president of the university.

SAI coordinates the co-curricular activities provided by the university, including homecoming, Roadman University Park, concerts, plays, musical productions, movies, outdoor recreation, the Herron Recreation and Fitness Center, intramural sports, dances, picnics, California University Television (CUTV), WVCS Radio, and other special events. Intercollegiate athletics are partially funded by SAI. In addition, SAI coordinates the activities of student clubs and organizations. The student handbook provides a complete listing of active student clubs and organizations.
Publications coordinated by SAI include a student handbook, an organizational handbook, *The California Times* (the student



newspaper), *Monocal* (the yearbook), and a number of brochures and pamphlets.

SAI is responsible for the development and maintenance of the George H. Roadman University Park, a 98-acre area located one mile from campus on Route 88 South. Facilities include tennis courts, baseball, football, soccer, softball, rugby, and intramural fields; picnic areas and Adamson Stadium.

Student Congress

Student congress is the official student governing body. It represents and serves the entire student population. It provides for a student forum, establishes channels for the communication of students' concerns to the proper administrative and faculty personnel, implements programs and activities that enrich campus life, and creates opportunities for students to exercise and develop leadership skills. For more information contact 724-938-4303.

Student Judicial System

The Dean of Student Development is responsible for administration of the judicial system and the conduct regulations. This office conducts pre-hearing interviews with students charged with a violation of the conduct regulations which may take place on or off campus, takes administrative disciplinary action in certain cases, conducts student/faculty judicial board hearings, maintains all university disciplinary records and serves as a resource to faculty, staff and students for disciplinary matters.

For additional information and regulations governing student life and conduct, students should refer to the current edition of the student handbook and the Rules of Conduct and Judicial Procedures handbook.

Student Leadership Development

The Student Leadership Development Department fosters ethical leadership development and encourages involvement in leadership opportunities to enhance a student's capacities for dealing effectively with complex problems, real life leadership situations, and cross-cultural issues. This comprehensive program is designed to promote an understanding of leadership theory and research, skills and competencies which support leadership effectiveness, a more fully developed code of personal ethics, and an enhanced sense of lifelong commitment to social responsibility and citizenship. There are specific programs developed for first- and second-year students, from traditionally underserved groups, athletes, residence hall students, and Greek-letter organization members. Anyone interested in developing leadership skills, call 724-938-4303.

Student Life Studies

The Department of Student Life Studies facilitates the assessment and research of student and staff facilities, services and programs within Student Development and Services. Assessment studies in the areas of tracking, needs, satisfaction, outcomes, culture, benchmarking, and professional standards are designed and implemented with the guidance of this department. In addition, this area coordinates the divisional comprehensive program review and continuous quality improvement efforts such as activity related to Middle States accreditation and institutional self-evaluation. By working collaboratively with the vice president and senior staff, the department provides data that is used in the division's strategic planning process and aids departments in developing appropriate programs and plans to meet the division's mission and goals. Student Life Studies seeks to collect and analyze data to be used for program enhancement and modifications in order to best meet the needs of the students.

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).

Requests for accommodation should be submitted directly to the Office for Students with Disabilities (OSD). Students requesting accommodations must provide the University with documentation to substantiate the request.

Students with disabilities follow the same admission procedures and standards for all students as required by California University's Admissions Office. Questions regarding admission procedures and acceptance status should be directed to the Admissions Office at 724-938-4404. Questions regarding available services for students with disabilities and required documentation should be directed to the Office for Students with Disabilities 724-938-5781.

Study Around the World Program

The Study Around the World program (SAW) administers both domestic and international student exchange opportunities. Each participant selects an exchange that will enrich their academic, cultural, social, and recreational background in consultation with the SAW program coordinator and their academic advisor. Students return from their exchanges with new perspectives on their education and lives.

A successful candidate for exchange has a willingness to undertake exposure to unfamiliar environments. Through exchange exposure, the participant becomes more independent as a learner, reflecting the self-reliance and self-confidence gained as a result of having taken a decisive role in planning his/her future and carrying through with those plans.

The SAW program is essentially divided into two categories of opportunities for students: domestic exchanges through the National Student Exchange consortium, and international through a multitude of program offerings. For further information, contact the SAW coordinator at 724-938-4439 or visit the SAW website at www.cup.edu.

National Student Exchange

The NSE is most popular with California University students as it combines the ease of academic applicability to programs at California University with financial affordability. A student may study at the NSE member institution of their choice for up to a full academic year, undertaking courses approved for application to their degree program at California through approval of their academic advisor. In most cases, the student has the choice to pay either California University tuition or instate tuition at the host institution.

Basic familiarity with surroundings can also be viewed as advantageous by the student as all NSE member institutions are located in either the United States or U.S. territories. The number of NSE consortium member institutions grows each year. The following schools are currently members of NSE:
Alabama A & M University; Alabama State University; University of Alabama; University of Alaska, Anchorage; University of Alaska, Fairbanks; University of Alaska, Southeast; Northern Arizona University; University of Arizona; California Polytechnic State University, San Luis Obispo; California State Polytechnic University, Pomona; California State University, Bakersfield; California State University, Chico; California State University, Domingue Hills; California State University, Fresno; California State University, Hayward; California State University, Los Angeles;

California State University, Northridge; California State University, San Bernardino; Humbolt State University; San Jose State; Sonoma State University; Fort Lewis College; Mesa State College; University of Northern Colorado; University of Southern Colorado; Western State College of Colorado; Eastern Connecticut State University; University of Connecticut; University of Delaware; Florida International University; University of Central Florida; University of West Florida; University of Georgia; University of Guam; University of Hawaii at Hilo; University of Hawaii at Manoa; Howard University; Boise State University; Idaho State University; University of Idaho; Illinois State University; Northeastern Illinois University; Indiana University; Purdue University, Fort Wayne; Iowa State University; University of Northern Iowa; Fort Hays State University; Witchita State University; Morehead State University; Murray State University; Grambling State University; University of Louisville; Louisiana State University; Southern University; University of New Orleans; University of Maine; University of Maine at Farmington; University of Maine at Fort Kent; University of Southern Maine; Bowie State University; St. Mary's College of Maryland; Towson State University; University of Maryland at College Park; Bridgewater State College; University of Massachusetts at Amherst; University of Massachusetts at Boston; Westfield State College; Michigan Technological University; Mankato State University; Moorehead State University; University of Minnesota, Twin Cities; Mississippi State University; Southwest Missouri State University; University of Missouri-St. Louis; Montana State University-Bozeman; University of Montana; University of Nebraska at Kearney; University of Nevada, Las Vegas; University of Nevada, Reno; Keene State College; University of New Hampshire; Rutgers College, Rutgers University; The College of New Jersey; William Paterson College of New Jersey; Eastern New Mexico University; New Mexico State University; University of New Mexico; Binghamton University; Hunter College of the City University of New York; SUNY College at Buffalo; SUNY at Plattsburgh; SUNY College at Potsdam; SUNY Center at Stony Brook; East Carolina University; North Carolina Central University; North Carolina State University; University of North Carolina at Wilmington; Western Carolina University; Bowling Green State University; Cleveland State University; East Central University; Oklahoma State University; Eastern Oregon State College; Oregon State University; Portland State University; Southern Oregon State College; University of Oregon; California University of Pennsylvania; East Stroudsburg University of Pennsylvania; Indiana University of Pennsylvania; West Chester University of Pennsylvania; Inter American University of Puerto Rico, San German; Universidad del Sagrado, Corazon; University of Puerto Rico, Bayamon; University of Puerto Rico, Cayey; University of Puerto Rico, Humacao; University of Puerto Rico, Mayague; University of Puerto Rico, Rio Piedras; Rhode Island College; University of Rhode Island; College of Charleston; South Carolina State University; University of South Carolina; Winthrop University; Northern State University; South Dakota State University; University of South Dakota; Tennessee State University; University of Memphis; University of Tennessee at Chattanooga; Southwest Texas State University; University of North Texas; University of Texas at El Paso; University of Texas at San Antonio; University of the Virgin Islands; University of Utah; Utah State University; Johnson State College; Virginia Commonwealth University; Virginia State University; Virginia Tech; Central Washington University; University of Washington; Washington State University; Western Washington University; Marshall University; West Virginia University; University of Wisconsin, Eau Claire; University of Wisconsin, Green Bay; University of Wisconsin, Plastteville; University of Wisconsin, River Falls; University of Wisconsin, Whitewater; University of Wyoming; Simon Fraser University; Universite de Sherbrooke.

University Conference Services

California University offers a variety of summer camps and conference programs. In addition to youth camps, University Conference Services can assist in the planning of family reunions, corporate retreats, academic camps, sports camps and leadership enrichment. For more information or to inquire about University Conference Services, call 724-938-4444 or check our website at univconfsrv@cup.edu.

