# Catalog Home

# Pennsylvania Western Undergraduate Catalog

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This catalog is edited by the Academic Affairs Office.

**California**
250 University Avenue
California, PA 15419

**Clarion**
840 Wood St
Clarion, PA 16214

**Edinboro**
219 Meadville St
Edinboro, PA 16444

*PennWest is a member of Pennsylvania's State System of Higher Education.*

**Pennsylvania's State System of Higher Education**
2986 North Second Street
Harrisburg PA 17110
717-720-4000
www.passhe.edu

## Three ways to locate information

**#1**: Type what you are looking for in the "Catalog Search" box, located at the top left of this page.

**#2**: Click on "Advanced Search" to look for specific courses and/or programs.

**#3**: Choose from the navigation bar along the left side of the page.

## Degree Planner

The Degree Planner link allows you to see, save, and/or print all the information about your program of study in a condensed, printable format.  To access, simply navigate to any program and click the Degree Planner link at the top right of the page.

## Create Your Personal Portfolio

The My Portfolio feature allows you to save information in your own personal folder so you can go directly to it!

1. Click on the My Portfolio link at the bottom of the left navigation bar.
2. Then use the left navigation bar or the search box to find what you are looking for in the catalog.
3. When you want to save a section, click the My Portfolio link at the top right of the page.
4. The next time you go to your portfolio, your saved material will be there!

## Need help?

If at any point you have questions about how to navigate this catalog, just click on the Help link at the top right of the page.

# Accreditations

# Accreditation Organization

Accreditation Council for Business Schools and Programs (ACBSP)

Accreditation Council for Education in Nursing (ACEN)

Accrediting Council for Collegiate Graphic Communications (ACCGC)

American Association for Paralegal Education (AAfPE)

American Bar Association (ABA)

American Chemical Society - Council on Professional Training (ACS-CPT)

American Veterinary Medical Association/Committee on Veterinary Technician Education and Activities (AVMA/CVTEA)

Association of Technology, Management and Applied Engineering (ATMAE)

CFP Board® (CFP)

Commission on Accreditation in Physical Therapy Education (CAPTE)

Commission on Athletic Training Education (CAATE)

Commission on Collegiate Nursing Education (CCNE)

Computer Accreditation Commission (CAC) of Accrediting Board for Engineering and Technology (ABET)

Council on Accreditation of Parks, Recreation, Tourism and Related Programs (COAPRT)

Council for Accreditation of Counseling and Related Educational Programs (CACREP)

Council for Accreditation of Educator Preparation (CAEP)

Council for Standards in Human Service Education (CSHSE)

Council on Social Work Education (CSWE)

Engineering Technology Accreditation Commission (ETAC) of Accrediting Board for Engineering and Technology (ABET)

Middle States Commission on Higher Education (MSCHE)

National Association of Schools of Art and Design (NASAD)

National Association of School Psychologists (NASP)

National Association of Schools of Theatre (NAST)

Pennsylvania Department of Education (PDE)

Pennsylvania State Board of Nursing (SBON)

# President's Message

Welcome to PennWest!

Pennsylvania Western University combines the strengths and stability of three historic institutions with a fresh, forward-thinking approach to education. Through personalized, transformative learning experiences, we are meeting the needs of today's students and tomorrow's world.

Built on hundreds of years of academic excellence, PennWest's top-notch graduate-level degree, certificate and professional certification programs offer flexible options for advanced study and professional growth - all at an incredible value.

Our supportive community of educators inspires confidence and awakens potential, preparing graduates to think critically and tackle real-world challenges. On campus or online, you will have access to a network of student support professionals and all the resources you need to meet and exceed your academic goals.

Classes are taught by internationally recognized faculty members who are passionate about teaching and committed to student success. Inside the classroom and beyond, PennWest faculty will help you discover your own passions through rich content, engaging discussions, one-on-one advising and relevant coursework.

Wherever you are, we are here for you. Our three unique campuses are each nestled in a picturesque, vibrant town. You can choose a riverside, lakeside or forested setting or access our top-notch programs anywhere through PennWest Global Online.

Online courses are supported by state-of-the-art instructional design services and the latest online learning technologies to ensure you receive the same high-quality instruction offered at our brick-and-mortar campuses.

Whether you are looking to start or complete a graduate degree, earn advanced credits, or gain specific credentials or certificates to give you an edge in the workplace, we are here to help you create the life you envision.

At PennWest, opportunities are boundless. And the future is yours to define.

Yours,

R. Lorraine Bernotsky, D.Phil.

Acting President

# Mission & Vision Statements

**Mission**

Through innovation, academic excellence, and empowering environments, Pennsylvania Western University provides accessible education that cultivates career-ready, life-long learners and leaders, who enrich and engage each other, their communities, the region, and beyond.

# Vision

Pennsylvania Western University empowers students to achieve meaningful goals through a broad array of nationally accredited undergraduate and graduate programs, career-focused learning, and support systems that foster lifelong success.

# Values

- **Learning:** We are a community of educators who provide a learning environment where students thrive and achieve their educational, professional, and personal goals.
- **Growth:** We are student ready, guiding our students towards personal, financial, and academic success.
- **Inclusion:** We advocate for all members of our campus communities and provide an equitable, supportive environment that builds a sense of belonging and togetherness.
- **Collaboration:** We engage in innovative partnerships, programs, and opportunities to address the needs of our regional communities and the commonwealth.
- **Culture:** We share a sense of purpose that unites the Pennsylvania Western University community at large and provides opportunities to learn, work and thrive.

# PennWest California - PennWest Clarion - PennWest Edinboro

At PennWest, you can choose from three unique campuses, each nestled in a picturesque, vibrant town. Choose a lakeside community or one sprawling along a river's bend.

Although each campus is distinctly different, they share a common goal of offering you the best educational and life experience, both in and out of the classroom.

As a PennWest student, you'll have the opportunity to take courses from professors at each campus. You will also enjoy robust shared student support programs and resources, clubs and organizations, athletics, intramurals and so much more. See what each of our campuses has to offer you.

# PennWest Global Online

PennWest Global Online program is designed to help you get to where you want to be, from wherever you are. Faculty from California, Clarion and Edinboro campuses- not teaching assistants-lead you every step of the way.

They make sure your degree is just as high-quality and valuable as the ones from our brick-and-mortar schools.

That same support, mentorship and advising extends outside the "classroom" to help you reach your goals.

And with our Graduate Programs and opportunities for advanced certifications, we can help you continue to grow throughout your career.

# Administration

**Office of the President**
R. Lorraine Bernotsky, President
Kelly Repinski, Vice President for University Affairs and Advocacy

**Academic Affairs**
Daniel Engstrom, Interim Provost & Vice President of Academic Affairs
James Fisher, Senior Associate Provost for Academic Administration
Thomas Wickham, Associate Provost for Curriculum and Faculty
Yugo Ikach, Associate Vice President for Graduate and Online Programs
Shayne Gervais, Associate Vice President for Academic Systems & University Registrar
Mary Paniccia Carden, Dean for College of Education, Arts and Humanities
Deborah Grubb, Associate Dean for College of Education, Arts and Humanities
Timothy Stevenson, Associate Dean for College of Education, Arts and Humanities
Deborah Kelly, Dean for College of Health Sciences and Human Services
Craig Coleman, Interim Associate Dean for College of Health Sciences and Human Services
Robert Mehalik, Interim Associate Dean for College of Health Sciences and Human Services
Brenda Fredette, Dean for College of Science, Technology and Business
Juanice Vega, Associate Dean for College of Science, Technology and Business
Anthony McMullen, University Library Director

**Administration and Finance**
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Tamara Varsek, Associate Vice President for Finance
Paul Allison, Associate Vice President for University Technology
Eric Guiser, Senior Associate Vice President for Human Resources

**Strategic Enrollment Management**
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David Dollins, Associate Vice President for Strategic Enrollment Management
Adam Reynolds, Assistant Vice President for Enrollment Marketing and Systems

**Student Affairs and Institutional Effectiveness**
Susannne Fenske, Vice President for Institutional Effectiveness and Student Affairs
Jennifer Graham, Assistant Vice President of Residence Life and Housing
Shawn Hoke, Assistant Vice President of Campus Life/Edinboro Campus Lead
James McGee, Assistant Vice President of Wellness/Clarion Campus Lead
Becky McMillen, Executive Director of Institutional Effectiveness
Lawrence Sebek, Associate Vice President for Auxiliaries, Budgets, Compliance & Project Management/California

Campus Lead
Steven Zidek, Chief Data Strategist

**Advancement**
James Geiger, Vice President for University Advancement and Clarion Campus Administrator
Anthony Mauro, Associate Vice President, University Development and California Campus Administrator
Amanda Sissem, Associate Vice President Alumni Engagement and Edinboro Campus Administrator
Wendy Mackall, Executive Director of Communications
William Berger, Executive Director of Creative Services and Brand Identity
Jeff Bender, Executive Director of University Marketing

# Title IX & Non-Discrimination Statement

# Non-Discrimination Statement

It is the policy of Pennsylvania Western University that there shall be equal opportunity in all of its educational programs, services, and benefits, and there shall be no discrimination with regard to a student's or prospective student's gender, gender identity, race or color, ethnicity, national origin or ancestry, age, mental or physical disability, religion or creed, genetic information, affectional or sexual orientation, veteran status, or other classifications that are protected under Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and other pertinent state and federal laws and regulations. Direct inquiries to the Executive Director of Equity and Title IX and Title IX Coordinator, 423 Becht Hall 16214-1232; email asalsgiver@pennwest.edu or phone 814-393-2109. Inquiries may also be directed to the Director of the Office for Civil Rights, Department of Education, 330 Independence Avenue, SW, Washington, DC 20201.

# Title IX Information

Pennsylvania Western University is committed to creating an environment free of sexual harassment for all members of its University community. Sexual harassment encompasses all forms of sexual misconduct: sexual harassment, sexual assault, sexual exploitation, stalking, dating violence, domestic violence, and any sexual activity conducted without consent. Accordingly, Pennsylvania Western University will not tolerate any form of sexual harassment and provides this policy to ensure its employees, students, and other members of the University community are not subjected to sexual harassment in any form. The University offers many resources for addressing complaints of sex discrimination. Amy Salsgiver, Executive Director of Equity and Title IX, serves as the University's Title IX Coordinator. Inquiries, concerns or complaints of faculty, staff and students regarding sex discrimination or sexual misconduct should be directed to Ms. Salsgiver's attention at asalsgiver@pennwest.edu or 814-393-2109.

Information regarding the reporting of sexual violence and the resources that are available to victims of sexual violence is set forth at Title IX | PennWest

Students may also visit the Code of Conduct, under Student Resources, to review options and for more information related to addressing of reported violations of Title IX at : Title IX | PennWest

# Faculty Reporting Requirements Under Title IX

Pennsylvania Western University and its faculty are committed to assuring a safe and productive educational environment for all students. In order to meet this commitment and to comply with Title IX of the Education Amendments of 1972 and guidance from the Office for Civil Rights, the University requires faculty members to report incidents of sexual violence shared by students to the University's Title IX Coordinator. The only exceptions to the faculty member's reporting obligation are when incidents of sexual violence are communicated by a student during a classroom discussion, in a writing assignment for a class or, as part of a University-approved research project and it is germane to the coursework. Faculty members are obligated to report sexual violence or any other abuse of a student who was, or is, a child (a person under 18 years of age) when the abuse allegedly occurred to the person designated in the University protection of minor's policy.

Information regarding the reporting of sexual violence and the resources that are available to victims of sexual violence is set forth at Title IX | PennWest. For Title IX reporting and compliance please contact the Title IX Coordinator, Pennsylvania Western University of Pennsylvania, 423 Becht Hall, asalsgiver@pennwest.edu or 814-393-2109. A complaint form is available online.

# Academic Calendar

https://www.pennwest.edu/academics/academic-calendar

# Admissions

- First-Time Degree-Seeking Students
- Transfer Admission
- International Degree Seeking Student
- International Transfer Applicants
- Readmission to PennWest University
- Non-Degree Applicant
- Visiting Student/PASSHE
- Visiting Student/non-PASSHE
- Certificate Only Applicants

# First-Time Degree-Seeking Students

## Regular Admission

- $35.00 application fee or official PennWest University or agency/affiliation fee waiver code.
- Official high school transcript showing a cumulative high school grade point average (GPA) =>2.5 on a 4.0 scale. The GPA can be weighted or unweighted, or,
- Copy of GED diploma and official score report showing a total score of >450, and, holistic review of applicants' course trends, rigor, leadership, activities and/or community service.
- PennWest University is test-optional, although some programs may require test results for direct admission.

# Conditional Admission

- Applicants with a high school GPA 2.25 -2.249 or GED total score <450 may be conditionally admitted to the university under the PennWest START program.
- Holistic review of applicants' course trends, rigor, leadership, activities and/or community service.
- Applicants admitted conditionally will be required to meet with PennWest Student Success team to ensure success and retention.

# Denied Admission

- Applicants with a high school GPA <2.25 on a 4.0 scale will be denied admission. Students who are denied admission may appeal to the Director of Admissions at their respective campus location.

# Transfer Admission

Students are considered to be a transfer if they have earned 6 or more postsecondary college level credits.

# Regular Admission

- $35.00 application fee or official PennWest University or agency/affiliation fee waiver code.
- Official college transcript(s) from accredited institution(s) indicating a cumulative (all colleges) transfer GPA >2.0
- Official, final high school transcript or GED diploma and scores required if applicant has < 12 transferable college credits, and for consideration for admission to Nursing programs.

# Conditional Admission

- Transfer applicants with a cumulative transfer GPA <2.0 out of a 4.0 scale may be conditionally admitted under one of the following criteria:
- Student is transferring from another college showing academic improvement in their most recent term, or
- Student has been out of college for at least 5 years.
- Applicants admitted conditionally will be required to meet with PennWest Student Success team to ensure success and retention.

# Provisional Admission

- Professional judgment is used to facilitate students' enrollment when unofficial documents are submitted pending official documents.
- Students are classified as non-degree and financial aid cannot be processed while in this status.
- Minimal 12-13 credit limit permitted.
- Upon receipt of required official academic credentials, students may receive Regular or Conditional Admission.

# Denied Admission

- Transfer applicants with a cumulative (all colleges) transfer GPA <2.0 will be denied admissions. Students who are denied admission may appeal to the Director of Admissions at their respective campus location.