Veterans Affairs

The Office of Veterans Affairs, located in Johnson Hall, is open from 8 a.m. to 4 p.m., Monday through Friday. Evening hours may be arranged by appointment. The phone number is 724-938-4076. All matters pertaining to veterans and those entitled to veterans' benefits are handled in this office. The staff also processes all VA forms and enrollment certifications for eligible students.

All veterans, reservists, National Guard personnel, and eligible dependents applying for entrance to the university should contact the Office of Veterans Affairs at an early date so that necessary VA paperwork can be processed to assure timely payments of educational benefits. Undergraduate veterans are also advised to take advantage of the university's program to award college credits for military service schools.

The on-campus Veterans Club sponsors the Colonel Arthur L. Bakewell Veterans' Scholarship. Three $1,000 scholarships are currently awarded to eligible undergraduate veterans.

Web Site Development

The Student Webteam consists of student employees and volunteers who are responsible for developing and maintaining more than 130 Student Life web sites. They are available to help clubs and organizations, dining services, athletics, student activities and all areas of Student Development and Services to design and post their sites. Explore the vast offerings for Cal U students, beginning with the Student Life homepage located at http://duncan.cup.edu/~studentlife.

Women's Center

The Women's Center in the Student Center is a service provided primarily for female students of the university. However, males as well as community residents are welcome to participate in the activities of the Center.

The goals of the Women's Center are to supplement the academic education of the students and to prepare them to deal with barriers in life.

Activities are designed to help female students grow and develop an understanding of how women can impact the future. Through special programs and individual counseling, the Center highlights options available to women. In addition, the Center provides programs to help students find creative ways to solve problems and manage the ever-changing roles of women.

The Center recognizes the needs of women and serves as a conduit to see that the needs are addressed. The services provided are advocacy, counseling, information, interest assessment, referrals, support groups, workshops, special events and activities.

Opportunities are available for students to serve on the Advisory Board of Directors, serve on special events committees, share ideas for programs and participate in the Mentoring Program. The Women's Center is open Monday through Friday from 8 a.m. to 4 p.m. The phone number is 724-938-4439.

WVCS (California Radio Station)

Owned and operated by the Student Association, Inc. (SAI), California University's radio station, WVCS, is a 24-hour, 3300 watt FM station with a coverage radius of 40 miles. WVCS typical audience member is in the 15-35 age bracket, residing in the five county region (Washington, Fayette, Greene, Westmoreland and Allegheny), with listeners in parts of Maryland and West Virginia.

WVCS, founded in the early 70s with a mission of broadcasting to the regional audience, features news, sports, public service information and the best in popular musical entertainment from a variety of genres. WVCS accomplishes this mission with student broadcasters, while providing an important educational opportunity, through "hands-on" experience. Since WVCS is owned by SAI, students involved with the station don't have to be Communication Studies majors. Students need only to have the desire to become involved. Students who have this interest go through a designed training program that familiarizes the student with the equipment, FCC rules and regulations, broadcasting skills and production. Students who successfully complete the training program are able to become on-air DJ's or news reporters. WVCS has an upscale, Top 40 format, with a variety of specialty shows covering all forms of music from country to alternative. WVCS is a comfortable place to work and learn and many life long friendships have started at Power 92. All this experience makes the student extremely marketable in the field. For those involved just as an activity, the various skills translate into other majors.

Students can take a personal tour and talk in further detail about the exciting opportunities available at WVCS. Questions may be directed to 724-938-4303 or by e-mail: wheeler@cup.edu.

Office of Social Equity

The Office of Social Equity supports the university 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 diversity and pluralism. The Office of Social Equity reaffirms the university commitment to equity 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 and affirmative action.

Services

The Office of Social Equity helps students to resolve concerns and complaints regarding harassment, discrimination, and disability. As Ombudsperson, the director serves as an advocate for students from diverse backgrounds, offering consultation and support in equity and diversity issues. The Social Equity Office strives to help individuals explore their attitudes and behavior regarding equity issues and is available to any student who needs information, assistance, or has a concern about justice, fairness and equal opportunity.

Support services are provided in the following areas:

- Equal Opportunity
- Diversity
- Compliance
- Equity

This area offers access to a resource library consisting of videos, books, pamphlets and other information related to equity and diversity issues.

Social Equity Complaints

The responsibility for investigating complaints is vested in the Office of Social Equity under the direction of the Special Assistant to the President. Complete information regarding policies, procedures, and the informal and formal complaint process can be found in the Policy Statement and Compliance Procedures on Equal Employment Opportunity and Social Equity, available from this office.

Ombudsperson

As Ombudsperson, the director offers consultation, assistance and support in equity and diversity issues. All members of the University community have the right to seek advice and information from the Special Assistant to the President, who will maintain such consultation in confidence to the greatest extent possible.

Sexual Harassment Education Sessions

As part of New Student Orientation, the Office of Social Equity provides an education session on sexual harassment awareness. The required student success session is designed to review the California University Policy on Sexual Harassment, discuss issues regarding sexual harassment, inform students who to contact if they should experience sexual harassment, and notify students that they can seek help and advice without fear of reprisal.

Location and Hours

The Office of Social Equity is located in South Hall, Room 112. Office hours are from 9AM to 5PM, Monday through Friday, and

evenings and weekends by appointment. Anyone desiring services or information is encouraged to stop at the office or call 724-938-4014. The web address is www.cup.edu/president/equity.

Policies

I. Equal Opportunity

Please see our statement on page 2 of the catalog. A copy of the policy is available from the Office of Social Equity.

II. Sexual Harassment

Sexual harassment is reprehensible conduct that will not be tolerated at California University. The university is committed to providing a harassment-free atmosphere for all members of the university community. The university is committed to the human rights and dignity of all individuals, therefore, it is the policy of the university to prevent and eliminate sexual harassment within the university community. In addition, it is the policy of the university that any practice or behavior that constitutes sexual harassment is unacceptable and will not be tolerated. The Office of Social Equity has an established process to investigate and address any complaints of sexual harassment. A complete copy of the complaint procedure may be obtained from the Office of Social Equity.

The Office of Social Equity has an established process to investigate and address any complaints of sexual harassment. Detailed information is available in the Policy Statement and Compliance Procedures on Equal Employment Opportunity and Social Equity, available from this office.

III. ADA/504

In accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 (ADA), California University of PA provides reasonable accommodations for otherwise qualified students to ensure equal access to university programs and activities.

Office for Students with Disabilities (OSD)

Services for students with disabilities are provided through the Office for Students with Disabilities (OSD). Students must request accommodations through the Office for Students with Disabilities and should make the request for accommodations as soon as possible. The decision regarding appropriateness of the requested accommodations rests with the service provider office and must be supported by the student's documentation on file with OSD. The office is currently located in the Keystone Education Building – Room 110A. The phone number is (724) 938-5781.

ADA/504 Appeal Process

If a student considers that a requested accommodation has not been granted or is inappropriate, s/he should immediately discuss the matter with the OSD Director, (724) 938-5781. If the student is not satisfied with the result of this conference, s/he should contact the ADA Compliance Office, (724) 938-4076. This office helps to ensure compliance with Section 504 of Rehabilitation Act of 1973 and the Americans with Disabilities Act and provides an avenue of resolution for student problems/concerns regarding accommodations. If the student does not reach accord at this level, they may appeal to the Office of Social Equity. The Office of Social Equity has an established process to investigate and address any complaints of discrimination on the basis of a disability.

IV. Affirmative Action Statement

Integrity, Civility and Responsibility are the official core values of California University of Pennsylvania, an affirmative action/equal opportunity employer. Women, minorities and the physically challenged are encouraged to apply.

Governance and Administration

State System of Higher Education
Chancellor

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Karen Fetsko-Hjerpe, associate athletic director/senior women's administrator

Paul Flores, associate athletic director, director of Vulcan sports network
Elizabeth A. Gruber, counselor, drug and alcohol specialist
Joy Helsel, director of student publications, Student Association, Inc.
Alan K. James, associate dean for student development
Charlene McVay, executive secretary to the vice president
Wayne Miller, director of athletic development/off-campus housing coordinator
Barry Niccolai, dean for student services/executive director, Student Association, Inc.
Richard Olshefski, director of business operations, Student Association, Inc.
Nancy Pinardi, assistant dean for student services
Thomas Pucci, athletic director
Celeste Roskevitch, nursing supervisor
Mary Ann Salotti, counseling psychologist
Lawrence Sebek, assistant dean for student services
David Smith, director of sports information
Norma Snyder, nurse educator
Timothy Susick, dean for student development/university judicial officer
Nancy J. Tait, dean/international student adviser
Shawn Urbine, assistant dean of residential facilities/conferences
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Charles Williamson, assistant dean for student growth and development

Residence Hall Directors
Lamont Coleman/activities
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Christopher Meehan, executive director of alumni relations
Jeffrey Petrucci, director of annual giving
Deborah Wojcik, director of Government Agency Coordination Office

Faculty

(Date of permanent appointment to California University of Pennsylvania.)

Holiday Eve Adair. (1998) Associate Professor, Psychology. B.A., M.A., Ph.D., University of Akron

David G Argent. (2000) Assistant Professor, Biological and Envrionmental Sciences. B.S., Indiana University of PA; M.S., Virginia Polytechnic Institute and State University; Ph.D., The Pennsylvania State University

Dencil K. Backus. (1983) Assistant Professor & Chair, Communication Studies. A.B., Glenville State College; M.A., West Virginia University

Mitchell M. Bailey. (1959) Associate Professor, Biological And Environmental Sciences. B.S., California University of Pennsylvania; M.Ed., Rutgers University

Rollin M. Barber. (1976) Professor & Chair, Social Science. B.S., M.S., Ph.D., Ohio State University

Sylvia J. Barksdale. (1999) Associate Professor, Social Work and Gerontology. B.A., M.S.W., Ph.D., University of Pittsburgh

Bruce D. Barnhart. (1986) Professor, Health Science and Sport Studies. B.S., M.Ed., California University of Pennsylvania; A.T.C., Ed.D., West Virginia University

Robert A. Bauman. (1968) Professor, Special Education. B.S., Geneseo College; M.S., Ed.D., Indiana University

William J. Beardsley. (1969) Assistant Professor, English. B.A., M.A., West Virginia University

Peter J. Belch. (1968) Professor & Coordinator of Graduate Program, Special Education. B.S., California University of Pennsylvania; M.A., Ed.D., West Virginia University

William Bennett. (1967) Assistant Professor, English. B.A., M.A., University of Pittsburgh

William B. Biddington. (1977) Professor & Chair, Health Science and Sport Studies. B.S., M.S., A.T.C.; Ed. D., West Virginia University

Foster E. Billheimer. (1969) Professor, Biological and Environmental Sciences. B.S., Pennsylvania State University; M.A., University of Texas; Ph.D., Rutgers University

Jerry M. Blackmon. (1985) Associate Professor & Chair, Mathematics and Computer Science. B.S., M.S., Oklahoma State University; Registered Professional Engineer (Electrical) P.E.

William F. Blank. (1965) Associate Professor, Mathematics and Computer Science. B.S., Indiana University of Pennsylvania; M.A.T., Duke University

William F. Blosel. (1976) Associate Professor, Business and Economics. B.S., Pennsylvania State University; M.B.A., University of Pittsburgh; C.P.A.

David F. Boehm. (1989) Professor & Chair, Biological and Environmental Sciences. B.S., West Liberty State College; M.S., Ph.D., West Virginia University

Jane Bonari. (2000) Instructor, Elementary and Early Childhood Education. B.S., M.Ed., California University of Pennsylvania

Barbara H. Bonfanti. (1994) Associate Professor & Chair, Communication Disorders. B.S., Indiana University of Pennsylvania; M.S., St. Francis College of Illinois; M.Ed., California University of Pennsylvania; Ph.D., University of Pittsburgh

Kaddour Boukaabar. (1997) Associate Professor, Mathematics and Computer Science. B.S., University of Wahran, Algeria; M.S., Florida Institute of Technology; Ph.D., Bowling Green State University

Mark E. Bronakowski. (1984) Professor, Applied Engineering and Technology. Coordinator of Distance Education. B.S., M.Ed., California University of Pennsylvania; Ed.D., West Virginia University

Burrell A. Brown. (1989) Professor & Chair, Business and Economics. B.S., California University of Pennsylvania; MBA., University of Pittsburgh; J.D., University of Pittsburgh

Edward Brown. (1967) Associate Professor & Chair, Social Work and Gerontology. B.S., University of Pittsburgh; M.L.S., Carnegie Mellon University; M.S.W., University of Pittsburgh

Robert A. Brown. (1969) Professor, Counselor Education and Services. B.A., University of New Hampshire; M.Ed., Ph.D., University of Pittsburgh

Walter A. Brumm. (1995) Professor, Social Science. B.A., Wittenberg University; B.D., Methodist Theological School of Ohio; M.A., Kent State University; Ph.D., Ohio State University

Gloria Brusoski. (1997) Associate Professor & Chair, Counselor Education and Services. B.A., Duquesne University; M.Ed., Gannon University; Ph.D., University of Pittsburgh

Thomas P. Buckelew. (1969) Professor, Biological and Environmental Sciences. B.S., Muhlenberg College; M.S., Ph.D., University of South Carolina

John J. Burns. (1969) Professor, Philosophy. B.A., University of Notre Dame; M.A., University of Toronto; J.D., Duquesne University

Malcolm P. Callery. (1978) Professor, Theatre and Dance. B.S., California University of Pennsylvania; M.F.A., Southern Illinois University

David N. Campbell. (1988) Professor & Chair, Educational Studies. B. Ed., Southeastern Louisiana University; M.S., University of Illinois; Ph.D., University of Illinois

Dorothy M. Campbell. (1973) Professor & Assistant Chair, Elementary and Early Childhood Education. B.S., Indiana University of Pennsylvania; M.S., Bucknell University; Ph.D., University of Pittsburgh

Nancy Carlino. (2000) Assistant Professor, Communication Disorders. B.S., Duquesne University; M.A., University of Pittsburgh

James O. Carter. (1990) Assistant Professor, Communication Studies. B.A., Marshall University; M.A., Ohio University

Raymond A. Catalano. (1967) Professor, Biological and Environmental Sciences. B.S., Edinboro University of Pennsylvania; M.Ed., Indiana University of Pennsylvania; Ph.D., Brigham Young University

Richard Cavasina. (1992) Professor, Psychology. B.S., M.S., Duquesne University; Ph.D., West Virginia University

Y. C. (Karen) Chan. (2000) Assistant Professor, Library Services. B.S.Sc., Chinese University of Hong Kong; M.L.S., University of California at Los Angeles; M.S., Eastern Washington University

M. Arshad Chawdhry. (1976) Professor, Business and Economics. B.S., University of Agriculture (Pakistan); M.S., University of Agriculture (Pakistan); M.A., University of Maryland; M.S., Ph.D., University of Illinois

Margaret Christopher. (1995) Associate Professor, Social Work and Gerontology. B.A., Mount St. Mary College; M.S.W., M.Ph., Ph.D., University of Pittsburgh

Edward J. Chute. (1990) Professor, English. Director of Honors Program. B.A., St. Vincent College; M.A., Ph.D., University of Minnesota

Pamela B. Cignetti. (1990) Professor, Elementary and Early Childhood Education. B.S., M.Ed., California University of Pennsylvania; Ed.D., University of Pittsburgh

Jesse A. Cignetti. (1968) Professor. Chemistry and Physics. B.S., Slippery Rock of Pennsylvania; M.Ed., Duquesne University; Ph.D., Ohio State University

Clyde W. Clendaniel. (1968) Associate Professor & Chair, Chemistry and Physics. B.S., California University of Pennsylvania; M.A.T., Indiana University

Debra M. Clingerman. (1984) Associate Professor, Business and Economics. B.A., California University of Pennsylvania; M.B.A., West Virginia University

Ismail Cole. (1988) Professor, Business and Economics. B.A., Harvard College; M.A., Tufts University; Ph.D., University of Pittsburgh

Donald J. Conte. (1968) Associate Professor, Earth Sciences. B.S., California University of Pennsylvania; M.A., Indiana University of Pennsylvania; M.S., California University of Pennsylvania

Elaine S. Costello. (1966) Instructor, Chemistry and Physics. B.S., California University of Pennsylvania

Joni L. Cramer-Roh. (1991) Associate Professor, Health Science and Sport Studies. B.S., West Virginia University; M.A., University of North Carolina at Chapel Hill; Ed.D., West Virginia University; A.T.C.

Christine Crawford. (1992) Assistant Professor, Academic Development Services. B.A., California University of Pennsylvania; M.A., West Virginia University

Rick Allen Cumings. (1992) Associate Professor, Communication Studies. B.A., University of Illinois; B.A., Moody Bible Institute; M.A., Marquette University; Ph.D., Pennsylvania State University

Robert David. (1998) Associate Professor, Elementary and Early Childhood Education. B.S., M.Ed., California University of Pennsylvania; Ph.D., University of Pittsburgh

Laura DeFazio. (2000) Assistant Professor, Art and Design. B.F.A., Indiana University of Pennsylvania; M.F.A., Kent State University

Anette M. DeNardo. (1985) Professor, Mathematics and Computer Science. B.S., M.Ed., California University of Pennsylvania; Ed.D., West Virginia University

Elwin Dickerson. (1989) Professor, Elementary and Early Childhood Education. B.S., M.S., California University of Pennsylvania; Ed.D., West Virginia University

Robert F. Dickie. (1966) Professor, Special Education. B.S., Bridgewater State College; M.A., Ed.D., Michigan State University

William E. Dieterle. (2000) Assistant Professor, Chemistry & Physics. B.S., Arizona State University; Ph.D., University of California at Berkeley

Robert W. Dillon, Sr. (1970) Professor, English. A.B., Fairfield University; M.A., Ph.D., Ohio University