# International Degree Seeking Student

- $35.00 application fee or official PennWest University or agency/affiliation fee waiver code.
- Official high school transcript (with accompanying SAT score ≥ 920 or ACT composite score ≥17 IF APPLICABLE - SAT/ACT is OPTIONAL for international applicants) Official iBT TOEFL≥6; or IELTS ≥5.5 or ITEP≥3.5 or Duolingo ≥ 90
- Signed Financial Guarantee Statement (can be submitted after admission based on student preference)
- Signed Affidavit of Support (can be submitted after admission based on student preference)
- A page-by-page translation of official transcripts must be completed for non-English transcripts (barring Spanish language transcripts, which may be submitted as would an English language transcript) For international applicants whose primary method of instruction was not English, TOEFL, IELTS, ITEP or Duolingo test scores that exceed the university or program minimums must be met and submitted. English proficiency requirements may be waived if the primary language of instruction is English with acceptable proof of medium of instruction from the institution accompanying the application, to be reviewed by admission staff on a case-by-case basis, or if the applicant is a citizen of a country that recognizes English as an official language. Upon receipt of an official English transcript not on a 4.0 scale, admissions will calculate to determine equivalency.
- A copy of the applicant's international passport (alternate forms of ID are NOT acceptable). The international passport shall also serve as proof of English proficiency for citizens of countries that recognize English as an official language

# International Transfer Applicants

- $35.00 application fee or official PennWest University or agency/affiliation fee waiver code.
- Official college transcript(s) indicating a GPA>2.00
- Official iBT TOEFL≥61; or IELTS ≥5.5 or ITEP≥3.5 or Duolingo ≥ 90
- Signed Affidavit of Support (can be submitted after admission based on student preference)
- A page-by-page translation of official transcripts must be completed for non-English transcripts (barring Spanish language transcripts, which may be submitted as would an English language transcript) For international applicants whose primary method of instruction was not English, TOEFL, IELTS, ITEP or Duolingo, SAT or ACT test scores that exceed the university or program minimums must be met and submitted. English proficiency requirements may be waived if the primary language of instruction is English with acceptable proof of medium of instruction from the institution accompanying the application, to be reviewed by admissions staff on a case-by-case basis, or if the applicant is a citizen of a country that recognizes English as an official language. Upon receipt of an official English transcript not on a 4.0 scale, admissions will calculate to determine equivalency.
- A copy of the applicant's international passport (alternate forms of ID are NOT acceptable) The international passport shall also serve as proof of English proficiency for citizens of countries that recognize English as an official language.

# Readmission to PennWest University

- Students who have not been enrolled PennWest University or any of its campuses in the last 12 months must submit an application for readmission through the Undergraduate Admissions Office.
- Application fees are not required.
- If a student was enrolled in another university during their leave (no degree earned), official transcripts must be submitted to the Undergraduate Admissions office.
- 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.
- 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 grade-point average 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 to return to the University from the Vice President for Student Affairs.
- Applications for readmission should be submitted as soon as possible, but at least two weeks before the class start date for the term in which the student desires to enroll.
- Students applying for readmission will not be readmitted to the University until all past indebtedness has been paid and all holds have been satisfied.
- The Office of Admissions checks applicants' academic, financial, and disciplinary holds through the appropriate offices.
- The Office of Admissions updates SIS with updated applicant details, i.e., majors, address, start term.
- The Office of Admissions will provide accurate next steps information to the applicant.

# Non-Degree Applicant

- $35.00 application fee or official PennWest University or agency/affiliation fee waiver code.
- Transcripts may only be required if a GPA is required by a specific academic program.
- Non-Degree students may take up to 30 credits only.

# Visiting Student/PASSHE

- Applicant must be enrolled in one of the PASSHE institutions with at least 12 college-level credits and be in good academic standing
- Student must submit an application for NON-DEGREE SEEKING as a VISITING STUDENT.
- PASSHE students are not required to pay the $35.00 application fee.
- Student must complete and submit the State System of Higher Education Application for Visiting Student Status form in addition to the non-degree seeking application.
- The Office for Undergraduate Admissions will inform the student of their next steps.
- The University Registrar will register the student.

# Visiting Student/non-PASSHE

- Applicant must be enrolled with at least 12 college-level credits and be in good academic standing

- Student must submit an application for NON-DEGREE SEEKING as a VISITING STUDENT.
- $35.00 application fee or official PennWest University or agency/affiliation fee waiver code.
- The applicant must submit a signed transient form from their university indicating the following information: First Name, Last Name, Email Address, Cell Phone Number, Total College Credits, Home University Name, Courses to be taken at PennWest with home University equivalency. Signed by home college Registrar.
- The Office for Undergraduate Admissions will inform the student of their next steps.

# Certificate Only Applicants

- Applicant must complete application for admission
- Must discuss with Office of Admissions if application fee will be required.
- May or may not require transcripts depending on program

# Student Accounts

**California Campus:**
Dixon Hall, First Floor
Telephone: 724-938-4431

**Clarion Campus:**
Becht Hall, First Floor
Telephone: 814-393-1071

**Edinboro Campus:**
Hamilton Hall, First Floor
Telephone: 814-732-3502

Email Address: studentaccounts@pennwest.edu
Website: pennwest.edu

# Current Costs of Enrollment

Students should refer to the PennWest University website at: pennwest.edu and choose the campus you are attending for current costs of enrollment and detailed billing and payment information.

# Student Invoices

Student invoices (bills) are not mailed to students. Students can view and print their electronic invoices (bills) via the Student Accounts Portal my.pennwest.edu approximately 30 days prior to the start of the fall and spring semester.

Billing for summer and winter semesters is typically 15 days prior to the start of classes. Students are billed each term (i.e. summer, fall, winter and spring) and payment is expected by the Friday before classes begin each semester.

# Monthly Payment Plan

During a regular semester, the monthly payment can be divided into 5,4, or 3 payments of the total charges for the semester, minus any financial aid. A non-refundable payment plan fee of $40 per semester will be charged to your student account. The budget amount includes tuition, fees, room and board for the current semester. If financial aid is awarded after the payment plan has been set up, you must continue to make regular payments until the aid is applied and the balance is paid in full. Your budget will adjust accordingly for payment received on your account. The payments are due by the 10th of each month. Once registered for the payment plan, installment reminders will be sent to the student's email and to authorized users monthly; no paper statements will be generated.

# Register for the Payment Plan Online:

Students - Visit the MyPennWest Portal, click on Student Account Portal and then click the "Enroll in Payment Plan" button.

Then select "term". You can now select the plan you would like to utilize.

Authorized Users - Parents and guests must first be authorized by students to use the above-mentioned online payment plan options. Students can complete this authorization online via their myPennWest account in their Student Accounts Portal located on the Student "Quick Links" tile. Select the "Authorized Users" on the right side of the page. Complete all of the steps on the "Add Authorized User" screens. After you enter the "user's" information, the "authorized user" will receive emails with the access codes and directions for logging in to the "PennWest University Authorized Payment Processor" system where they can make a payment to your student account & view account details with your discretion. Make sure you select the authorization you wish to grant the "User".

# Pennwest University Book Voucher

The book voucher fund is an interest-free fund that students may utilize for educational books and supplies purchased at the University bookstore at each campus. Students must have excess financial aid to cover the cost of the books and be enrolled in a degree-seeking program at least half-time (6 credits). Students must be in good standing with the university.

The voucher is an **advance** of your anticipated financial aid for use at the University Book Store at your PennWest home campus and must be repaid. The voucher will be automatically paid from any **excess** federal, state, institutional, or private financial aid that is available at the time the charge is posted to your student account. Adjustments to your student account (adding/dropping credits or changing housing and meal plans) could affect amount of aid available before financial aid is posted to your student account. If a student does not have sufficient financial aid to cover the book voucher (maximum amount of $600) then student **will be responsible for the resulting balance due on the account.**

# Financial Aid

- Financial Aid Application
- Academic Year
- Financial Aid Programs
- PennWest University Undergraduate Student Scholarships
- Self Help Aid
- Military and Veteran Success
- Conditions Which Accompany Financial Aid
- Reinstatement of Aid
- Return of Federal Aid Monies Due to University Withdrawal

The Financial Aid Office serves prospective students, current students, and their parents with financial aid questions and needs. The primary goal of the Financial Aid Office is to provide appropriate financial resources in the form of scholarships, grants, loans, and student employment to enable students to achieve their educational potential while ensuring compliance with the various sources of financial aid. The University strives to meet the "financial need" of as many students from as many resources as possible.

# Financial Aid Application

The major funding sources are from the federal and state governments. For consideration for financial assistance students are urged to complete a Free Application for Federal Student Aid (FAFSA) prior to May 1 each year via the federal website studentaid.gov. Please indicate PennWest's Title IV code (003316) for Global Online and California Campus, Clarion Campus code (003318), and Edinboro Campus code (003321) on the FAFSA form.

# Academic Year

PennWest's academic year is comprised of a fall and spring semester, during which a full-time undergraduate student is expected to complete at least 24 credits. The period of time school is in session consists of 30 weeks of instruction.

# Financial Aid Programs

GRANTS & SCHOLARSHIPS are what financial aid refers to as gift aid. Gift Aid is money the student receives that does not need to be repaid or earned. Grants are based upon financial need, while scholarships are generally based upon characteristics such as scholastic achievement, athletic ability, or geographic location.

## Federal Pell Grant

Pell Grants are designed to assist students, from low-income households, who have not yet earned their first bachelor's degree. Pell Grants are intended to be the "foundation" of the financial aid package. Eligible students must demonstrate financial need, as determined by the FAFSA application. Congress sets the annual minimum and maximum award amounts for Pell Grant awards.

## Maximum Pell Grant Eligibility

Effective July 1, 2012, the Department of Education established the Federal Pell Grant Lifetime Eligibility Used (LEU). Students can receive the Federal Pell Grant for the equivalent of 12 full-time semesters (roughly 6 years) or 600%. This means a student who has received a Federal Pell Grant that is equivalent to 12 full-time semesters is no longer eligible to receive the Federal Pell Grant or any other federal grants, even if they have not completed their first bachelor's degree. Students who have reached their maximum Pell Grant eligibility will be notified by FAFSA via their Student Aid Report (SAR) in the Comment Section. Students can also monitor the percentage and semesters of their Federal Pell Grant eligibility used by logging in to studentaid.gov.

## Federal TEACH Grant

Teacher Education Assistance for College and Higher Education (TEACH) grants are based on the program of study and cumulative grade point average (3.25 is required) rather than financial need. In order to qualify for this grant at

PennWest, besides meeting the GPA requirement, students must be enrolled in one of the following programs: BSED Early Childhood/Special Education, BSED Middle Level Math, BSED Middle Level Science, BSED Secondary Education Biology, BSED Secondary Education Chemistry, BSED Secondary Education General Science, BSED Secondary Education Mathematics, BSED Special Education PK-12, MEd Reading Specialist, or MEd Special Education. Students also must obtain College of Education Teacher Education Admission in order to qualify for the TEACH Grant. Interested students should complete a TEACH Grant Preliminary Application found on the school website. Once approved for the grant, students must complete an annual Agreement To Serve document in which they agree to teach for at least four academic years within the first eight calendar years of completing their TEACH-eligible degree as well as TEACH Entrance Counseling. Note: TEACH recipients who fail to complete this service obligation will have their TEACH grants converted to interest-bearing Federal Direct Unsubsidized Loans. Interest will be assessed retroactive to the date the first TEACH grant disbursed to their account.

# Federal SEOG Grant

Federal Supplemental Educational Opportunity Grants (SEOG) are need-based, campus-based grants awarded by the Financial Aid Office to Pell-eligible students. There is no separate application for the SEOG grant program, but a current year FAFSA form must be on file to determine financial need and Pell grant eligibility. Awards range from $100-$4000 per year and are targeted to students who demonstrate significant unmet need who also have a zero or very small expected family contributions (EFC).

# Pennsylvania State Grant

The Pennsylvania state grant is need-based, as determined by the PHEAA's methodology, in conjunction with the federal FAFSA form. Eligible students must be residents of Pennsylvania who have not yet received their first bachelor's degree. Students must have their FAFSA form submitted by May 1 each year to be considered for this grant. First-time students must also complete a student status form at pheaa.org. Award amounts vary based on funding levels.

Bachelor degree-seeking students are limited to no more than four years of full-time funding (eight semesters) and associate degree students are limited to two years (four semesters). PHEAA requires full-time students to successfully complete 24 credit hours each academic year in order to qualify for the grant in future terms. Part-time students are required to pass at least six credits each semester in which they receive a part-time grant. Due to limited resources, students enrolled in more than 50% distance education credits (online) may receive a reduced award. For more information on your PA State Grant eligibility contact PHEAA at 1-800-692-7392 or pheaa.org. In addition, per PHEAA regulations, for students enrolled in a module course (7W1, 7W2, and all summer sessions) for the term, the PA State Grant cannot be credited to the student's account until enrollment is confirmed in the final module, which is after add/drop, even if the student is enrolled at least half-time prior to that final module.

# PennWest University Undergraduate Student Scholarships

PennWest University's endowed, annual, and athletic scholarships provide support to more than 600 students yearly. Scholarships are available to new incoming students as well as currently enrolled students. Most of PennWest's scholarships are funded by private support through the California, Clarion and Edinboro Foundations and are overseen by the Financial Aid Office, within the Enrollment Management Division. Students may access the scholarship application through the MyPennWest Portal, with individual log-in credential for their PennWest account. Financial aid will automatically consider them for any scholarships for which they are qualified. PennWest will annually notify students when the application is available and the submission deadline.

# Self Help Aid

There are two types of Self-help financial aid. Loans which are borrowed and must be repaid with interest and Student Employment where students earn money to help pay for school by working part-time.

# Federal Direct Student Loan Program

Federal Direct Student loans provide a maximum of $5,500 per academic year for first-year students, $6,500 for second- year students (30-59 credits), and $7,500 for third, fourth and fifth-year students (60 credits and higher) not to exceed an aggregate undergraduate level of borrowing of $31,000 in total. NOTE: Students who are determined by their current year FAFSA to be "independent" are eligible to borrow additional "unsubsidized" loan amounts: $4,000 for first and second-year students and $5,000 for third and fourth year (60 credits and higher). Independent students cannot exceed an aggregate loan limit of $57,500 during their undergraduate enrollment at PennWest University. Borrowers who demonstrate unmet financial need may qualify for a portion of these annual loan amounts to be subsidized (i.e. interest-free) during their enrollment at PennWest.