Gail S. Ditkoff. (1986) Professor, Psychology. B.A., State University of New York at Binghamton; M.S., Ph.D., State University of New York at Albany

Theodore L. Dominick. (1969) Professor, Chemistry and Physics. B.S., California University of Pennsylvania; Ph.D., West Virginia University

Ronald G. Dreucci. (1973) Professor, Applied Engineering and Technology. B.S., M.Ed., California University of Pennsylvania; Ed.D., West Virginia University

Jeffrey B. Dunbar. (1999) Associate Professor, Elementary and Early Childhood Education. B.S., Ph.D., University of Maryland

Raymond E. Dunlevy. (1978) Associate Professor, Art and Design. B.S., M.Ed., Indiana University of Pennsylvania

Dilawar Mumby Edwards. (1972) Professor, Educational Studies. I.Sc., St. Aloysius' College, Jabalpur, India; B.E. (Hons.), Govt. Engineering College, Jabalpur, India; M.E.(I), Indian Institute of Science, Bangalore, India; M.Sc. in Ed., Indiana University; Ph.D., Indiana University

Audrey-Beth Fitch. (1995) Assistant Professor, History and Political Science. B.A., University of Calgary; M.A., University of Toronto; Ph.D., University of Glasgow

Paul A. Flores. (1985) Associate Professor & Chair, Athletics; Associate Director Of Athletics. B.S., M.S., East Stroudsburg University of Pennsylvania

Sylvia L. Foil. (1990) Professor, Communication Studies. Director of Television Studio. B.S.S., M.A., Ph.D., Northwestern University

Nicholas S. Ford. (1992) Professor, Mathematics and Computer Science. B.S., Michigan State University; M.S., West Virginia University; Ph.D., Michigan State University

Ronald L. Forsythe. (1968) Assistant Professor, English. B.S., California University of Pennsylvania; M.A., North Dakota State University

George J. Frangos. (1966) Professor, Educational Studies. B.S., California University of Pennsylvania; M.A., West Virginia University; Ph.D., The Ohio State University

Marc S. Frederico. (1999) Assistant Professor, Health Science and Sport Studies. B.S., University of Pittsburgh; M.P.T., Slippery Rock University

Gabriel C. Fusco. (1967) Professor, Chemistry and Physics. B.S., M.S., Duquesne University; Ph.D., University of Colorado

John S. Gibson, Jr. (1967) Associate Professor, Mathematics and Computer Science. B.A., Washington and Jefferson College; M.A., Michigan State University

Lizbeth A. Gillette. (1986) Professor, Educational Studies. B.S., Carnegie Mellon University; M.Ed., University of Pittsburgh; M.Pub.Mgmt., Carnegie Mellon University; Ed.D., University of Pittsburgh

Charles A. Gismondi. (1969) Associate Professor, Communication Disorders. B.S., California University of Pennsylvania; M.S., West Virginia University; CCC Speech Pathology

Max A. Gonano. (1982) Professor & Chair, Music. Director of Bands.B.F.A., M.F.A., Carnegie Mellon University

Judith A. Good. (1990) Associate Professor, English. B.S., M.A., Pennsylvania State University, M.F.A., University of Pittsburgh

Gregg Gould. (1991) Professor, Chemistry and Physics. B.A., Colgate University; Ph.D., University of North Carolina at Chapel Hill

Albertha L. Graham. (1971) Professor, Provost's Office. B.S., Morris College; M. Ed., Loyola University of Chicago Erikson Institute; Ph.D., University of Pittsburgh

Helen M. Grochmal. (1991) Associate Professor, Library Services. B.A., Wilkes College; M.A., Pennsylvania State University; M.L.S., Rutgers University

Elizabeth A. Gruber. (1990) Assistant Professor, Student Services. B.S., Bowling Green State University; M.A., Youngstown State University

William A. Gustin. (1988) Associate Professor, Earth Sciences. B.S., M.A., Indiana State University

Judith I. Hall. (1984) Associate Professor, Mathematics and Computer Science. B.S., University of Pennsylvania; M.S., University of Pittsburgh

John M. Hanchin. (1967) Professor, English. B.A., Duquesne University; M.Ed., California University of Pennsylvania; Ph.D., Indiana University of Pennsylvania

Mary A. Hart. (1984) Assistant Professor, Social Work and Gerontology. B.S., Nebraska Wesleyan University; M.A., Duquesne University; Graduate Aging Specialist Certificate, University of Nebraska, Omaha

Patricia L. Hartman. (1989) Professor, English. Director of Women's Studies Program. B.A., Abilene Christian University; M.A.T., Johns Hopkins University; M.A., Ph.D., Ohio University

Wilburn Hayden, Jr. (1998) Associate Professor & Coordinator of MSW Program, Social Work and Gerontology. B.A., St. Andrews College; M.S.W., University of North Carolina; Ph.D., University of Toronto

Joseph C. Heim. (1990) Associate Professor, History and Political Science. B.A., University of Pittsburgh; M.A., University of Pittsburgh; M. Phil., Cambridge University; Ph.D., University of Pittsburgh; Certificate, International Finance, Wharton Graduate School of Business, University of Pennsylvania

Richard James Helldobler. (1988) Professor, Interim Dean, College of Liberal Arts. B.B.A., University of Toledo; M.A., Ph.D., Bowling Green State University

William Hendricks. (1990) Professor, English. B.A., Case Western Reserve University; M.A., Ph.D., University of Pittsburgh

Keith D. Hepner. (1995) Associate Professor, Educational Studies. B.S., M.Ed., California University of Pennsylvania, Ed.D., University of Pittsburgh.

Nancy H. Hepting. (1997) Associate Professor, Communication Disorders. B.S., Clarion University of Pennsylvania; M.S., California University of Pennsylvania; Ph.D., University of Pittsburgh

Barbara Hess. (1990) Associate Professor, Mathematics and Computer Science. B.S., Clarion University of Pennsylvania; M.Ed., Indiana University of Pennsylvania

Glenn R. Hider. (1998) Assistant Professor, Applied Engineering and Technology. A.S., State University of New York; B.S., State University College Oswego; M.S., Eastern Illinois University; Ed.D., West Virginia University

Karla A. Hoffman. (1990) Associate Professor, Mathematics and Computer Science. B.S., Towson State University; M.Ed., CAGS, University of Massachusetts

Larry D. Horath. (1990) Professor, Applied Engineering and Technology. B.S., M.S., Eastern Illinois University; Ph.D., Texas A&M University

Karen L. Hornung. (1981) Professor, Social Work and Gerontology. B.A., Geneva College; M.A., University of New Mexico; Ph.D., University of Nebraska; Graduate Aging Specialist, University of Michigan; Faculty Fellow, Geriatric Education Center of Pennsylvania

Ronald C. Hoy. (1969) Professor & Chair, Philosophy. B.A., University of California at Berkeley; M.A., University of Pittsburgh; Ph.D., University of Pittsburgh

Henry A. Huffman. (1995) Associate Professor, Educational Studies. Director of Character Education Institute. B.S., California University of Pennsylvania, M.Ed., University of Pittsburgh, Ed.D., University of Pittsburgh.

Barry B. Hunter. (1968) Professor, Biological and Environmental Sciences. B.S., California University of Pennsylvania; M.S., University of Minnesota; M.Ed., California University of Pennsylvania; Ph.D., West Virginia University

Susan A. Jasko. (1998) Assistant Professor, Communication Studies. Director of Communication Lab/Research Center. B.A., William Patterson College; M.A., Ph.D., Ohio State University

Kirk R. John. (1990) Professor, Psychology. Director of School Psychology Clinic. B.A., California University of Pennsylvania; M.Ed., Ed.D., Indiana University of Pennsylvania; NCSP; Pennsylvania Certified School Psychologist; Pennsylvania Licensed Psychologist

David L. Johnson. (1968) Professor, Chemistry and Physics. B.S., University of Kansas; Ph.D., Louisiana State University

David T. Jones. (1985) Associate Professor, Business and Economics. B.S., Waynesburg College; M.S., West Virginia University; C.P.A.

Elizabeth Jones. (1992) Associate Professor, Social Science. B.A., M.A., Ph.D. American University

Geraldine M. Jones. (1974) Assistant Professor, Interim Dean, College of Education and Human Services. B.S., M.Ed., California University of Pennsylvania

Macdonald N. Kalé. (1985) Associate Professor, Communication Studies. B.A., Governors State University; M.A., M.A., University of Illinois, Chicago; Ph.D., Indiana University, Bloomington

John R. Kallis. (1985) Professor, Applied Engineering and Technology. B.S., M.Ed., California University of Pennsylvania; Ed.D., University of Pittsburgh

Robert H. Kane, Jr. (1988) Professor, Health Science and Sport Studies. B.S., University of Connecticut; M.S., University of Southern Maine; P.T.; A.T.C.; Ed.D., West Virginia University

Carol L. Kaplan. (1986) Professor, Foreign Languages and Cultures. B.A., M.A., Northwestern University; Ph.D., University of Pittsburgh

Clyde Y. Kiang. (1972) Associate Professor & Chief Cataloger, Library Services. B.A., National Taiwan University; M.A., Western Michigan University; M.A., Michigan State University

William G. Kimmel. (1976) Professor, Biological and Environmental Sciences. B.A., Wilkes College; M.S., Ph.D., Pennsylvania State University

Richard L. Kline. (1972) Assistant Professor & Chair, Student Services;. Director of Institutional Research. B.S., Pennsylvania State University; M.S., California University of Pennsylvania

David V. Kolick. (1988) Associate Professor, Applied Engineering and Technology. B.S., A.S., M.Ed., California University of Pennsylvania

Stanley A. Komacek. (1987) Professor & Chair, Applied Engineering and Technology. B.S., California University of Pennsylvania; M.Ed., Miami University; Ed.D., West Virginia University

Kade Kos. (1961) Professor & Cataloger, Library Services. B.S., Clarion University of Pennsylvania; M.L.S., Syracuse University; Ed.D., University of Pittsburgh

Kevin A. Koury. (1999) Associate Professor, Special Education. B.S., West Virginia Westleyan College; M.A., Ed.D., West Virginia University

Alan H. Krueck. (1966) Professor, Foreign Languages and Cultures. B.A., Syracuse University; M.A., Michigan State University; Ph.D., University of Zurich

René L. Kruse. (1989) Professor, Applied Engineering and Technology. B.S., Peru State College; M.S., Ph.D., Texas A&M University

Michelle L. LaCarte. (1999) Assistant Professor, Health Science and Sport Studies. B.S., University of Pittsburgh; Master of Occupational Therapy, Duquesne University

John P. Lambertson. (1998) Assistant Professor, Art and Design. B.A., Mary Washington College; Ph.D., University of Illinois

Paul L. Lancaster. (1969) Associate Professor & Chair, Special Education. B.S., M.S., California University of Pennsylvania

Regis Lazor. (1972) Associate Professor, Special Education. B.S., California University of Pennsylvania; M.Ed., University of Delaware

Anthony Lazzaro. (1966) Professor, Chemistry and Physics. B.S., California University of Pennsylvania; M.Ed., University of North Carolina; Ph.D., Pennsylvania State University

Karen L. LeMasters. (1986) Professor, Business and Economics. B.S., M.B.A., West Virginia University; Ph.D., University of Pittsburgh

Robert T. Little. (1986) Professor, Mathematics and Computer Science. B.S., M.Ed., California University of Pennsylvania; Ed.D., West Virginia University

John W. Loney. (1984) Associate Professor, Applied Engineering and Technology. B.S., Youngstown State University; M.S., Michigan Technological University

Sammy P. Lonich. (1989) Associate Professor & Chair, Psychology. B.S., M.S., California University of Pennsylvania; Pennsylvania Certified School Psychologist, Licensed Psychologist

John J. Lynch. (1998) Assistant Professor, Chemistry and Physics. B.S., Tufts University; M.S., Ph.D., University of Colorado

Andrew J. Machusko. (1970) Professor, Mathematics and Computer Science. B.S., California University of Pennsylvania; M.A., Ph.D., University of Georgia

Sean C. Madden. (1989) Professor & Chair, History and Political Science. B.A., Xavier University; M.A., University of Notre Dame; D.A., Carnegie Mellon University

Virginia Majewski. (1991) Associate Professor, Social Work and Gerontology. Ph.D., University of Pittsburgh

Margaret A. Marcinek. (1983) Professor & Chair, Nursing. B.S., Pennsylvania State University; M.S.N., University of Maryland; Ed.D., West Virginia University; R.N.

J. Gregory Martin. (1969) Professor, Elementary and Early Childhood Education. B.A., Miami University; M.A.T., Ph.D., Cornell University

Nicholas Martin. (2000) Instructor, Psychology. B.S., M.S.W., University of Pittsburgh; M.S. California University of Pennsylvania

Elizabeth Mason. (1987) Professor, Psychology. Supervisor of School Psychology Clinic. B.S., M.Ed., Indiana University of Pennsylvania; Ph.D., Ball State University; NCSP; Pennsylvania Certified School Psychologist; Licensed Psychologist

Beth McElhany. (2000) Instructor, Health Science and Sport Studies. B.S., California University of Pennsylvania; A.A.S., Houston Community College

J. Drew McGukin. (1990) Associate Professor, Communication Studies. B.A., Freed Hardeman College; M.A., S.C.T., Murray State University; Ph.D., University of Nebraska-Lincoln

Phyllis S. McIlwain. (1969) Professor, Elementary and Early Childhood Education. B.S., Slippery Rock University of Pennsylvania; M.Ed., Indiana University of Pennsylvania; Ph.D., University of Pittsburgh

James T. McVey. (1966) Assistant Professor, English. B.A., Youngstown University; M.A., University of Virginia

James R. Means, Jr. (1986) Associate Professor, Applied Engineering and Technology. B.S., West Virginia University; M.S., University of Pittsburgh

Beverly J. Melenyzer. (1991) Professor, Elementary and Early Childhood Education. B.S., M.Ed., California University of Pennsylvania; Ed.D., Indiana University of Pennsylvania

Edward Mendola. (1989) Associate Professor, Business and Economics. M.S., Waynesburg College; M.S., Robert Morris College; C.P.A.

Ellen M. Michael. (1992) Associate Professor, Music. B.A., St. Catherine; M.M., University of Wisconsin; Ph.D., University of Pittsburgh

Ronald L. Michael. (1969) Professor, Justice Studies. B.S., Jamestown College; M.A., University of North Dakota; Ed.D., Ball State University

John E. Michaels (1999) Associate Professor, Business and Economics. B.S., American University; M.B.A., American University; D.B.A., George Washington University

Richard Miecznikowski. (1990) Professor & Chair, Art and Design. B.S., Indiana University of Pennsylvania; M.F.A., State University of New York, College of Ceramics at Alfred University

Patricia Milford. (1989) Associate Professor, Communication Studies. B.A., George Mason University; M.A., Eastern Michigan University; Ph.D., Pennsylvania State University

C. Allan Miller. (1976) Professor, Biological and Environmental Sciences. B.S., Buena Vista College; M.A., Mankato State College; Ph.D., North Dakota State University

Patrick L. Miller. (1967) Assistant Professor, Communication Studies. B.S., Dickinson State University; M.A., Colorado State University

Susan J. Mongell. (1990) Associate Professor, Business and Economics. B.A., Seton Hill College; M.A., University of Pittsburgh; Ph.D., University of Pittsburgh

Thomas C. Moon. (1969) Professor, Biological and Environmental Sciences. B.A., Kalamazoo College; M.A.T., Oberlin College; Ph.D., Michigan State University

Lawrence L. Moses. (1969) Professor & Chair, Earth Sciences. B.S., Edinboro University of Pennsylvania; M.Ed., Pennsylvania State University; Ph.D., University of Pittsburgh

Thomas R. Mueller. (1999) Assist Professor, Earth Sciences. B.S., Towson State University; M.A., University of Connecticut; Ph.D., University of Illinois

John P. Nass. (1990) Associate Professor, Justice Studies. B.A., Michigan State University; M.A., Western Michigan University; Ph.D., The Ohio State University

J. Alan Natali. (1986) Assistant Professor, English. B.S., M.A., California University of Pennsylvania

Charles P. Nemeth. (2000) Professor & Chair, Justice Studies, Director of Criminal Justice Program. B.A., University of Delaware; J.D., University of Baltimore Law; M.S., Niagara University; LL.M., George Washington University; M.A.,Ph.D. Duquesne University,

Diane H. Nettles. (1989) Professor, Elementary and Early Childhood Education. B.A., University of South Florida; M.A., University of South Florida; Ph.D., University of South Florida

Marsha L. Nolf. (1987) Associate Professor & Bibliographic Lecturer, Library Services. B.A., Waynesburg College; M.L.S., University of Pittsburgh

George D. Novak. (1959) Associate Professor, Mathematics and Computer Science. B.S., California University of Pennsylvania; M.Litt., University of Pittsburgh

Mark L. Nowak. (1985) Professor, Applied Engineering and Technology. B.S., University of Wisconsin, Stout; M.S., Ed.D., Texas A&M University; C.P.R.

William W. O'Donnell. (1995) Associate Professor, Theatre and Dance. B.F.A., Pennsylvania State University; M.F.A., Wayne State University

Mahmood A. K. Omarzai. (1979) Professor, Business and Economics. B.A., Y.D. College, India; M.A., Karachi University, Pakistan; M.A., Indiana University; Ph.D., Indiana University

Michele A. Pagen. (1998) Assistant Professor, Theater and Dance. B.A., California University of Pennsylvania; M.A., Bowling Green State University; Ph.D., Bowling Green State University

David W. Pajerski. (1969) Professor, Chemistry and Physics. B.S., University of Pittsburgh; M.S., University of New Hampshire; Ph.D., University of Pittsburgh

Suzanne M. Palko. (1984) Associate Professor, Nursing. B.S.N., Edinboro University of Pennsylvania; M.S.N., University of Pennsylvania; R.N.