Students must have a current year FAFSA on file, as well as a Master Promissory Note (MPN) and Entrance Loan Counseling. The one-time-only Entrance Counseling and ten-year MPN are completed online at studentaid.gov. Federal Direct Student Loan interest rates vary by year and type of loan (subsidized vs. non-subsidized). However, there is an 8.25 percent maximum interest rate cap on all Direct Stafford Loan programs. Repayment for Federal Direct Student Loans begins six months after the student ceases at least half-time enrollment at the university. During this six month "grace" period, no payment is required. However, monthly repayments start at the end of the one-time-only grace period and extend over a 10-year repayment period. Loan deferments are available to eligible students. Students should contact their federal loan servicer to obtain additional information if they experience financial hardships during their 10-year repayment period.

Graduate students enrolled in the Teacher Certification program and not receiving a master's degree are subject to undergraduate loan limits of $5,500 Subsidized Stafford and $7,000 Unsubsidized Stafford Loan limits. Graduate degree-seeking students who enroll in all undergraduate coursework for any given term will have their loans adjusted to reflect undergraduate loan level.

# Federal Parent Loan for Undergraduate Students (PLUS)

Federal Parent PLUS loans are available to parents of dependent students and are not based on financial need. Parents may choose to borrow up to the student's cost of education minus any other financial aid awarded for the year.

There are no aggregate loan limits for this program. The parent who applies for this loan must be the student's natural or adoptive parent. A stepparent can apply only if his/her information is provided on the current year FAFSA. Students must have a current year FAFSA on file and parents must complete both a PLUS loan application and a PLUS loan Master Promissory Note (MPN) on the studentaid.gov website. Eligible students must be enrolled at least half-time to qualify for this loan. Eligible parents must demonstrate no adverse credit history in order to qualify for the loan.

Note: Dependent students whose parents are denied access, based on credit history, to participate in the Federal Parent PLUS loan program, are eligible for the additional unsubsidized loan amounts typically restricted to independent students (see information under Federal Direct Student Loans).

PLUS loan interest rates may vary, but there is a 10.5 percent maximum cap. Parents may request an in-school deferment during the PLUS application process. This permits them to waive the requirement to begin repayment no later than 60 days after the loan is fully disbursed to the student's account.

Parents have 10 years in which to repay the loan once their deferment expires and/or the loan is fully disbursed to the student.

# Nursing Loans

This program is intended to assist students to achieve careers in nursing by providing long-term, low-interest loans to help meet the costs of education. The maximum loan is $2,500 for an academic year or the amount of financial need, whichever is less. A student may receive up to $4000 in the last two years of study. The total amount of a student's loans for all years may not exceed $13,000. Loans are interest free during the in-school period enrollments of at least half-time. Repayment may be made over a ten-year period which begins nine months after study has been terminated, and the minimum payment can be $40. Five percent interest accrues during the repayment period. Payments may be deferred up to three years during military service, Peace Corps participation, and periods of full-time advanced professional training in nursing.

# Private (Alternative) Loans

Before applying for a private (alternative) loan, consider Federal Direct Student Loans first. Generally, they offer better terms and lower interest rates. If you find that you need additional funding, do not wish to apply for federal financial aid, or are ineligible for federal aid, you may want to apply for a private loan. Some private loans are not subject to federal financial aid regulations, such as having a FAFSA on file, making satisfactory academic progress, completing federal verification, and some do not have limits on the amount borrowed based on the number of credits earned. However, they are based on the credit- worthiness of the applicant and/or the cosigner. Private lenders offer a variety of loan products to undergraduate, graduate, professional school, part-time, and continuing education students. In most cases, students can apply online. In some cases, the loans can be used to pay past due balances of educational costs. Additional information, as well as our private loan comparison tool through ELMSelect, can be found online at elmselect.com.

# Student Employment

The University offers student employment opportunities through four programs - Federal Work Study, State Work Study, Institutional Work Study and Graduate Assistantships. Employment is available to the extent that funds are provided by the federal government, the Pennsylvania Higher Education Assistance Agency (PHEAA), and the institution. Students who receive student employment awards are not guaranteed a job. Students are required to actively engage in acquiring employment.

All student employment programs require eligible students to maintain at least half-time enrollment (six credits) during the academic year. Participating students must be paid at least the current federal minimum wage rate and receive their pay on a bi-weekly basis.

# Federal Work-Study Program

The university participates in the Federal Work-Study Program which permits students with unmet financial need to work while classes are in session. Eligible students must have a current year FAFSA on file. Participating students typically work no more than 10-15 hours per week (as determined by the employer) during the academic year.

# State (Institutional) Employment Program

Students participating in this program do not need to demonstrate unmet financial need nor is a current year FAFSA required. Hours are typically limited to no more than 10-15 hours per week during the academic year (as determined by the employer).

# Military and Veteran Success

All Active-Duty Service-members, Veterans, Reservists, National Guard personnel and eligible dependents who are eligible for VA education benefits should contact this office at an early date so that the necessary VA paperwork can be processed and to assure prompt payments of educational benefits.

# Conditions Which Accompany Financial Aid

In order to continue receiving financial aid following initial enrollment at PennWest University of Pennsylvania, students must meet certain conditions each year. One such condition requires students to enroll at least part-time (six credits) for every aid program, except the federal Pell Grant program. Also, all federal and state aid applicants must reapply for aid using the FAFSA form each year.

Full-time baccalaureate students may receive assistance from most federal Title IV programs for up to six years of attendance or 180 semester hours; full-time associate degree students are limited to three years of attendance or 90 semester hours. State programs provide baccalaureate students with up to four years of potential funding and associate degree students with a maximum of two years of funding.

Federal and state regulations require students to maintain satisfactory academic progress (SAP). Pennsylvania Western University of Pennsylvania has developed standards of Satisfactory Academic Progress (SAP) in accordance with federal regulations. This policy measures quantity (number of credits completed), quality (cumulative grade point average), and maximum time frames for completion and measures progress incrementally. SAP will be reviewed after each payment period (fall semester, spring semester, and the summer term).

The provisions of the policy apply to students seeking eligibility for Federal Title IV Aid (Federal Pell, Federal SEOG, Federal Direct Stafford Subsidize and Unsubsidized Loans, Federal Work-Study, Federal Direct Plus, Federal TEACH Grant, and Federal Nursing Loans), and other programs, which require monitoring of academic progress. Note: Standards of satisfactory academic progress for the PA State Grant is not the same as the federal standards.

For financial aid purposes, a student is considered to be making satisfactory academic progress if he/she meets the following criteria: All undergraduate students are required to maintain a minimum cumulative grade point average of 2.0 or better and complete at least 67% of all attempted coursework which includes (F)ailures, (I)ncompletes, (W)ithdrawals, and (R)epeat courses.

Note: The Satisfactory Academic Progress Policy for Financial Aid recipients is independent of "Academic Probation and Suspension." Students who have completed 180 credits and/or 12 semesters with or without the benefit of financial assistance are no longer eligible for financial aid. If it is determined that a student has met the requirements for his/her degree but did not apply for graduation, federal grant aid will not be awarded. All credits are counted as attempted credits after the end of the "add/drop period" for the purpose of determining progress for federal financial aid. *The number of semesters is based on an equivalency of full-time enrollment (e.g. a student enrolled in six (6) credit hours has an equivalency of .50 semester (6 credit hours/12 full-time credits hours = .50).

Any student who fails to meet SAP requirements will be placed on financial aid warning for one semester. If at the end of the warning period the student does not meet the requirements for SAP, all aid will be cancelled and the student is placed on financial aid suspension; students on financial aid suspension are no longer eligible for federal financial aid (which includes student loans).

Students who are on warning are encouraged to seek academic and/ or personal counseling. Counseling services can provide the student with additional support, which may alleviate obstacles that hinder satisfactory academic progress. Students on warning are further encouraged to consult with a financial aid counselor prior to withdrawing from any classes or if midterm grades are failures.

# Reinstatement of Aid

Aid may be reinstated by meeting the requirements for SAP or by an approved appeal with an academic plan signed by the student's academic advisor. If aid is reinstated, a probationary status will remain in effect. A period of non-enrollment does not reinstate aid eligibility. Appeals Students who wish to appeal the suspension of financial aid eligibility based on mitigating circumstances (e.g. severe illness, death of close family member, severe injury, other factors relevant to student success) may do so by submitting a letter of appeal and supporting documentation to the Financial Aid Office within the first 2 months of the semester, which is affected by the SAP status for which the appeal applies.

All appeals for reinstatement of aid must include: A completed appeal form which identifies the reason for unsatisfactory progress, supporting documentation, and what has changed in order to better facilitate academic success. Once this material is received, the Financial Aid Office will review and approve or deny the appeal. If approved, the student will need to meet with their advisor, department chair or dean to complete an academic plan. The plan must be signed by the student as well as the academic advisor and must be received by the Financial Aid Office no later than the 8th week of classes.

The Director of Financial Aid will notify the student of the decision to reinstate or deny aid. If the appeal is approved, the student must adhere to the signed academic plan and if the conditions are not satisfied, students are placed on Financial Aid Denied without an opportunity to appeal and aid will be denied in all subsequent terms until the student can regain aid eligibility by reaching the required 67% completion rate and a 2.0 cumulative GPA. The committee will not review incomplete and/or partial appeals. All documentation is retained by the Financial Aid Office for audit purposes.

# Return of Federal Aid Monies Due to University Withdrawal

Federal Title IV regulations dictate the return of federal aid monies. If a recipient of Title IV funds (Pell Grant, IASG, SEOG Grant, TEACH Grant, Direct Student Loan) withdraws from school after beginning attendance, a portion of the Title IV funds may have to be returned to the U.S. Department of Education (USDE). Title IV funds are awarded to a student under the assumption that the student will attend school for the entire period for which the assistance is awarded. When a student withdraws, the student may no longer be eligible for the full amount of the Title IV funds that the student was originally scheduled to receive. Students who are considering withdrawing after the semester begins or reducing their credit hour load, should contact the Financial Aid Office first to determine the impact on their financial aid awards. If a student withdraws before completing 60 percent of the semester, the percentage of Title IV funds earned is equal to the percentage of the semester completed. The university is required to return the unearned portion to the U.S. Department of Education. If a student earned less aid than was disbursed, the institution is required to return a portion of the funds and the student is then required to return a portion of the funds. When Title IV funds are returned, the student borrower may owe a balance to the institution. The institution must return the amount of the Title IV funds for which it is responsible no later than 45 days after the date of the determination of the date of the student's withdrawal.

The percentage of payment period or term completed up to the withdrawal date is determined by dividing the total number of days enrolled by the total days in the standard payment period or term. (Any break of five days or more is not counted as part of the days in the term.) This percentage is also the percentage of earned aid. Funds are returned to

the appropriate federal program based on the percentage of unearned aid using the following formula: aid to be returned= (100 percent of the aid that could be disbursed minus the percentage of earned aid) multiplied by the total amount of aid that could have been disbursed during the payment period of the term.

Returns are allocated in the following order:

1. Unsubsidized Federal Direct Student Loans
2. Subsidized Federal Direct Student Loans
3. Federal Direct PLUS Loans
4. Federal Pell Grants
5. Federal SEOG Grants
6. TEACH Grant
7. Iraq and Afghanistan Service Grant

If a student withdraws after completing more than 60 percent of the semester, the percentage of Title IV funds earned is 100, and neither the student nor the school return any funds to USDE.

If a student earns more aid than was disbursed to him/ her, the institution owes the student a post-withdrawal disbursement which must be paid within 120 days of the student's withdrawal. The full policy can be found on PennWest's website.

Please note: The university refund policy for tuition and fees is very different from the Federal Title IV regulations for returning financial aid. For example: If a student withdraws after the end of the university refund period, the student will be charged for 100 percent of his/her tuition and fees. If the student withdraws before completing more than 60 percent of the semester, the university is required to return a portion of his/her Title IV funds. In most cases, the student will owe the university for the Title IV funds returned. If not repaid to the university, the student will not be able to return in future semesters or receive official transcripts.

# Student Life

- Institutional Effectiveness and Institutional Research
- Student Affairs
- University Police

# Division of Institutional Effectiveness, Student Affairs, and University Police

The Division of Institutional Effectiveness, Student Affairs, and University Police fosters opportunities to engage students in an environment conducive to lifelong learning. Student Life is a critical component of a student's learning experience that goes beyond the classroom and provides a safe and healthy living and learning environment. Our student-centered approach promotes learning, social interaction, and personal growth in a multicultural world. We are committed to developing empowered and responsible students in their progression towards graduation and global citizenship.

Brief descriptions of our functional areas are below.

# Institutional Effectiveness and Institutional Research

The Offices of Institutional Effectiveness and Institutional Research are responsible for assisting in institution wide reporting, compliance, assessment, and accreditation. This includes development and management of the assessment framework for strategic planning, strategic management, and continuous improvements. The team ensures governance and validation of institutional data and promotes a culture of assessment and data-based decision making.

# Student Affairs

## Auxiliaries and Project Management

*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. Students living in a residence hall, as well as commuters, may choose from a variety of meal plans. All students who live in a university residence hall must participate in the meal plan program.

*PennWest Student Centers*

The mission of the Student Center is to serve as the "family room" for the campus Community. We are dedicated to providing and fostering life-long learning opportunities for our community through a broad array of services, facilities, and programs of an educational, multicultural, and recreational nature.

# Campus Life

Campus Life aids students in their transition to PennWest through Orientation and Welcome Weekend programs and challenges students to learn and grow through involvement clubs and organizations, University Programming, Homecoming Activities, Greek Life, and Leadership & Career Development. We host several events throughout the year that are planned and coordinated by students, for students. The Programming Boards are the central event planning group for the campus. The student-run organizations provide entertainment and activities for all students. These events enhance the educational, cultural, social, and recreational aspects of the university experience. Activities include speakers, comedians, recreation, and a wide variety of other events that are free to students.

We strive to give students and clubs the autonomy to host their own events, while imparting leadership opportunities for students to become campus leaders. We work in constant communication with the Student Government and the Student Associations for the advancement of the student body.

We offer a variety of resources and programming that enhances college life and celebrates individual differences. We provide leadership opportunities that foster personal and professional development while coordinating multicultural initiatives. We encourage acceptance and appreciation of cultural differences where everyone is welcomed and supported. We are dedicated to helping you develop the skills and experiences valued by employers and learn how to prepare for the transition from college to career.