Raldo O. Parascenzo. (1965) Associate Professor & Chair, Foreign Languages and Cultures. B.A., M.Ed., M. Lit., University of Pittsburgh; D.Ph. & Lit., International University of Mexico

Young J. Park. (1977) Professor, Business and Economics. B.P.A., Korea University; M.A., Ph.D., Temple University

Pratul C. Pathak. (1990) Professor & Chair, English. B.A., University of Delhi, India; M.A., University of Delhi, India; L.L.B., University of Delhi, India; M.A., Ph.D., University of Wisconsin-Milwaukee

Brian K. Paulson. (1989) Professor, Biological and Environmental Science. B.A., Gustavus Adolphus College; M.S., Michigan Technological University; Ph.D., University of Oklahoma

Jeffrey L. Petrucci. (1981) Associate Professor, University Advancement. B.S., M.A., California University of Pennsylvania

Albert R. Pokol. (1965) Associate Professor, Chair, & Reference Librarian, Library Services. B.S., California University of Pennsylvania; M.Ed., Duquesne University; M.L.S., University of Pittsburgh

Alton N. Powe. (1973) Professor, Academic Development Services. B.A., Slippery Rock University of Pennsylvania; M.Ed., California University of Pennsylvania; Ph.D., University of Pittsburgh

Loring Prest. (1998) Instructor & Electronic Resources Librarian, Library Services. A.A., Brevard Community College; B.R.E. Baptist Bible College; Th. M. Grace Theological Seminary; M.S. (L.I.S.), University of Illinois at Urbana-Champaign

Thomas G. Pucci. (1991) Professor, Athletics. Director of Athletics. B.S., California State University at Sacramento; M.Ed., Pacific University; Ph.D., University of New Mexico.

Anthony S. Pyzdrowski. (1990) Professor, Mathematics and Computer Science. A.S., Pennsylvania State University; B.S., West Virginia University; M.S., West Virginia University; Ph.D., West Virginia University; E.I.T.

Joanne Raleigh. (1975) Associate Professor, Academic Development Services. Act 101 Director. B.S., M.Ed., California University of Pennsylvania

Margarita Ribar. (1986) Associate Professor, Foreign Languages and Cultures. B.S., Universidad Pedagógica, Bogotá, Colombia; M.S., Duquesne University

Clyde A. Roberts. (1992) Professor, Business and Economics. B.S., Marshall University; M.B.A., Marshall University; D.D.A., University of Kentucky

Joanne Rodriguez-Naeser. (1992) Assistant Professor, Academic Development Services. Director of Student Support Services. B.A., California University of Pennsylvania; M.Ed., California University of Pennsylvania

Lawrence D. Romboski. (1969) Professor, Mathematics and Computer Science. B.A., Washington and Jefferson College; M.A., M.S., Ph.D., Rutgers University

Melvin J. Sally. (1973) Professor & Chair, Academic Development Services. B.S., West Virginia University; M.Ed., California University of Pennsylvania; Ph.D., University of Pittsburgh

Mary Ann Salotti. (1994) Assistant Professor & Counseling Psychologist, Student Services. B.A., University of Pittsburgh; M. Ed., Duquesne University; Ph.D., University of Pittsburgh

Joseph A. Sanfilippo. (1965) Professor, Applied Engineering and Technology. B.S., California University of Pennsylvania; M.S., Ball State University; Ed.D., West Virginia University

Joseph G. Schickel. (1988) Assistant Professor, Applied Engineering and Technology. B.S., California University of Pennsylvania; M. Ed., Clemson University

William F. Schweiker. (1972) Professor, Social Science. B.A., West Virginia University; M.A., Ph.D., University of Minnesota

Lisa M. Schwerdt. (1990) Professor, English. B.S., Florida International University; B.A., Florida International University; M.A., Ph.D., Purdue University

Richard D. Scott. (1971) Professor, Psychology. B.A., Pennsylvania State University; M.S., University of Massachusetts; Ph.D., University of Tennessee

Terry E. Scott. (1966) Associate Professor, Health Science and Sport Studies. B.A., William Jewell College; M.A., Washington University of St. Louis

Mary Seman. (1998) Assistant Professor, Special Education. B.S., California University of Pennsylvania; M.Ed., University of Vermont; Ed.D., West Virginia University

Louise E. Serafin. (1991) Professor, Business and Economics. B.S., California University of Pennsylvania; E.M.B.A., University of Pittsburgh; Ph.D.

Betty Shaw. (1988) Associate Professor & Reference Librarian, Library Services. B.S., University of Pittsburgh; M.L.S., Carnegie Mellon University; M.A., Indiana State University

Caryl Sheffield. (1991) Professor, Elementary and Early Childhood Education. B.S., California University of Pennsylvania; M.Ed., Slippery Rock University; Ph.D., University of Pittsburgh

Debra A. Shelapinsky. (1986) Associate Professor, Nursing. B.S.N., University of Akron; M.S.N., University of Pittsburgh; R.N.; P.N.P.

John W. Shimkanin. (1990) Professor, Elementary and Early Childhood Education. B.S., Moravian College; M.S., Clarion University of Pennsylvania; Ph.D., Penn State University

Sylvia E. Sholar. (1995) Associate Professor, Communication Studies. B.A., Georgia Southern University; M.A., University of Georgia; Ph.D., Temple University

Nancy A. Skocik. (1990) Associate Professor, Mathematics and Computer Science. B.S., M.Ed., California University of Pennsylvania

Robert Skwarecki. (2000) Assistant Professor, Communication Disorders. B.S., Duquesne University; M.S., Ph.D., University of Pittsburgh

Michael D. Slaven. (1995) Associate Professor, History and Political Science. B.A., M.A., Ph.D., West Virginia University

Michael J. Slavin. (1989) Associate Professor & Interim Chair, Theatre and Dance. B.S., California University of Pennsylvania; M.A., West Virginia University; Ph.D., Bowling Green State University

Rosalie Smiley. (1999) Associate Professor, Social Work and Gerontology. M.S.W., M.P.H., Ph.D, University of Pittsburgh

Darrell L. Smith. (1968) Professor, Applied Engineering and Technology. B.S., M.Ed., California University of Pennsylvania; Ed.D., Texas A&M University

Gary A. Smith. (1967) Assistant Professor, Philosophy. B.A., Juniata College; M.A., Wayne State University

Madeline C. Smith. (1990) Professor, English. B.A., Mt. St. Mary College; M.A., SUNY-New Paltz; Ph.D., West Virginia University

Gregory A. Spicer. (1998) Assistant Professor, Communication Studies. B.S., Clarion University of Pennsylvania; M.S., Southern Illinois University ; Ph.D., University of Pittsburgh

Margaret A. Spratt. (1988) Associate Professor, History and Political Science. B.A., Transylvania University; M.A., Duke University; Ph.D., University of Kentucky

Jacqueline Stefanik. (1984) Professor, Nursing. B.S.N., Pennsylvania State University; M.S.N., M.P.A., Ed.D., West Virginia University; C.R.N.P.

Michael C. Steinagel. (1998) Assistant Professor, Health Science and Sport Studies. B.S., Duquesne University; M.Ed., University of Virginia

Jeffrey S. Sumey. (1990) Assistant Professor, Applied Engineering and Technology. B.S., California University of Pennsylvania; M.S., West Virginia University

Gene G. Suskalo. (1967) Associate Professor, Music. B.S., Duquesne University; M.S., M.Music, Duquesne University

Dennis C. Sweeney. (1991) Associate Professor, Psychology. B.S., University of North Carolina; M.A., Ph.D., Bowling Green State University

Barbara Ann DeMartino Swyhart. (1990) Professor, Philosophy. B.A., M.A., Marquette University; Ph.D., Temple University

Marc A. Sylvester. (1973) Professor, Biological and Environmental Sciences. B.A., Washington and Jefferson College; M.S., Ph.D., West Virginia University

Shirley T. Sylvester. (1999) Assistant Professor, Elementary and Early Childhood Education. B.S., M.Ed., University of Southwestern Louisiana; Ph.D., Louisiana State University

James E. Syphers. (1991) Assistant Professor, Social Work and Gerontology. B.A., University of New Hampshire; M.S.W., University of Pittsburgh; Ph.D., Walden University

Nancy J. Tait. (1971) Professor, Student Services. Counselor, Center for Student Development. B.S., Lake Erie College; M.S., Northern Illinois University; Ed.D., Indiana University

P. Ronald Tarullo. (1978) Professor, Business and Economics. B.A., Marietta College; M.A., Ph.D., University of Pittsburgh

Charles R. Thomas. (1965) Professor, English. B.A., West Virginia University; B.S., California University of Pennsylvania; M.A., West Virginia University; M.Ed., California University of Pennsylvania; Ed.D., West Virginia University