*Career Center*

The Center for Career and Professional Development educates and empowers students to explore, prepare, and apply their skills and experiences to meet their definition of career and life success. We offer you important guidance and career resources to be successful in today's competitive job markets, which are accessible 24/7 at career.pennwest.edu.

Students can meet with their career coach who can help you:

- Explore majors and careers
- Understand, develop, and articulate key skills employers seek of interns and graduates
- View on campus jobs/graduate assistantships
- Learn internship and job search strategies
- Develop resumes and cover letters
- Prepare for interviews and career fairs/events
- Research and apply to graduate school
- Connect with employers looking to hire PennWest interns and graduates

The Career Center also delivers workshops to classes and student clubs and organizations on a variety of topics such as career development and planning, resume writing, interviewing, and job/internship searching. Students are encouraged to visit the center early and often throughout their college experience. If you have any question email career@pennwest.edu.

*Internship Center*

The Internship Center is a resource for students seeking a for-credit internship. We help students navigate the university's internship application process, update them on available resources and deadlines, and coordinate the application process for select academic departments. In addition, the Internship Center manages the internship evaluation process measuring students' Career Readiness. We also oversee the Rutledge Internship Award available to PennWest California students.

Rutledge Internship Award

This scholarship provides financial assistance to students from Southwestern Pennsylvania who wish to pursue a for-credit internship 150 miles from campus.

Eligibility Requirements:

- Must reside in one of the following PA Counties: Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Lawrence, Somerset, Washington, or Westmoreland.
- Must have secured a for-credit academic internship.
- Must demonstrate financial need.

Questions about internships? Visit https://career.pennwest.edu/channels/apply-for-internships/or email internship@pennwest.edu.

*Fraternity and Sorority Life*

Fraternities and sororities offer students the opportunity for leadership, service, academics, and lifelong friendships. Greek membership carries with it many immediate benefits, including leadership opportunities, academic support, and an emphasis on community service; this has been the basis of the Greek letter movement since its founding over 150 years ago.

Joining a Greek organization is an excellent way to get involved. Besides making great friendships that will last a lifetime, students will gain valuable leadership skills and give back to others through community service.

*New Student Orientation/Welcome Weekend*

Occurring in the summer, New Student Orientation provides incoming students and their parents/supports one final opportunity to visit campus prior to the start of the semester. As part of the program, participants will have an opportunity to meet with Student Financial, Residence Life, Dining, and other offices/departments to ensure all necessary paperwork has been submitted so the student can smoothly start their first semester. There is also an opportunity for students to review their fall schedule, meet with faculty & success coaches and meet other students.

Welcome Weekend occurs the weekend before classes start and seeks to get new students acclimated to life on campus. Through interactive programs students will learn about rules and policies related life on campus and in the Residence Halls, opportunities for involvement in clubs/organizations, how to find their classes and will participate in campus traditions, as well as other fun activities.

*Student Conduct*

Standards for student-conduct are established to maintain order, to provide for the safety and wellbeing of all members of the University community, to support a positive living and learning environment, and to uphold the good name of the University. Students are held accountable for their actions and are encouraged to act as positively contributing members of the University community. Consistent with the educational mission of the University, appropriate efforts are made to foster personal and social development. The Dean of Students Office provides the due process through which allegations of misconduct are adjudicated. Copies of the Student Code of Conduct and Procedures are available here.

*Student Government & Student Association*

The Student Government is the official representative body of the students at PennWest and has a presence on each campus. Student Government responds to various student issues and concerns to enhance the quality of life for PennWest students. Student Government officially recognizes student organizations and works with the Student Associations to annually allocate Student Activity Fee budgets to the student organizations on our campuses so they can sponsor campus-wide programs and activities.

Membership in Student Government, or on a Student Association Board, is a terrific way to develop your leadership skills through attending meetings, serving on committees, planning programs, working on student concerns, and participating in leadership conferences.

*Student Organizations*

A complete list of student organizations can be obtained upon request to campuslife@pennwest.edu or by signing into the Engage platform for PennWest: engage.pennwest.edu

# Residence Life and Housing

PennWest offers a blend of contemporary housing in suites as well as traditional residence hall communities. PennWest is proud of our residential communities that offer students more privacy in their living options while remaining near classes, the student center, dining area, and all the campus athletic venues. Both contemporary and traditional housing offer convenience and commitment from the university community to promote student success. In all residence hall rooms, each student has individual furnishings that include a bed, dresser, desk, desk chair and wardrobe/ closet. High-speed Internet access and network access. All residence halls feature common lounges with wireless access, recreation areas, television lounges, vending/snack equipment and laundry facilities.

The mission of Residence Life and Housing is to provide quality residential services that complement the mission of the University by encouraging civility, personal development, and student success. This is achieved by offering a just and caring community for everyone. The Residence Life and Housing staff is available to assist new students in making the transition from home to life on campus and to assist students in developing knowledge and skills that will give them a foundation for achieving excellence within and outside of the classroom. The residence hall staff provides activities and opportunities for students to become involved in campus life and community activities. Professional staff are helped by Graduate Hall Coordinators and undergraduate Community Assistants in each community's operation.

Safety and security are among our top concerns. Students living on campus will reside in facilities having smoke and heat detection systems and sprinklers throughout the facilities. In addition, card access systems are available in all the living units. Beyond the available equipment, the halls are staffed by well-trained professional students and employees who work to maintain a safe environment. Safety education is on-going in the hall communities. In addition, the

university police and the Office of Safety and Risk Management participate in staff and student education programs and routinely may be found in the residence halls.

# Wellness

*Health Promotions*

The Wellness offices provide students with information and resources that they may use for programming, educational purposes, or personal use. Free materials are available for all students that cover a wide variety of topics, ranging from mental health to healthy- eating habits.

The Wellness Offices also support Health Promotions programs such as BASICS (Brief Alcohol Screening and Intervention for College Students) and CASICS (Cannabis Screening and Intervention for College Students). BASICS and CASICS are the nationally recognized alcohol and marijuana education programs utilized on each PennWest campus. These programs form a comprehensive strategy to improve well-being; reduce underage drinking and other drug abuse among students and promote the ideals of safety and wellness to all students.

*Counseling Services*

Counseling Services is part of the University's comprehensive student health program. It is centrally located on campus and is accessible to all enrolled students.

Counseling Services offers professional and confidential counseling for developmental, educational, and future goals. Counseling creates an opportunity for a student to address personal, social and/or emotional concerns, and to enhance a successful university experience. Counseling Services strives to facilitate the development of students by providing short-term individual, relationship, and group counseling.

Through the provision of high-quality clinical services Counseling Services promotes the total development of students by reducing psychological problems and distress and by enhancing mental health, well-being, quality of life, and supporting aspirations for optimal functioning. The primary focus is on providing brief, strengths-based, confidential counseling aimed at helping students succeed academically and interpersonally.

Counseling Services has three essential roles:

1. Providing clinical services that help students achieve their academic and personal goals
2. Educating the campus community about the emotional and developmental needs of students through community level interventions, including outreach, programming, and consultation
3. Responding to the psychological effects of crisis impacting individual students and the campus community

Counseling Services is open to students in the fall and spring semesters when classes are in session. The Counseling Services faculty are licensed mental health professionals who can provide counseling in person on campus and via a confidential telehealth format to meet the individual students' needs. For additional information, please refer to the PennWest directory for phone and email information.

*Fitness Centers*

The Fitness Centers are on each campus and are accessible to all students with their student ID card who pay the campus recreation fee. Memberships are available to current students, faculty, staff, and alumni. Guest passes are available for non-members if they are accompanied by a current member. Weight rooms, cardio areas, climbing walls, group fitness studios, walking/running indoor tracks, and gym space are just a few of the areas offered on each campus. Aquatic areas, eSports, and informal recreation vary by facility. Stop by and ask for a tour and learn how you can enjoy these services.

**Health Services**

*Intramural Sports*

Intramural sports provide members with a flexible, yet structured, environment in which to participate in a variety of athletic-type activities. These programs are operated in league and tournament formats, with various divisions including men's, women's, open, and co-recreational teams. Individuals and teams must register to participate through IM Leagues on each campus. The program is open to all students, faculty, and staff. Opportunities range from Basketball (3v3 & 5v5), Board Games, Fantasy Football, Flag Football, Soccer, Softball and MORE.

*Office for Students with Disabilities*

Services for students with disabilities are provided through the Office for Students with Disabilities (OSD). Students must request accommodations through OSD and should make the request for accommodations as soon as possible. An application is available on the Penn West website and must be submitted with accompanying documentation that supports the need for services. Examples of acceptable documentation are and IEP, 504, psychiatric and or psychological evaluation, a summary letter from a clinician, counselor, therapist or other appropriate health professional that lists one's diagnosis, symptoms, and how those symptoms impact the students' activities of daily living as well as academics. The decision regarding appropriateness of the requested accommodation rests with the service provider office and must be supported by the student's documentation on file with OSD.

*Outdoor Recreation*

Outdoor Recreation provides the campus community with additional outlets for the expenditure of leisure time. Outdoor recreation trips complete with equipment rentals include white water rafting, skydiving, caving, mountain biking, hiking, camping, canoeing, paintball, spring break adventure trip, alpine and cross-country skiing, rock climbing, snowshoeing, snowboarding, and more. These programs are structured for any level of adventure. No experience necessary! Stop by your fitness center for more trip information or to rent any of our outdoor equipment.

*Sports Clubs*

Sports clubs provide students the opportunity for personal growth and leadership development through competitive sports interaction amongst intercollegiate competition. The mission is to enhance each club and provide the best available resources, and to promote each participant not only as a student, but a student-athlete inside and outside the educational classroom and on the playing field. It should be emphasized that the clubs are operated for and by the students; each club is student initiated and sustained. Each club has a University Advisor, and some have coaches as available and required. Teams typically compete in local, regional, and national conferences and leagues against other colleges and universities. For a complete listing of the sports clubs offered please go to the Engage Platform for PennWest or stop by your campus fitness center.

*Health Services*

Health Services provides episodic, wholistic health care. Health Services is staffed by a medical director, a certified registered nurse practitioner, and registered nurses.

The goal of the staff is to promote wellness, healthier lifestyles, provide health education, increase health consumer awareness, and encourage self-care responsibilities. A wide referral base is maintained for any expertise needed to treat a student. Confidentiality is maintained and health information will not be released without the student's written permission. Students are encouraged to have open communications with their family or significant other. A sample of services available include illness and injury diagnosis and treatment, TB testing, allergy injections, physicals, pap tests, birth control, immunizations, educational programs, eating concerns, nutrition, stress management, and sexual health.

Ambulance service is available from the local community fire department and is utilized at the student's own expense or his/her insurance carrier.

For additional information, please refer to the PennWest directory for phone and email information.

*Student Support Assistants*

Student Support Assistants provide a wide array of resources and support to students who may be struggling with mental and/or physical health, academics, relationship issues, interpersonal conflict, and more. Student Support Assistants help students get connected to resources on campus that can help them overcome obstacles and succeed both academically and personally.

Hours differ on each campus therefore, to request services, please contact the Counseling Center on the campus in which you are primarily enrolled:

**Clarion Campus: 814-393-2255 - 256 Becht Hall**

**California Campus: 724-938-4056 - G-53 Carter Hall**

**Edinboro Campus: 814-732-2252 - McNerney Hall, 1st floor**

****Students enrolled as Global On-Line students, please contact 814-393-2255 or email at Studentwellness-cal@pennwest.edu**

**Students experiencing a crisis outside of Counseling Services normal operational hours are to contact the University Police or 911.**

# University Police

The PennWest University Police Department is responsible for security on campus. All PennWest University police officers have extensive, ongoing police training, including courses in criminal justice, investigation, accident reporting, first aid, and criminal law and procedures. All PennWest University Police Officers complete annual training as required by MPOETC (Municipal Police Officers Education and Training Commission), and other training as required under the standards of the Pa. Chiefs of Police Association's Accreditation Program. Their top priority is the safety and security of our campus community.

University police representatives meet regularly with local police and receive all information concerning allegations of criminal activity by students. This information is retained by the PennWest University Police Department and provided to the Office of Student Conduct, who may subject the violator to university disciplinary procedures.

The PennWest University Police Department is on duty around the clock, every day of the year. University police officers work with local, state, and federal law enforcement, as needed, to process physical evidence or investigate crimes. All crimes that occur on PennWest University Campuses are investigated by the PennWest University Police.

# Parking

Parking at each PennWest University campus is overseen by the University Police Station for that campus. All campuses have annual student parking permits available for their campus. Specific information for student parking on each PennWest Campus can be obtained through that campus parking office. Permits are required on all campuses for students during the academic year.

# Academic Information

# Academic Affairs

For the student pursuing a program of study at PennWest University, the catalog is an important planning tool. It provides essential information that will assist the student in meeting the requirements and standards related to that program of study as well as the range of services and opportunities provided by the University in support of the student's educational goals. The catalog should be used in working with the student's advisor. The information contained in the catalog applies to the program of study for individuals entering during the year for which the catalog is dated. The information in this section of the catalog explains the essential elements of academic policies, procedures and standards in effect at the time of its publication. Additional information concerning these issues is available from the Office of the Provost. Students are expected to follow their program of study outlined in the catalog in effect at the time of their admission to that program. Students who transfer to a new program or who interrupt their program of study for a period exceeding one calendar year and are subsequently reinstated will be expected to meet the requirements of the program in effect at the time of their transfer or reinstatement. When this is impractical, students, together with their advisor and chairperson, will develop a program to be approved by the dean of the school. Reinstated students who return to the University within one calendar year of their last enrollment have the option of continuing under the curriculum and graduation requirements for which they were responsible when they left the institution.

# Academic Advisement and Student Responsibility

Upon entering PennWest University, each student is assigned a faculty advisor who, by experience, professional background and example, should be particularly qualified to assist the student in planning the program of study, in developing successful strategies for academic success and in providing insight into preparation for a career and the value of the program of study the student has undertaken. Academic advisors are available during regularly scheduled office hours or by appointment to meet with their advisees. The academic advisement process is a critical element in a university education. In addition, professional counseling is available to those seeking assistance with academic or personal problems. These opportunities are listed elsewhere in this catalogue and in other publications provided to students. The student is responsible for ensuring that all requirements for graduation have been met. It is expected that each student will discuss, on a regular basis, the development and execution of a plan of study for his or her academic program with the assigned academic advisor. However, the final responsibility rests with the student.

# Academic and Student Resources

# Dean of Students Office

The Dean of Students Office for PennWest promotes responsible citizenship by protecting student rights and maintaining the principles outlined in the Student Code of Conduct and Community Standards Document. The office administers campus disciplinary procedures, seeks to maintain a positive living and learning environment and encourages the building of a respectful and inclusive community. Additionally, the office works with the campus based Behavioral Intervention Team (BIT), and the Title IX process, as well as with student complaints. The office also serves as a resource to the university community regarding conflict management and resolution by providing services that promote the development of critical life skills. A mediation service is available to assist students in resolving interpersonal conflict.

# Study Abroad

Studying abroad is an incredible opportunity and Pennsylvania Western University encourages students to explore such an opportunity. A study abroad experience can be short-term (two to ten weeks), for a semester, or academic year. Pennsylvania Western University offers short-term, for credit, study abroad programs at various locations throughout the world for all students. Programs are offered in the summer, during winter and spring breaks, and our faculty accompany our students. Recently, students have traveled to England, Scotland, Italy, China, Japan, Ireland, and the

Dominican Republic on long and short-term experiences. Getting started is easy! The Global Education Office will provide students with a basic overview of study abroad opportunities and the process. Individual guidance is provided to meet a student's specific goals regarding location, finances, classes/transfer credits, and preparation. Students can learn more by emailing globaled-edn@pennwest.edu.

# General Education Program

## Goals and Purpose

PennWest empowers students to build meaningful lives through a broad array of accredited programs, career-focused learning, and an unwavering focus on student success. As a comprehensive institution, PennWest provides accessible, affordable higher education through a specialized education in a major program of study combined with a common general education program. Specialized education provides a student with a depth of knowledge in a particular vocation, profession, academic discipline, or area of study.  Through PennWest University's General Education program, students build and strengthen foundational skills (Foundations); discover and explore the arts, the humanities, and the social and natural worlds (Discoveries); and develop and strengthen competencies key to a fulfilling career and engaged citizenship (Competencies). Specific programs may prescribe courses in each category for their students.

## General Education Requirements

I. Foundations (12 credits) - Students develop foundational skills by taking four courses designed to be taken during the beginning of a student's academic career.

a. Oral Communication

b. Written Communication

c. Quantitative Reasoning

d. Technological Literacy

II. Discoveries (27 credits) - Students explore diverse areas of inquiry and develop "broad knowledge of the world" (PASSHE policy 1993-01) by taking 27 credits of Discoveries courses.

a. Arts and Humanities (9 credits)

b. Social Sciences (9 credits)

c. Natural Sciences and Technology (9 credits)

*At least two disciplines must be represented within each of the three discoveries categories.

III. Elective (3 credits) - Students have the option to take up to three credits of approved Dimensions of Wellness and Health courses or a Foundations or Discoveries elective as directed by their program of study.

IV. Competencies (9 courses) - Students will take a variety of courses that develop one or more competencies key to a fulfilling career and engaged citizenship in a dynamic world.

1. Quantitative Applications (1 course)
2. Applied Methodologies (1 course)
3. Intercultural Fluency (1 course)
4. Ethical Reasoning (1 course)
5. Information Literacy (1 course)
6. Writing Intensive (2 courses)
7. Keystone Experience (1 course)

Within the General Education program, specific courses may be approved to fulfill Gen Ed requirements for both Foundations or Discoveries; however, a student may only use that course to satisfy either a Foundations or Discoveries requirement but not both.

Students cannot take more than two courses (of three or four credits each) in a specific, or similar, course prefix to meet their Foundations requirements.

Students cannot take more than two courses (of three/four credits each) in a specific course prefix to meet their Discoveries requirements.

Degree programs can prescribe that majors take up to three specific Discoveries courses (of three/four credits each) (or take up to three courses among a range of Discoveries courses), but programs cannot prescribe more than two courses within a given Discoveries area.

Within the Competencies requirements, courses from all disciplines and course levels may be designated as developing one or two (but not more than two) competencies.

Discoveries courses may also be designated as meeting one or two Competency requirements. Foundations courses may not be designated as meeting Competency requirements.

For the Quantitative Application, Intercultural Fluency, Ethical Reasoning, Applied Methodologies, and Information Literacy Competencies, a degree program can 1) require students to take a specific course (or course among a range of options) to meet the Competency or 2) permit the student to take any course (major, Discoveries, or free elective) that is designated to meet the Competency.

At least one of the two Intensive Writing Competency courses must be taken within a student's degree program (which could be a specific course designated by the degree program or one of multiple Writing-Intensive-designated courses within the major).

It is recommended that one Writing-Intensive designated course be taken within the first two years of student work and the other in the last two years of student work.

Students will satisfy the Keystone Experience Competency course requirement with a course within the student's degree program (for example, a capstone course, research experience, clinical training)

# Academic Policies

https://www.pennwest.edu/academics/policies

# Programs

## Associate Degree Programs

# Accounting, AS

The Associates of Science in Accounting degree prepares students for entry level positions in accounting. This degree applies seamlessly into the BSBA in Accounting.

Advisement Sheet

## Student Learning Outcomes

- Students will demonstrate analytical thinking skills and competence across core accounting areas.
- Students will measure the impact of income taxes on both personal and business financial performance.
- Students will effectively generate, analyze, and communicate accounting information internally and externally.

## Curriculum Requirements

### General Education

- Oral Communication - COMJ 1010 - Public Speaking **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - MATH 1010 - Quantitative Reasoning **Credit Hours:** 3
- Technological Literacy - BSIN 2000 - Management Information Systems **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - PSYC 1000 - Introduction to Psychology **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective **Credit Hours:** 3

### Competencies

- Applied Methodologies - Natural science elective **Credit Hours:** 3
- Ethical Reasoning - BSAD 3200 - Business Ethics **Credit Hours:** 3
- Information Literacy - Any Course **Credit Hours:** 3
- Writing Intensive - ENGL 2280 - Writing for Business **Credit Hours:** 3

## Major

### Required Major Courses

- ACC 2000 - Financial Accounting **Credit Hours:** 3
- ACC 3000 - Managerial Accounting **Credit Hours:** 3
- BLAW 2000 - Legal and Ethical Environment of Business **Credit Hours:** 3
- ECON 2100 - Principles of Microeconomics **Credit Hours:** 3
- ECON 2200 - Principles of Macroeconomics **Credit Hours:** 3
- ACC 3100 - Intermediate Accounting I **Credit Hours:** 3
- ACC 3200 - Federal Income Tax I **Credit Hours:** 3
- ACC 4600 - Accounting Information Systems **Credit Hours:** 3
- Any ACC course **Credits Hours:** 3

- MATH 1220 - College Algebra **Credit Hours:** 3
  **OR**
- QBA 2000 - QBA 2: Statistical Analysis **Credit Hours:** 3

- Business elective aligned with BSBA major or concentration **Credit Hours:** 3

## Total Credits: 60

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Allied Health, AS

This is a 60-credit online degree completion program for individuals who are already credentialed allied health professionals. Approximately 25 to 30 credits will be awarded to individuals who have completed a formal accredited education program in a recognized allied health field and who hold the appropriate professional credential deemed acceptable by the College of Health Sciences. Eligible individuals will complete approximately 30 credits of general education coursework online. PennWest does not provide the clinical course work required for this degree program.

Advisement Sheet

## Student Learning Outcomes

- Graduates will be able to commit to personal and professional ethical responsibility.
- Graduates will be able to formulate patient care strategies based on their knowledge and understanding of cultural diversity.

## Curriculum Requirements

## General Education

- Oral Communication - COMJ 1010 - Public Speaking **Credit Hours:** 3

- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - Any Course **Credit Hours:** 3 (Recommended: STAT 2020 - Elements of Statistics )
- Technological Literacy - Any Course **Credit Hours:** 3
- Arts & Humanities- Any Course **Credit Hours:** 3 (Recommended: PHIL 3220 - Biomedical Ethics )
- Social Sciences- Any Course **Credit Hours:** 3 (Recommended : SOCI 1000 - Introduction to Sociology OR PSYC 1000 - Introduction to Psychology )
- Natural Sciences & Tech - Any Course **Credit Hours:** 3 (Recommended : BIOL 1101 - Fundamentals of Biology )
- Student Elective- ALHL 3301 - Research Methods for Health Sciences **Credit Hours:** 3

## Competencies

- Applied Methodologies - Any Course **Credit Hours:** 3 (Recommended: STAT 2020 - Elements of Statistics )
- Ethical Reasoning - Any Course **Credit Hours:** 3 (Recommended: PHIL 3220 - Biomedical Ethics )
- Information Literacy - ALHL 3301 - Research Methods for Health Sciences **Credit Hours:** 3
- Writing Intensive - Any Course **Credit Hours:** 3 (Recommended: PHIL 3220 - Biomedical Ethics )

## Major

### Required Major Courses

- ALHL 2101 - Medical Terminology **Credit Hours:** 3
- ALHL 1201 - Introduction to the Healthcare Environment **Credit Hours:** 2
- ALHL 2290 - Allied Health Clinical I **Credit Hours:** 1 TO 15
- ALHL 2299 - Allied Health Clinical II **Credit Hours:** 1 TO 15
- ALHL 3300 - Allied Health Clinical III **Credit Hours:** 1 TO 15
- ALHL 3310 - Allied Health Clinical IV **Credit Hours:** 1 TO 15

## Total Credits: 60

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Applied Technology, AAS

The Associate of Applied Science in Applied Technology provides workplace ready training in many of Pennsylvania's high priority careers. Students complete general education, technology, and business courses either on campus or online and the technical component of the degree through licensed, certified, accredited, and/or otherwise approved technical education providers. This program utilizes a unique model which permits students to complete field training while attending PennWest University, or to transfer in their certification or training previously received from other accredited institutions. The concentration in Aeronautical Science works in collaboration with partnering flight schools to prepare students for careers as professional pilots, while earning their Associate of Applied Science degree. The flight and ground school is provided by a flight school certified by the Federal Aviation Administration or, alternatively, this training may be satisfied by possession of a current license/certification at the appropriate level. This portion of the training has additional associated costs depend on how the flight training requirements are satisfied.

Advisement Sheet

## Student Learning Outcomes

- Apply technology effectively to solve discipline-specific problems.
- Function effectively as a member or a leader on a technical team.
- Apply written, oral, and graphical communication in both technical and nontechnical environments, including an ability to identify and use appropriate technical literature.
- Apply knowledge, techniques, skills and modern tools of the discipline to solve broadly-defined problems appropriate to the discipline.

## Curriculum Requirements

Applied Technology (no concentration)

Applied Technology, Aeronautic Science Concentration

# Business Administration, AS

The Associates of Science in Business Administration Integrated Business degree prepares students for today's business environment. This degree applies seamlessly into the BSBA in Business Administration.

## Student Learning Outcomes

- Demonstrate foundational knowledge in functional business areas
- Effectively communicate business concepts and solutions

## Curriculum Requirements

### General Education

- Oral Communication - COMJ 1010 - Public Speaking **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - MATH 1010 - Quantitative Reasoning **Credit Hours:** 3
- Technological Literacy - BSIN 2000 - Management Information Systems **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - PSYC 1000 - Introduction to Psychology **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective - Any Course **Credit Hours:** 3

### Competencies

- Applied Methodologies - Natural science elective **Credit Hours:** 3
- Ethical Reasoning - BSAD 3200 - Business Ethics **Credit Hours:** 3
- Information Literacy - Any Course **Credit Hours:** 3
- Writing Intensive - ENGL 2280 - Writing for Business **Credit Hours:** 3

### Major

### Required Major Courses

- ACC 2000 - Financial Accounting **Credit Hours:** 3
- ACC 3000 - Managerial Accounting **Credit Hours:** 3
- BLAW 2000 - Legal and Ethical Environment of Business **Credit Hours:** 3
- BSAD 3200 - Business Ethics **Credit Hours:** 3
- ECON 2100 - Principles of Microeconomics **Credit Hours:** 3
- ECON 2200 - Principles of Macroeconomics **Credit Hours:** 3
- FINA 3000 - Financial Management **Credit Hours:** 3
- MGMT 3000 - Principles of Management **Credit Hours:** 3
- MKTG 3000 - Principles of Marketing **Credit Hours:** 3
- MATH 1220 - College Algebra **Credit Hours:** 3
- Business elective aligned with BSBA major or concentration **Credit Hours:** 3

## Total Credits: 60

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Digital Media Technology, AS

The Associate of Science in Digital Media Technology degree program prepares students to design, create and deliver content using print and digital media technologies. The program includes a core curriculum of technical, hands-on laboratory and studio courses that explore relevant concepts.

Advisement Sheet

## Student Learning Outcomes

- Students will be able to evaluate principles of design and layout.
- Students will be able to solve problems related to print and digital media.
- Students will be able to operate various conventional and digital output devices.
- Students will be able to design multimedia elements for printing and digital media.

## Curriculum Requirements

### General Education

- Written Communication ENGL 1200 - College Composition **Credit Hours:** 3

- Quantitative Reason - MATH 1220 - College Algebra **Credit Hours:** 3
- Technological Literacy - DGMT 1800 - Foundations of Digital Media **Credit Hours:** 3
- Arts and Humanties - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours**: 3
- Student Elective **Credit Hours:** 3

## Competencies

- Applied Methodologies - Any Course **Credit Hours:** 3
- Intercultural Fluency - Any Course (Intercultural Fluency OR Ethical Reasoning for AS) **Credit Hours:** 3
- Ethical Reasoning - Any Course (Intercultural Fluency OR Ethical Reasoning for AS) **Credit Hours:** 3
- Information Literacy - Any Course **Credit Hours:** 3
- Writing Intensive - Any Course **Credit Hours:** 3

## Major

### Required Major Courses

- DGMT 1000 - Foundations of Print Media **Credit Hours:** 3
- DGMT 2000 - Print Media Production Processes **Credit Hours:** 3
- DGMT 2200 - Digital Photography **Credit Hours:** 3
- DGMT 2250 - Digital Page Layout **Credit Hours:** 3
- DGMT 2400 - Vector Based Graphics **Credit Hours:** 3
- DGMT 2500 - Digital Imaging **Credit Hours:** 3
- DGMT 3200 - Digital Video **Credit Hours:** 3

### Major Electives

- Writing Intensive Competency **Credit Hours:** 3
- Information Literacy Competency **Credit Hours:** 3

- Intercultural Fluency **Credit Hours:** 3
  **OR**
- Ethical Reasoning Competency **Credit Hours:** 3

- Applied Methodologies Competency **Credit Hours:** 3

## Total Credits: 60

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Engineering Technology, AS

This program prepares individuals to apply basic engineering principles and technical skills in support of engineers engaged in a wide variety of projects. Includes instruction in various engineering support functions for research, production, and operations, and applications to specific engineering specialties. This program requires students to select a concentration to define the specific field about which program instruction is focused.