John M. Thompson. (1987) Professor, Applied Engineering and Technology. B.S., M.S., Ph.D., University of Pittsburgh

Linda Toth. (2000) Assistant Professor, Psychology. B.S., California University of Pennsylvania; M.S. Duquesne University; Ed.D., West Virginia University

Laura Ann Tuennerman-Kaplan. (2000) Assistant Professor, History and Political Science. B.A., The College of Wooster; M.A., University of Delaware; Ph.D., University of Minnesota

Pamela C. Twiss. (1999), Associate Professor, Social Work and Gerontology. B.A., Point Park College; M.S.W., Ph.D., University of Pittsburgh

Susan G. Urbine. (1990) Assistant Professor, Applied Engineering and Technology. B.S., California University of Pennsylvania; M.Ed., Clemson University

Virginia Rider Valentino. (1992) Associate Professor, Mathematics and Computer Science. B.A., M.S., Ed.D., West Virginia University

John R. Vargo. (1970) Associate Professor, Elementary and Early Childhood Education. B.S., California University of Pennsylvania; M.A., West Virginia University

Robert A. Vargo. (1984) Professor, Earth Sciences. B.S., California University of Pennsylvania; M.S., Syracuse University; Ph.D., Syracuse University

Jaroslav V. Vaverka. (1990) Professor, Applied Engineering and Technology. B.S., Dux School of Mines, Czech Republic; M.B.A., Baldwin-Wallace College; M.S., Columbia Pacific University; D.I.T., University of Northern Iowa

Jacqueline Walsh. (1998) Assistant Professor, Counselor Education and Services. B.S., M.S., California University of Pennsylvania; Ph.D., Kent State University

Carole A. Waterhouse. (1986) Professor, English. B.A., University of Pittsburgh; M.F.A., University of Pittsburgh; Ph.D., Ohio University

Thomas Dean Wickham. (2000) Assistant Professor, Earth Sciences. B.S., Slippery Rock University; M.S., West Virginia University; Ph.D, Pennsylvania State University

Paul D. Williams. (1986) Professor, Mathematics and Computer Science. Director of Math Lab. B.S., California University of Pennsylvania; M.S., Clarkson University; Ed.D., University of Pittsburgh

Beverly G. Willison. (1980) Professor, Social Work and Gerontology. B.A., Duquesne University; M.S.W., University of Pittsburgh; Ed.D., West Virginia University; N.C.C., L.S.W., A.C.S.W.

James Wood. (1987) Professor, History and Political Science. B.A., Colorado State University; M.A., Arizona State University; Ph.D., Arizona State University

Peter H. Wright. (2000) Associate Professor, Applied Engineering and Technology. B.A., Yale University; M.A., West Virginia University; Ed.D., West Virginia University

Andrea Wyman. (1999) Associate Professor & Government Documents Librarian, Library Services. B.S., Westminster (UT) College; M.S., Western Oregon University; M.L.I.S., University of Wisconsin-Milwaukee; Ph.D., Union Institute

Richard M. Wyman. (1992) Professor & Chair, Elementary and Early Childhood Education. B.A., Franklin and Marshall College; M.Ed., Tufts University; Ed.D., University of Washington

William A. Yahner. (1989) Associate Professor, English. Coordinator of the Writing Center. B.S., M.A., Edinboro University of Pennsylvania; Ph.D., Indiana University of Pennsylvania

Mohamed Yamba. (1989) Associate Professor, History and Political Science. B.A., University of Ghana; M.A.I.A., Ohio University; M.A., Ohio University; Ph.D., University of Pittsburgh

Roy Yarbrough. (1999) Associate Professor, Health Science and Sport Studies. B.S., Greenville College; M.S., Eastern Illinois University; Ed.D., University of North Carolina at Greensboro

George Yochum. (1988) Associate Professor, Communication Studies. B.A., M.A., Ph.D., University of Pittsburgh

John R. Young. (1990) Associate Professor, Educational Studies. B.A., Lincoln University; M.Litt., Ph.D., University of Pittsburgh

Joseph Zisk. (2000) Assistant Professor, Educational Studies. B.S., M.Ed., California University of Pennsylvania; M.S., Drexel University; Ed.D., Temple University

Edwin M. Zuchelkowski. (1985) Professor, Biological and Environmental Sciences. B.S., California University of Pennsylvania; Ph.D., West Virginia University

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Tentative Academic Calendar

FALL SEMESTER 2001

August 26	Move-In Day for Residence Hall Students
August 27-28	New Student Orientation & Residual Registration
August 29	Classes Begin
September 3	Labor Day (no classes)
November 21-24	Thanksgiving Break (no classes)
December 15	Semester Ends
December 17	Grades Due From Faculty

FALL SEMESTER 2002

August 25	Move-In Day for Residence Hall Students
August 26-27	New Student Orientation & Residual Registration
August 28	Classes Begin
September 2	Labor Day (no classes)
November 27-30	Thanksgiving Break (no classes)
December 14	Semester Ends
December 16	Grades Due From Faculty

SPRING SEMESTER 2002

January 13	New Student Orientation
January 14-15	New Student Orientation & Residual Registration
January 16	Classes Begin
March 11-16	Spring Break (no classes)
March 23	Honors Convocation
March 29-30	Easter Break (no classes)
May 10	Semester Ends
May 11	Commencement
May 13	Grades Due from Faculty

SPRING SEMESTER 2003

January 12	New Student Orientation
January 13-14	New Student Orientation & Residual Registration
January 15	Classes Begin
March 10-15	Spring Break (no classes)
March 22	Honors Convocation
April 18-19	Easter Break (no classes)
May 10	Semester Ends
May 10	Commencement
May 13	Grades Due from Faculty

Summer College 2002

May 20-August 17	Special Sessions
May 27	Memorial Day (no classes)
June 10-July 13	First-Five Week Session
June 10-August 17	Ten-Week Session
July 4	Independence Day (no classes)
July 15-August 17	Second Five-Week Session

Summer College 2003

May 19-August 19	Special Sessions
May 26	Memorial Day (no classes)
June 9-July 12	First-Five Week Session
June 9-August 16	Ten-Week Session
July 4	Independence Day (no classes)
July 14-August 16	Second Five-Week Session

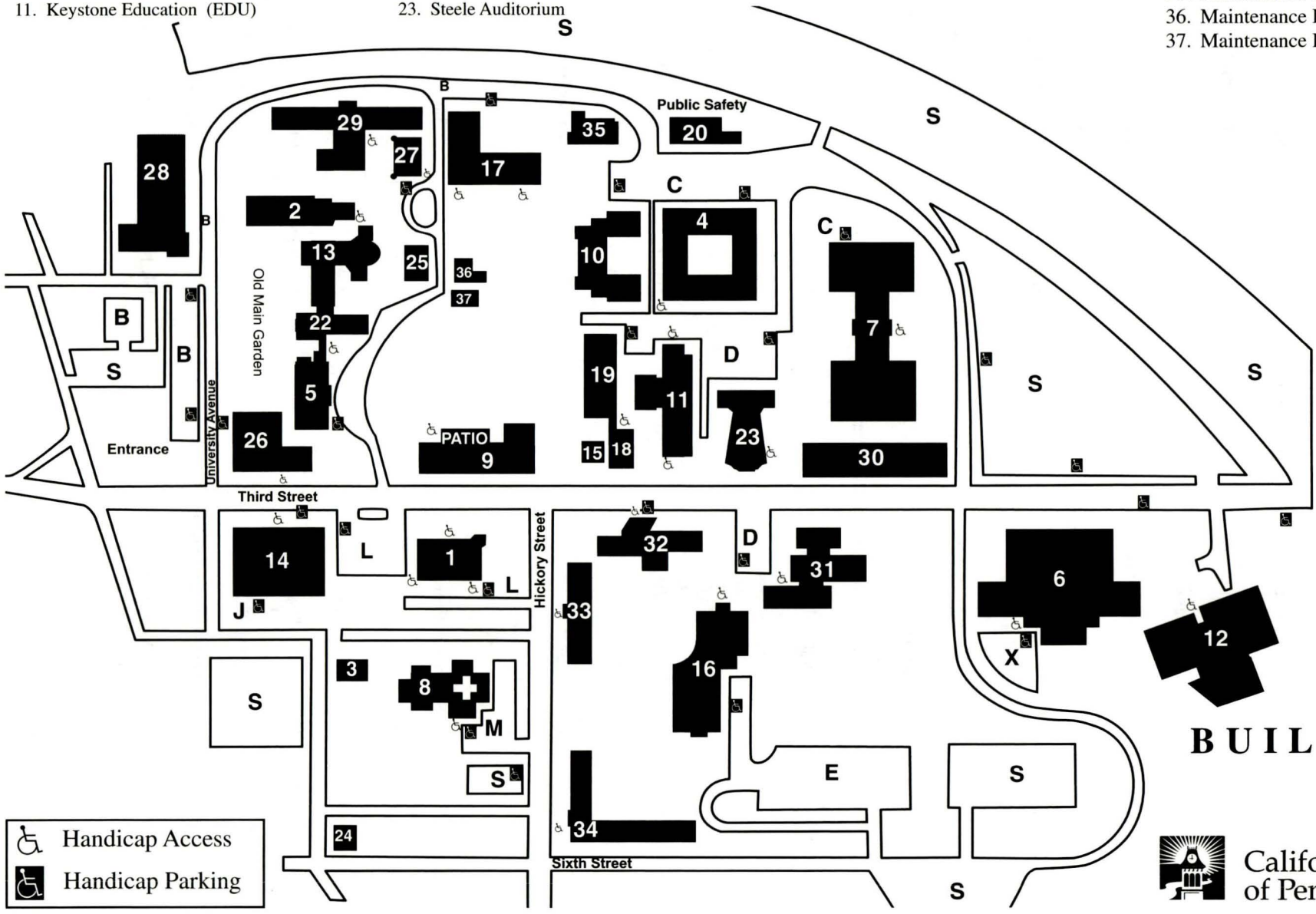
1. Azorsky Administration Building
2. Frich Biological Science Bldg. (BSC)
3. Carter - Black Culture Center
4. Coover Hall (COO)
5. Dixon Hall (DIX)
6. Gallagher Dining Hall
7. Hamer Hall (HAM)
8. Downey-Garofalo Health Services Bldg. Student Growth and Development Center
9. Herron Fitness Center (HER)
10. Industrial Arts Building (IAR)
11. Keystone Education (EDU)
12. Morgan Learning and Research Center (LRC)
13. Main Hall (MAI)
14. Manderino Library (LML)
15. Career Services
16. Natali Student Center
17. New Science Building (NSC)
18. Noss Annex
19. Noss Hall (NOS)
20. Public Safety
22. South Hall
23. Steele Auditorium
24. Student Development Annex
25. Vulcan Hall
26. Duda World Culture Building (WCU)
27. Watkins Academic Building (WAC)
28. Eberly Science and Technology Center (ESC)