## Student Learning Outcomes

**Computer Engineering Technology Concentration Outcomes**

- Apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline.
- Design solutions for well-defined technical problems and assist with the engineering design of systems, components, or processes appropriate to the discipline.
- Identify and use appropriate technical literature and apply written, oral, and graphical communication in well-defined technical and non-technical environments.
- Conduct standard tests, measurements, and experiments, and analyze and interpret the results.
- Function effectively as a member of a technical team.

**Electrical Engineering Technology Concentration Outcomes**

- Apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline.
- Design solutions for well-defined technical problems and assist with the engineering design of systems, components, or processes appropriate to the discipline.
- Identify and use appropriate technical literature and apply written, oral, and graphical communication in well-defined technical and non-technical environments.
- Conduct standard tests, measurements, and experiments, and analyze and interpret the results.
- Function effectively as a member of a technical team.

**Robotics Engineering Technology Concentration**

- Apply knowledge, techniques, skills, and modern tools in robotics engineering technology.
- Apply concepts of circuit analysis, analog and digital electronics, automation and controls, instrumentation, and computers to aid in the characterization, analysis, and troubleshooting of robotic systems.
- Apply problem-solving skills, including the ability to identify problems, conduct experiments, gather data, analyze data, and produce results.
- Use appropriate computer languages and application software that pertain to robotics engineering technology systems.
- Function effectively as a member or a leader on a technical team.
- Apply written, oral, and graphical communication in both technical and nontechnical environments; demonstrate the ability to identify and use appropriate technical literature.
- Explain and analyze the impact of engineering technology solutions in a societal and global context.

## Curriculum Requirements

Engineering Technology, Computer Engineering Technology Concentration

Engineering Technology, Electrical Engineering Technology Concentration

Engineering Technology, Robotics Engineering Technology Concentration

# Human Services and Rehabilitation, AS

The Associate of Science in Human Services and Rehabilitation trains people to work in human service practitioner roles in various human service agencies. The program offers both specialized and general competencies. The two-year program culminates with a supervised internship/field experience in a human service agency. Students will work with faculty who are experienced, human service practitioners. Students may continue their study toward a bachelor's degree in Human Services and Rehabilitation, Sociology, or other related disciplines and receive credit toward graduation for courses taken while earning the associate degree.

Advisement Sheet

# Student Learning Outcomes

- Students will be familiar with the range of human service delivery models.
- Students will demonstrate professional attitudes, behavior, and skills.
- Students will demonstrate appreciation and awareness of diversity.
- Students will demonstrate an understanding of the importance and relevance of the constantly evolving knowledge base of the field of human services and its related disciplines and use this knowledge to better inform practice decisions and evaluate outcomes.
- Students will apply meaningful connections between classroom learning and experiences in the field throughout the program.
- Students will analyze the needs of clients/consumers, develop goals and design as well as implement a plan of action.

# Curriculum Requirements

## General Education

- Oral Communication - Any Course **Credit Hours:** 3
- Written Communication - Any Course **Credit Hours:** 3
- Quantitative Reason - Any Course **Credit Hours:** 3
- Technological Literacy - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - PSYC 1000 - Introduction to Psychology **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective - SOCI 1000 - Introduction to Sociology **Credit Hours:** 3

## Competencies

- Applied Methodologies - HSRH 2950 - Internship in Human Services and Rehabilitation **Credit Hours:** 3 TO 10
- Intercultural Fluency - SOCI 1000 - Introduction to Sociology **Credit Hours:** 3
- Information Literacy - HSRH 2270 - Neurological Impairments and Physical Disorders **Credit Hours:** 3

- Writing Intensive - SOCI 2300 - Sociology of Life Course **Credit Hours:** 3

### Major

### Required Major Courses

- HSRH 1260 - Introduction to Rehabilitation and Human Services **Credit Hours:** 3
- HSRH 2270 - Neurological Impairments and Physical Disorders **Credit Hours:** 3
- HSRH 2500 - Human Relations Skills **Credit Hours:** 3
- SOCI 2100 - Social Inequalities: Who Gets What, and Why? **Credit Hours:** 3
- SOCI 2300 - Sociology of Life Course **Credit Hours:** 3
- HSRH 2950 - Internship in Human Services and Rehabilitation **Credit Hours:** 3 TO 10
- HSRH 3995 - Seminar for Human Services and Rehabilitation Internship **Credit Hours:** 2

### Major Electives

- Any SOCI-, SOWK-, PSYC,- or HSRH-listed course **Credit Hours:** 12

## Total Credits: 60

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Interdisciplinary Studies, AA

The Associate of Arts in Interdisciplinary Studies offers students a broad foundation across the disciplines, with a focus on critical thinking, reading, and writing skills and a range of knowledge across the arts and humanities, social and behavioral sciences, and natural sciences. This academic program builds students' problem-solving skills to prepare them for the work force or continued studies toward a bachelor's degree.

Advisement Sheet

## Student Learning Outcomes

- Graduates can demonstrate strong written and verbal communication skills.
- Graduates can demonstrate an understanding of the perspectives of core disciplines, such as the natural sciences, social sciences, and arts and humanities.
- Graduates can demonstrate problem-solving and critical thinking skills.

## Curriculum Requirements

### General Education

- Oral Communication - Any Course **Credit Hours:** 3
- Written Communication - Any Course **Credit Hours:** 3
- Quantitative Reason - Any Course **Credit Hours:** 3

- Technological Literacy - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective **Credit Hours:** 3

## Competencies

- Quantitative Applications - Any Course **Credit Hours:** 3
- Applied Methodologies - Any Course **Credit Hours:** 3
- Intercultural Fluency - Any Course **Credit Hours:** 3
- Ethical Reasoning - Any Course **Credit Hours:** 3
- Information Literacy - Any Course **Credit Hours:** 3
- Writing Intensive - Any Course **Credit Hours:** 3
- Keystone Experience - Any Course **Credit Hours:** 3

## Free Electives

- Any Course **Credit Hours:** 3

## Major

### Required Major Courses

- Courses at the 3000-level or above **Credit Hours:** 9

### Major Electives

- Courses at the 1000-level or above **Credit Hours:** 15

## Total Credits: 60

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Interdisciplinary Studies, Science and Technology, AS

The Associate of Science in Interdisciplinary Studies, Science and Technology, offers students a customizable degree to build a unique skill set that focuses on two or more technical areas of study.

## Student Learning Outcomes

- Graduates can demonstrate strong written communication skills.
- Graduates can demonstrate problem-solving and/or critical thinking skills.
- Graduates can demonstrate adequate knowledge of the use of technology.
- Graduates can demonstrate knowledge of various disciplines including STEM, Business, and Economics.

# Curriculum Requirements

## General Education

- Oral Communication - Any Course **Credit Hours:** 3
- Written Communication - Any Course **Credit Hours:** 3
- Quantitative Reason - Any MATH course **Credit Hours:** 3
- Technological Literacy - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective **Credit Hours:** 3

## Competencies

- Applied Methodologies - Any Course **Credit Hours:** 3
- Intercultural Fluency - Any Course **Credit Hours:** 3
- Writing Intensive - Any Course **Credit Hours:** 3

- Ethical Reasoning - Any Course **Credit Hours:** 3

**OR**

- Information Literacy - Any Course **Credit Hours:** 3

## Free Electives

- Any Course **Credit Hours:** 9

## Major

### Required Major Courses

Professional Technical Core Studies

- Any courses from disciplines BIOL, BSAD, CMAC, CSMC, ECON, FINA, DGMT, GEOG, MATH, MKTG, STAT, NURS, PHYS, RECR **Credit Hours:** 27

# Total Credits: 60

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Nursing, ASN

The Associate of Science in Nursing program prepares nurses to exhibit integrity, and ethical behavior, while providing holistic patient-centered care, with dignity and respect for diversity. The program provides students with the knowledge and skills to sit for the National Council of State Boards of Nursing (NCSBN) NCLEX exam.

Advisement Sheet

## Student Learning Outcomes

- Recognize the patient or designee as the source of control and full partner in providing compassionate and coordinated care based on respect for patient's preferences, values, and needs.
- Function effectively within nursing and inter-professional teams, fostering open communication, mutual respect, and shared decision-making to achieve quality patient care.
- Integrate best current evidence with clinical expertise and patient/family preferences and values for delivery of optimal health care.
- Use data to monitor the outcomes of care processes and use improvement methods to design and test changes to continuously improve the quality and safety of health care systems.
- Minimizes risk of harm to patients and providers through both system effectiveness and individual performance.
- Use information and technology to communicate, manage knowledge, mitigate error, and support decision making.

## Curriculum Requirements

### General Education

- Oral Communication - Any Course **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - MATH 1030 - Mathematics for Health Sciences **Credit Hours:** 3
- Social Sciences - PSYC 1000 - Introduction to Psychology **Credit Hours:** 3
- Social Sciences - PSYC 2200 - Lifespan Developmental Psychology **Credit Hours:** 3
- Natural Sciences and Tech - BIOL 2810 - Human Anatomy and Physiology I Lecture **Credit Hours:** 3
- Natural Sciences and Tech - BIOL 3810 - Human Anatomy and Physiology II Lecture **Credit Hours:** 3

### Competencies

- Intercultural Fluency - NURS 1110 - Nursing Process I **Credit Hours:** 2
- Information Literacy - NURS 2030 - Nursing Seminar **Credit Hours:** 2
- Applied Methodology - BIOL 3811 - Human Anatomy and Physiology II Laboratory **Credit Hours:** 1

### Major

#### Required Major Courses

- NURS 1010 - Nursing Process I **Credit Hours:** 4

- NURS 1110 - Nursing Process I **Credit Hours:** 2
- NURS 1210 - Nursing Process I Clinical Lab **Credit Hours:** 1
- NURS 1310 - Nursing Health Assessment **Credit Hours:** 2
- NURS 1020 - Nursing Process II **Credit Hours:** 5
- NURS 1120 - Nursing Process II Clinical **Credit Hours:** 4
- NURS 2010 - Nursing Process III **Credit Hours:** 5
- NURS 2110 - Nursing Process III Clinical **Credit Hours:** 4
- NURS 2020 - Nursing Process IV **Credit Hours:** 5
- NURS 2030 - Nursing Seminar **Credit Hours:** 2
- NURS 2120 - Nursing Process IV Clinical **Credit Hours:** 4

### Major Electives

- BIOL 2811 - Human Anatomy and Physiology I Laboratory **Credit Hours:** 1
- BIOL 3811 - Human Anatomy and Physiology II Laboratory **Credit Hours:** 1

## Total Credits: 61

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Physical Therapist Assistant, AAS

The rigorous Physical Therapist Assistant (PTA)  Associate of Applied Science degree program at PennWest California trains individuals to assist physical therapists (PT's) in providing rehabilitation services that improve people's quality of life by improving physical mobility and function. This program can be completed in five semesters over two years and prepares you for the National Physical Therapy Examination and PTA licensure. A maximum of 26 students will be admitted based upon GPA in the first-semester pre-technical courses. Clinical internships give you the experience you need to excel in your career. This program is accredited by the Commission on Accreditation for Physical Therapy Education (CAPTE).

Advisement Sheet

## Student Learning Outcomes

- Students will understand the role of the physical therapist assistant and work in a manner consistent with their state practice act and American Physical Therapy Association's Code of Ethics and Guide for Conduct of the Physical Therapist Assistant.
- Students implement appropriate physical therapy intervention techniques based on the plan of care established by a licensed physical therapist.
- Students perform appropriate measurement techniques within the limits of practice to assist the supervising physical therapist.
- Students interact with patients and families in a manner which provides the desired psychosocial support including the recognition of cultural socioeconomic differences.
- Students produce quality documentation in an efficient manner.
- Students value professional literature and integrate evidence-based practice.
- Students will achieve an effective transition from this education program to a physical therapist assistant career.

## Curriculum Requirements

### General Education

- Oral Communication - COMJ 1010 - Public Speaking **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - Any Course **Credit Hours:** 3
- Social Sciences - PSYC 1000 - Introduction to Psychology **Credit Hours:** 3
- Social Sciences - PTA 1000 - Introduction to Physical Therapist Assistant **Credit Hours:** 3
- Natural Sciences and Tech - HLSC 1100 - Allied Health Anatomy and Physiology I **Credit Hours:** 4
- Natural Sciences and Tech - HLSC 1200 - Allied Health Anatomy & Physiology II **Credit Hours:** 4

### Competencies

- Ethical Reasoning - PTA 2400 - Physical Therapist Assistant Special Topics **Credit Hours:** 3
- Information Literacy - PTA 2250 - Physical Therapist Assistant Interventions in Orthopedic Impairments **Credit Hours:** 4

### Major

### Required Major Courses

- PTA 1010 - Basic Physical Therapy Procedures **Credit Hours:** 1
- PTA 2300 - Physical Therapy Interventions Across the Lifespan **Credit Hours:** 3
- PTA 2900 - Therapeutic Modalities **Credit Hours:** 4
- PTA 1100 - Introduction to Pathology **Credit Hours:** 2
- HLSC 2750 - Functional Kinesiology **Credit Hours:** 3
- PTA 4950 - Physical Therapy Clinical Internship I **Credit Hours:** 4
- PTA 2050 - Interventions in Cardiopulmonary Impairments **Credit Hours:** 3
- PTA 2100 - Physical Therapy Interventions for Neurological Impairments **Credit Hours:** 4
- PTA 2250 - Physical Therapist Assistant Interventions in Orthopedic Impairments **Credit Hours:** 4
- PTA 2400 - Physical Therapist Assistant Special Topics **Credit Hours:** 3
- PTA 2600 - Pharmacology and Imaging for the PTA **Credit Hours:** 2
- PTA 2000 - Professional Issues in PTA **Credit Hours:** 2
- PTA 4955 - Physical Therapy Clinical Internship II **Credit Hours:** 12

## Total Credits: 70

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Pre-Pharmacy, AS

The A.S-Pre-pharmacy degree develops theoretical and practical skills for a wide-range of career opportunities as students prepare for future pharmacy programs. Using modern instructional techniques and instrumentation, the

program will develop critical and independent thinking, collegial exchange of ideas and knowledge, and high ethical standards.

Advisement Sheet

# Student Learning Outcomes

- Students will **use** chemical theory to produce rationale for chemical reactivity.
- Students will **apply** quantitative reasoning to scientific data, to **interpret** experimental results and **draw** conclusions.
- Students will **maintain** accurate and structured records of experimental work using standard scientific format.
- Students will **develop** laboratory knowledge, technique, and instrumentation skills.
- Students will **analyze** experimental and instrumentation data, **interpret** experimental results, and **draw** conclusions.
- Students will **sustain** a commitment to safety in the laboratory.
- Students will be able to **use** electronic databases to search and access primary literature.
- Students will be able to **use** personal productivity software to create written reports and visual aids.
- Students will **generate** written reports that reflect the accepted style, conventions, and standards of the discipline of chemistry.
- Students will **compose** and **deliver** effective oral presentations in a professional manner.

# Curriculum Requirements

## General Education

- Oral Communication - Any Course **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - MATH 2410 - Analytical Geometry and Calculus I **Credit Hours:** 4
- Technological Literacy - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - SOCI 1000 - Introduction to Sociology **Credit Hours:** 3
- Natural Sciences and Tech - CHEM 1108 - General Chemistry I **Credit Hours:** 4
- Program Elective **Credit Hours:** 3

## Competencies

- Applied Methodologies - CHEM 1128 - General Chemistry II **Credit Hours:** 4
- Ethical Reasoning - Any Course **Credit Hours:** 3
- Information Literacy - Any Course **Credit Hours:** 3
- Writing Intensive - CHEM 2205 - Organic Chemistry I Laboratory **Credit Hours:** 1

## Major

### Required Major Courses

- STAT 2020 - Elements of Statistics **Credit Hours:** 3

- PHYS 1500 - General Physics I **Credit Hours:** 3 *
- PHYS 1510 - General Physics I Laboratory **Credit Hours:** 1 *
  **OR**
- PHYS 2500 - University Physics I **Credit Hours:** 4 *
- PHYS 2510 - University Physics I Laboratory **Credit Hours:** 1 *

- CHEM 1128 - General Chemistry II **Credit Hours:** 4
- CHEM 2200 - Organic Chemistry I **Credit Hours:** 3
- CHEM 2205 - Organic Chemistry I Laboratory **Credit Hours:** 1
- CHEM 2250 - Organic Chemistry II **Credit Hours:** 3
- CHEM 2255 - Organic Chemistry II Laboratory **Credit Hours:** 1
- BIOL 1900 - Introduction to Cellular and Molecular Biology **Credit Hours:** 4

- ECON 2200 - Principles of Macroeconomics **Credit Hours:** 3
  **OR**
- ECON 2100 - Principles of Microeconomics **Credit Hours:** 3

### Major Electives

Take 2 or more courses.

- BIOL 2202 - Genetics **Credit Hours:** 4
- BIOL 3330 - Cell Biology **Credit Hours:** 4
- BIOL 4320 - Molecular Biology **Credit Hours:** 4

## Total Credits: 60

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Preschool Education, AS

The Department of Early Childhood and Elementary Education prepares preschool teachers and assistants for the Commonwealth of Pennsylvania in the area of preschool education. Upon completion of 60 credit hours, the candidate is granted an Associate of Science degree in Preschool education.

Advisement Sheet

## Student Learning Outcomes

- Candidates will apply knowledge of child development and learning in context to create a caring community of learners (NAEYC Standard 1).
- Candidates will engage in reciprocal partnerships with families and fostering community connections (NAEYC Standard 2).
- Candidates will observe, document, and assess children's development and learning (NAEYC Standard 3).
- Candidates will utilize instructional strategies to promote children's development and learning (NAEYC Standard 4).

- Candidates will apply knowledge in the  content areas to plan and implement an engaging curriculum designed to meet goals that are important and meaningful for children, families, and the community in the present as well as the future (NAEYC Standard 5).

# Curriculum Requirements

## General Education

- Oral Communication - Any Course **Credit Hours:** 3
- Written Communication -  ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason -  MATH 1110 - Mathematics for Teachers I **Credit Hours:** 3
- Technological Literacy - Any Course **Credit Hours:** 3
- Arts and Humanities -  SPED 1050 - Foundations of Special Education **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Wellness Elective -  ECEE 2440 - Motor Development and Learning **Credit Hours:** 3

## Competencies

- Applied Methodologies - Any Course **Credit Hours:** 3
- Intercultural Fluency Any Course **Credit Hours:** 3
- Ethical Reasoning - Any Course **Credit Hours:** 3
- Information Literacy - Any Course **Credit Hours:** 3
- Writing Intensive - ECEE 2440 **Credit Hours:** 3

## Free Electives

- Any Course **Credit Hours:** 6

## Major

### Required Major Courses

- ECEE 1100 - Teaching Children's Literature **Credit Hours:** 3
- ECEE 1200 - Child Development and Learning **Credit Hours:** 3
- ECEE 1210 - Developmentally Appropriate Practices in PreK **Credit Hours:** 3
- ECEE 2300 - Family & Community Collaborative Partnerships **Credit Hours:** 3
- ECEE 2320 - Early Childhood and Elementary Education Learning Environments **Credit Hours:** 3
- ECEE 2340 - Creative Arts for Early Childhood Educators **Credit Hours:** 3
- ECEE 2400 - Emergent Literacy and Language **Credit Hours:** 3
- ECEE 2410 - Pre-K STEAM **Credit Hours:** 3
- ECEE 2420 - Culturally and Developmentally Responsive Teaching in PreK **Credit Hours:** 3
- ECEE 2430 - Observation & Assessment **Credit Hours:** 3

# Total Credits: 60

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Veterinary Technology, AS

Veterinary technology is one of the fastest-growing occupations in Pennsylvania and across the United States. With an associate degree in veterinary technology from PennWest California, you'll be ready to enter this exciting field as a veterinary technician, or "vet tech." In this AVMA accredited program, students work with live animals on campus as they master practical skills in animal care. Coursework in the vet tech program consists of classroom theory, hands-on training and 240 hours of clinical experience.

Advisement Sheet

## Student Learning Outcomes

- Students will be successful on the Veterinary Technician National Exam.
- Students will be able to perform routine diagnostic and clinical procedures on common species.
- Students will be able to identify, utilize, and maintain conventional veterinary instruments and equipment
- Students will work cooperatively to achieve optimum and compassionate patient care.

## Curriculum Requirements

### General Education

- Oral Communication - Any Course **Credit Hours:** 3
- Written Communication - Any Course **Credit Hours:** 3
- Quantitative Reason - MATH 1030 - Mathematics for Health Sciences **Credit Hours:** 3 or higher
- Technological Literacy - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - BIOL 2226 - Basic Microbiology **Credit Hours:** 3
- Student Elective - Any Chemistry Approved for General Education **Credit Hours:** 3

### Competencies

- Applied Methodologies - VETT 2100 - Veterinary Clinical Technology and Laboratory Procedures **Credit Hours:** 4
- Intercultural Fluency - Any Course or Ethical Reasoning **Credit Hours:** 3
- Ethical Reasoning - Any Course or Intercultural Fluency **Credit Hours:** 3
- Information Literacy - VETT 1600 - Care and Management of Exotic and Laboratory Animals **Credit Hours:** 3
- Writing Intensive - VETT 2920 - Clinical Experience **Credit Hours:** 3

### Major

#### Required Major Courses

- VETT 1010 - Introduction to Veterinary Technology **Credit Hours:** 3
- VETT 1600 - Care and Management of Exotic and Laboratory Animals **Credit Hours:** 3
- VETT 2020 - Small Animal Management and Clinical Procedures **Credit Hours:** 0 TO 4
- VETT 2100 - Veterinary Clinical Technology and Laboratory Procedures **Credit Hours:** 4
- VETT 2200 - Large Animal Management and Clinical Procedures **Credit Hours:** 0 TO 4
- VETT 2300 - Digital Diagnostic Imaging **Credit Hours:** 4
- VETT 2400 - Veterinary Pharmacy and Pharmacology **Credit Hours:** 3
- VETT 2500 - Â  Surgical Nursing, Anesthesia, and Pain Management **Credit Hours:** 0 TO 4
- VETT 2920 - Clinical Experience **Credit Hours:** 3
- BIOL 2710 - Anatomy and Physiology of Domestic Animals I **Credit Hours:** 4
- BIOL 2720 - Anatomy and Physiology of Domestic Animals II **Credit Hours:** 4

## Total Credits: 64

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Bachelor Degree

# Accounting, BSBA

The BSBA in accounting at PennWest University is designed to meet the fluid demands of the accounting profession through a commitment to high-quality, relevant, and integrative teaching. The program prepares graduates for careers in public, corporate, governmental, and not-for-profit accounting. The program helps prepare students for professional exams, including the Certified Public Accountant (CPA), Certified Management Accountant (CMA), and Certified Fraud Examiner (CFE) credentials. Graduates will benefit from engaging faculty who hold a range of professional certifications and have achieved significant professional experience.

Advisement Sheet

## Student Learning Outcomes

**BSBA Program Level Outcomes**

- Demonstrate proficiency in foundational concepts of functional business areas.
- Exhibit critical thinking skills for the collection, analysis, and application of data and concepts.
- Display cultural competence for ethical, sustainable, inclusive, and collaborative leadership practices including a global perspective.
- Effectively communicate in oral, written, visual, and digital formats.

  **Accounting Major Outcomes**

  - Students will demonstrate analytical thinking skills and competence across core accounting areas.
  - Students will utilize appropriate technology to support business decision making.
  - Students will measure the impact of income taxes on both personal and business financial performance.
  - Students will evaluate the impacts of regulatory issues imposed upon the accounting profession.
  - Students will effectively generate, analyze, and communicate accounting information internally and externally.

# Curriculum Requirements

## General Education

- Oral Communication - COMJ 1010 - Public Speaking **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - MATH 1010 - Quantitative Reasoning **Credit Hours:** 3
- Technological Literacy - BSIN 2000 - Management Information Systems **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - PSYC 1000 - Introduction to Psychology **Credit Hours:** 3
- Social Sciences - ECON 2100 - Principles of Microeconomics **Credit Hours:** 3
- Social Sciences - ECON 2200 - Principles of Macroeconomics **Credit Hours:** 3
- Natural Sciences and Tech - MATH 1220 - College Algebra **Credit Hours:** 3
- Natural Sciences and Tech - QBA 1000 - QBA 1: Optimization **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective **Credit Hours:** 3

## Competencies

- Quantitative Applications - QBA 2000 - QBA 2: Statistical Analysis **Credit Hours:** 3
- Applied Methodologies - QBA 3000 - QBA 3: Analytics and Applications **Credit Hours:** 3
- Intercultural Fluency - Any Course **Credit Hours:** 3
- Ethical Reasoning - BSAD 3200 - Business Ethics **Credit Hours:** 3
- Information Literacy - Any Course **Credit Hours:** 3

- Writing Intensive - BSAD 4900 - Business Capstone **Credit Hours:** 3
  **AND**
- ANY WI COURSE

- Keystone Experience - Any Course **Credit Hours:** 3

## Major

## Required Major Courses

- ACC 2000 - Financial Accounting **Credit Hours:** 3
- ACC 3000 - Managerial Accounting **Credit Hours:** 3
- BLAW 2000 - Legal and Ethical Environment of Business **Credit Hours:** 3
- BSAD 3200 - Business Ethics **Credit Hours:** 3
- BSAD 4900 - Business Capstone **Credit Hours:** 3
- FINA 3000 - Financial Management **Credit Hours:** 3
- MGMT 3000 - Principles of Management **Credit Hours:** 3
- MKTG 3000 - Principles of Marketing **Credit Hours:** 3
- QBA 2000 - QBA 2: Statistical Analysis **Credit Hours:** 3

- QBA 3000 - QBA 3: Analytics and Applications **Credit Hours:** 3
- ACC 3100 - Intermediate Accounting I **Credit Hours:** 3
- ACC 3150 - Intermediate Accounting II **Credit Hours:** 3
- ACC 3050 - Cost Accounting **Credit Hours:** 3
- ACC 3200 - Federal Income Tax I **Credit Hours:** 3
- ACC 3250 - Federal Income Tax II **Credit Hours:** 3
- ACC 4100 - Advanced Financial Accounting **Credit Hours:** 3
- ACC 4400 - Auditing **Credit Hours:** 3
- ACC 4600 - Accounting Information Systems **Credit Hours:** 3

### Major Electives

- Required Minor/Certificate Course **Credit Hours:** 3
- Required Minor/Certificate Course **Credit Hours:** 3
- Required Minor/Certificate Course **Credit Hours:** 3
- Required Minor/Certificate Course **Credit Hours:** 3

### Program Notes

Students can choose a minor in Economics, Forensic Accounting, Global Business, Human Resource Management, Management, Management Information Systems, or Marketing. 9 credits from these minors overlap with the Business Core courses, so only 12 credits are required to complete the minor. Students can choose the Spanish for Professions certificate (12 credits). Other minors or certificates may be chosen but will require more credits (which may apply to General Education or free electives). Students with dual majors or dual degrees are not required to complete a minor.

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Allied Health Leadership, BS

The 120-credit Bachelor of Science degree in allied health leadership (BSAHL) is for individuals who wish to attain leadership roles in health care. This online bachelor's degree completion program is for health care professionals who have earned an associate degree, certificate, or diploma in a recognized allied health field and hold a corresponding professional credential. Eligibility for the BSAHL is determined by the College of Health Sciences and is based on the accreditation and length of the health education program completed by the applicant and the type of professional credential earned. Up to 60 clinical credits will be granted to eligible candidates. General education course work completed at an accredited college or university will also be considered for transfer in accordance with the university's transfer policy.

This is an online degree completion program for credentialed health care professionals who want to earn their bachelor's degree online.

Advisement Sheet

## Student Learning Outcomes

- Upon graduation, students will be able to apply leadership concepts to construct a personal leadership vision, a code of ethics, and short- and long-term goals that will serve as a foundation for their leadership development.
- Upon graduation, students will be able to employ information literacy knowledge and skills to critically analyze the quality, reliability, credibility, and relevancy of sources of healthcare related information that will inform their clinical decision making.
- Upon graduation, students will be able to apply leadership theory and concepts to diagnose problems in a work envrionment that stem from leadership deficiences, to suggest solutions, and to initiate positive change.