RESIDENCE HALLS

29. Binns Hall (Men's Dorm)
30. Longanecker Hall (Men's Dorm)
31. Stanley Hall (Women's Dorm)
32. Clyde Hall (Women's Dorm)
33. Johnson Hall (Cal Hall Honor's Dorm)
34. McCloskey Hall (Men's Dorm)

OTHER BUILDINGS

35. Maintenance Building
36. Maintenance Building
37. Maintenance Building CST Ceramic Studio



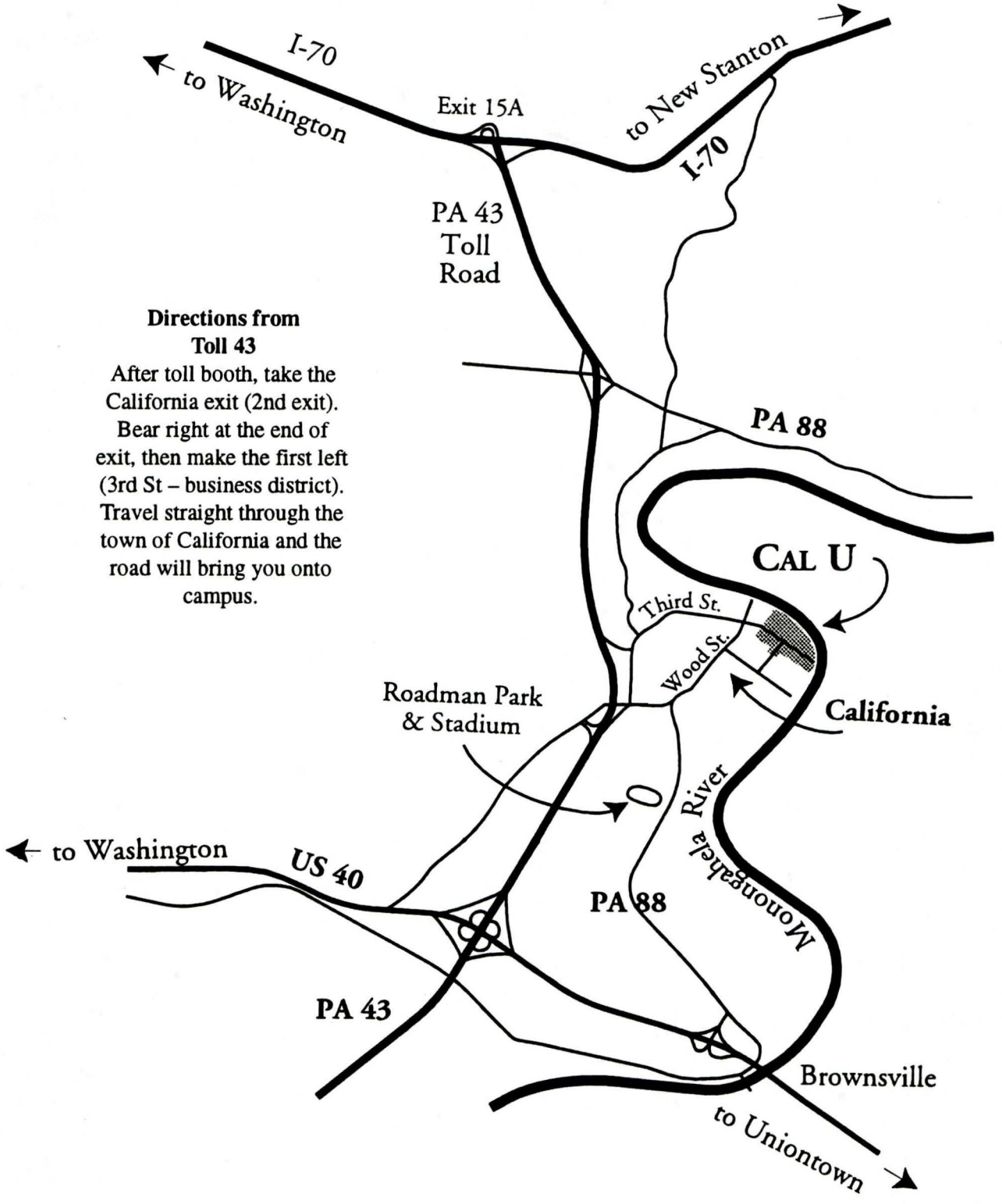
PARKING AREAS

B - Faculty and Staff
C - Faculty and Staff
D - Faculty and Staff
E - Faculty and Staff
J - Faculty and Staff
L - Faculty and Staff
M - Faculty and Staff

BUILDING

California University of Pennsylvania

California Area



California University of Pennsylvania

Undergraduate Catalog 2001-2002

Social Security Number: _____

Last Name: _____ First Name: _____ MI: ___

Please circle one: Ms. Miss Mrs. Mr.

Address: _____

City: _____ State: _____ Zip Code: _____

Telephone: ( ) _____

Starting Year: _____ Please Circle One: Fall Spring Summer

High School: _____ High School Graduation Date: ____

If applicable, list college/university last attended and degree earned: _____

_____

Intended Major: _____

Please circle prospective level of entry:

Freshperson Transfer Certification Visiting Student

Activity/Athletic Interest: _____

California University of Pennsylvania

Undergraduate Catalog 2001-2002

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Please circle prospective level of entry:

Freshperson Transfer Certification Visiting Student

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FOR MORE INFORMATION

Office of Admissions
California University of PA
250 University Avenue
California, PA 15419
phone: 1.888.412.0479 or 724.938.4404
fax: 724.938.4564

E-mail: inquiry@cup.edu
Website: www.cup.edu

Office of Financial Aid
phone: 724.938.4415

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PROGRAMS OF STUDY • CALIFORNIA UNIVERSITY OF PENNSYLVANIA

COLLEGE OF LIBERAL ARTS

- Art
- Communication Studies
- Criminal Justice
- Earth Sciences
- Economics
- English
- Foreign Languages and Cultures
- History
- Humanities Area
- Journalism
- Meteorology
- Philosophy
- Psychology
- Radio and TV
- Social Sciences
- Theater
- General Studies in Liberal Arts

EBERLY COLLEGE OF SCIENCE & TECHNOLOGY

- Administration & Management
- Applied Computer Science
- Biology
- Business Administration
- Chemistry
- Electrical Engineering Technology
- Environmental Studies
- Graphic Communication Technology
- Industrial Management
- Technology
- Mathematics
- Mathematics & Computer Science
- Medical Technology
- Mortuary Science (Cooperative)
- Natural Sciences
- Nursing
- Physics
- Pre-Engineering
- General Studies in Science & Technology

COLLEGE OF EDUCATION & HUMAN SERVICES

- Athletic Training
- Communication Disorders
- Early Childhood Education
- Elementary Education
- Elementary & Middle School Education
- Elementary & Early Childhood Education
- Gerontology
- Occupational Therapy Assistant
- Physical Therapist Assistant
- Secondary Education
- Social Work
- Special Education
- Technology Education
- General Studies in Education