## Curriculum Requirements

## General Education

- Oral Communication - COMJ 1010 - Public Speaking **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3

- Quantitative Reason - STAT 2020 - Elements of Statistics **Credit Hours:** 3
  **OR**
- Quantitative Reason - STAT 2010 - Statistics for Business **Credit Hours:** 3

- Technological Literacy - any course **Credit Hours:** 3
- Arts & Humanities- PHIL 3220 - Biomedical Ethics **Credit Hours:** 3
- Arts & Humanities- Any Course **Credit Hours:** 3
- Arts & Humanities- Any Course **Credit Hours:** 3
- Social Sciences- Any Course **Credit Hours:** 3
- Social Sciences- ECON 2200 - Principles of Macroeconomics **Credit Hours:** 3
- Social Sciences- ECON 2100 - Principles of Microeconomics **Credit Hours:** 3
- Natural Sciences & Tech - Any Course **Credit Hours:** 3
- Natural Sciences & Tech - Any Course **Credit Hours:** 3
- Natural Sciences & Tech - Any Course **Credit Hours:** 3
- Wellness Elective-Any Course **Credit Hours:** 3

## Competencies

- Quantitative Application - Any Course **Credit Hours:** 3
- Applied Methodologies - Any Course **Credit Hours:** 3
- Intercultural Fluency - Any Course **Credit Hours:** 3
- Ethical Reasoning - PHIL 3220 - Biomedical Ethics **Credit Hours:** 3
- Information Literacy - ALHL 3301 - Research Methods for Health Sciences **Credit Hours:** 3

- Writing Intensive - ALHL 4900 - Allied Health Leadership Capstone **Credit Hours:** 3
  **AND**
- Writing Intensive - PHIL 3220 - Biomedical Ethics **Credit Hours:** 3

- Keystone Experience - ALHL 4900 - Allied Health Leadership Capstone **Credit Hours:** 3

## Major

## Required Major Courses

- ALHL 1201 - Introduction to the Healthcare Environment **Credit Hours:** 2
- ALHL 3301 - Research Methods for Health Sciences **Credit Hours:** 3
- ALHL 2101 - Medical Terminology **Credit Hours:** 3
- ALHL 4900 - Allied Health Leadership Capstone **Credit Hours:** 3
- ALHL 2290 - Allied Health Clinical I **Credit Hours:** 1 TO 15
- ALHL 2299 - Allied Health Clinical II **Credit Hours:** 1 TO 15
- ALHL 3300 - Allied Health Clinical III **Credit Hours:** 1 TO 15
- ALHL 3310 - Allied Health Clinical IV **Credit Hours:** 1 TO 15
- ALHL 4400 - Allied Health Clinical V **Credit Hours:** 1 TO 15
- ALHL 4410 - Allied Health Clinical VI **Credit Hours:** 1 TO 15
- ALHL 4420 - Allied Health Clinical VII **Credit Hours:** 1 TO 15
- ACC 2000 - Financial Accounting **Credit Hours:** 3
- MGMT 3000 - Principles of Management **Credit Hours:** 3
- MKTG 3000 - Principles of Marketing **Credit Hours:** 3
- FINA 3000 - Financial Management **Credit Hours:** 3

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Applied Computing, BS

The Bachelor of Science in Applied Computing program at PennWest University provides students with the traditional foundations in Computer Science while simultaneously allowing them to explore high demand skills in areas such as Web Programming, Game Development, Database Management, and Machine Learning. The program provides students the opportunity to quickly acquire all of the necessary skills for investigating real world applications, leading to career success in the computing industry.

## Student Learning Outcomes

- Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
- Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
- Communicate effectively in a variety of professional contexts.
- Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
- Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
- Apply computer science theory and software development fundamentals to produce computing-based solutions.

## Curriculum Requirements

Applied Computing (no concentration)

Applied Computing, Game Programming Concentration

# Arabic Language and Cultures, BA

This professional bachelor's degree program is delivered 100% online with classes beginning for new students in the fall and spring. Transfer students that need varying general education and elective courses may enter into the program in the fall, winter, spring or summer terms. Courses combine a comprehensive education in reading, writing and speaking Modern Standard Arabic with a wide range of instruction in Arabic culture.

Advisement Sheet

## Student Learning Outcomes

- Students will acquire and demonstrate listening, speaking, reading, and writing skills at the Intermediate-High level of the target language (Arabic) consistent with the National Standards for Foreign Language Education.
- Students will acquire and demonstrate skills necessary to analyze and compare cultural products and practices of the target culture (Arabic).
- Students will be able to identify and analyze major literary, historical and cultural products of the target culture (Arabic) and situate those products within a broad historical framework.
- Students will demonstrate the ability to use library and technological resources that allow them to access and analyze literary works, and cultural products and practices related to the target language (Arabic).
- Students will also acquire and demonstrate basic listening, speaking, reading, and writing basic skills at the elementary level in either Spanish, French, or Chinese to analyze and compare linguistics and cultural aspects and practices between Arabic, Spanish, French, & Chinese languages.

## Curriculum Requirements

### General Education

- Oral Communication - Any Course **Credit Hours:** 3
- Written Communication - Any Course **Credit Hours:** 3
- Quantitative Reason - Any Course **Credit Hours:** 3
- Technological Literacy - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective**Credit Hours:** 3

### Competencies

- Quantitative Applications - Any Course **Credit Hours:** 3
- Applied Methodologies - Any Course **Credit Hours:** 3
- Intercultural Fluency - Any Course **Credit Hours:** 3
- Ethical Reasoning - Any Course **Credit Hours:** 3
- Information Literacy - Any Course **Credit Hours:** 3
- Writing Intensive - ARAB 4002 - Arabic Translation **Credit Hours:** 3 and Any WI Course **Credit Hours:** 3
- Keystone Experience - ARAB 4002 - Arabic Translation **Credit Hours:** 3

## Major

### Required Major Courses

- ARAB 1001 - Elementary Arabic I **Credit Hours:** 3
- ARAB 1002 - Elementary Arabic II **Credit Hours:** 3
- ARAB 2001 - Intermediate Arabic I **Credit Hours:** 3
- ARAB 2002 - Intermediate Arabic II **Credit Hours:** 3
- ARAB 3001 - Advanced Arabic I **Credit Hours:** 3
- ARAB 3002 - Advanced Arabic II **Credit Hours:** 3

Choose 6 credits from:

- FREN 1001 - Elementary French I **Credit Hours:** 3
- SPAN 1001 - Elementary Spanish I **Credit Hours:** 3
- CHIN 1001 - Elementary Chinese I **Credit Hours:** 3
- FREN 1002 - French Two **Credit Hours:** 3
- SPAN 1002 - Spanish Two **Credit Hours:** 3
- CHIN 1002 - Chinese Two **Credit Hours:** 3

### Major Electives

Choose 18 Credits

- ARAB 3110 - Arabic Conversation **Credit Hours:** 3
- ARAB 3410 - Contemporary Arabic Culture **Credit Hours:** 3
- ARAB 3420 - The Culture of Islam **Credit Hours:** 3
- ARAB 3430 - Images of Islam: From Spain to Iran **Credit Hours:** 3
- ARAB 4001 - Introduction to Arabic Linguistics **Credit Hours:** 3
- ARAB 4002 - Arabic Translation **Credit Hours:** 3
- ARAB 4210 - Arabic Literature in Translation **Credit Hours:** 3
- ARAB 3990 - Selected Topics in Arabic **Credit Hours:** 3 TO 12
- ARAB 4951 - Modern Languages & Cultural Internship **Credit Hours:** 0 TO 12

# Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Biology, BS

The Biology major is designed to provide a high-quality education to students looking to begin science-related careers and those planning to continue on to graduate school. The program provides students with broad training in the biological sciences, physical sciences and mathematics, while also allowing them the opportunity to focus on topics in biology that are of particular interest to them. Students receive hands-on training in the methods and technology of the discipline, build their critical thinking and problem-solving skills and participate in original research as part of the many laboratory and field courses, and the independent study, internship and study abroad opportunities that they have to choose from across our three campuses. As graduates, our students succeed in careers in the private sector, academia and all levels of government.

## Student Learning Outcomes

**Biology, BS Program Level Outcomes**

- Students will describe and explain the content knowledge of biology (cells through ecosystems) through its fundamental theories, terminology, and principles.
- Students will apply the scientific method to develop hypotheses, and design and conduct laboratory or field research to address biological questions.
- Students will critically review, synthesize, interpret, and assess scientific data using a variety of methods and tools.
- Students will access, assess, and use available sources of information (including primary sources and databases) in the biological sciences.
- Students will be able to communicate clearly and accurately in both written and/or verbal presentations.
- Students will be able to identify social and ethical issues in the field of Biology.

**Pre-Veterinary Science Concentration Outcomes**

- Students will be able to describe the foundational principles of biology (cellular and molecular biology, genetics, anatomy, physiology), with a particular emphasis on these areas as they relate to the health professions.
- Students will be able to demonstrate proficiency with basic animal anatomy and physiology laboratory equipment and techniques.
- Students will be able to critically evaluate and interpret scientific data, with a particular emphasis on medically relevant data.
- Students will be able to access, assess and use available sources of information (primary literature, databases).
- Students will be able to communicate clearly and accurately in both written and/or verbal presentations.
- Students will be able to identify and explain social and ethical issues related to medical biology.
- Students will be able to work collaboratively as part of a team.

**Mortuary Science (Cooperative) Concentration Outcomes**

- Students will be able to describe the foundational principles of biology (cellular and molecular biology, genetics, anatomy, physiology), with a particular emphasis on these areas as they relate to the health professions.
- Students will be able to demonstrate proficiency with basic human anatomy and physiology laboratory equipment and techniques.
- Students will be able to critically evaluate and interpret scientific data, with a particular emphasis on medically relevant data.
- Students will be able to access, assess and use available sources of information (primary literature, databases).

- Students will be able to communicate clearly and accurately in both written and/or verbal presentations.
- Students will be able to identify and explain social and ethical issues related to medical biology.
- Students will be able to work collaboratively as part of a team.

**Molecular Biology and Biotechnology Concentration Outcomes**

- Students will be able to describe foundational principles of molecular biology (the role of energy in biological systems; how the structure of biological molecules relates to their function and regulation; the dynamic mechanisms underlying information storage and flow).
- Students will be able to develop a hypothesis, design and conduct appropriate experiments.
- Students will be able to analyze and interpret data using appropriate quantitative modeling and simulation tools.
- Students will be able to access, assess and use available sources of information (primary literature, databases, sequence data).
- Students will be able to present scientific data in an appropriate context and in a variety of ways at different levels.
- Students will be able to demonstrate knowledge of the social and ethical dimensions of science.
- Students will be able to work safely alone and in an effective team.

**Pre-Medical Science Concentration Outcomes**

- Students will be able to describe the foundational principles of biology (cellular and molecular biology, genetics, evolution, anatomy, physiology), with a particular emphasis on these areas as they relate to the health professions.
- Students will be able to demonstrate proficiency with basic human anatomy and physiology laboratory equipment and techniques.
- Students will be able to critically evaluate and interpret scientific data, with a particular emphasis on medically relevant data.
- Students will be able to access, assess and use available sources of information (primary literature, databases).
- Students will be able to communicate clearly and accurately in both written and/or verbal presentations .
- Students will be able to identify and explain social and ethical issues related to medical biology.
- Students will be able to work collaboratively as part of a team.

## Curriculum Requirements

Biology (no concentration)

Biology, Molecular Biology and Biotechnology Concentration

Biology, Mortuary Science (Cooperative) Concentration

Biology, Pre-Medical Science Concentration

Biology, Pre-Veterinary Science Concentration

# Chemistry, BS

The B.S. Chemistry degree, accredited throught the American Chemical Society (ACS-CPT), develops theoretical and practical skills for a wide-range of career opportunities in the natural sciences. Using a modern instructional techniques and instrumentation, the program will develop critical and independent thinking, collegial exchange of ideas and knowledge, and high ethical standards.

## Student Learning Outcomes

- Students will **use** chemical theory to produce rationale for chemical reactivity.
- Students will **apply** quantitative reasoning to scientific data, to **interpret** experimental results and **draw** conclusions.
- Students will **maintain** accurate and structured records of experimental work using standard scientific format
- Students will **develop** laboratory knowledge, technique, and instrumentation skills.
- Students will **analyze** experimental and instrumentation data, **interpret** experimental results, and **draw** conclusions.
- Students will **sustain** a commitment to safety in the laboratory.
- Students will be able to **use** electronic databases to search and access primary literature.
- Students will be able to **use** personal productivity software to create written reports and visual aids.
- Students will **generate** written reports that reflect the accepted style, conventions, and standards of the discipline of chemistry.
- Students will **compose** and **deliver** effective oral presentations in a professional manner.

## Curriculum Requirements

Chemistry (no concentration)

Chemistry, Biochemistry Concentration

Chemistry, Forensic Science Concentration

# Commercial Music Technology, BS

Combining music, technology and entrepreneurship, the B.S. degree in Commercial Music Technology (CMT) provides students with the skills and experience necessary for a career in today's music and media industries. The four-year, 120-credit curriculum fuses traditional approaches to the study of music performance, music history, and theory with modern-day applications, including popular music analysis, live sound reinforcement, audio engineering and entrepreneurship. The CMT degree has three distinct areas of focus that aid students in developing a well-rounded set of artistic and multimedia skills. These three areas of focus are: Music (30%), Technology (30%) and Entrepreneurship (30%) - with 10% general education courses.

Advisement Sheet

## Student Learning Outcomes

**Commerical Music Technology, BS Program Level Outcomes**

- The Student will be able to demonstrate proficiency on one musical instrument of choice and develop a thorough understanding of music theory.
- The Student will be able to implement audio engineering and music production techniques in both field and studio settings.
- The Student will be able to apply business and entrepreneurial knowledge to their future careers in the commercial music industry.

**Commercial Music Business Concentration Outcomes**

- The Student will be able to demonstrate proficiency on one musical instrument of choice.

- The Student will be able to implement audio engineering techniques in field settings.
- The Student will be able to apply business and entrepreneurial knowledge to their future careers in the commercial music industry.
- The student will be able to apply ethical principles to a wide range of business models.

## Curriculum Requirements

Commercial Music Technology (no concentration)

Commercial Music Technology, Commercial Music Business Concentration

# Communication Sciences & Disorders (Speech-Language Pathology), BS

The B.S degree in Communication Sciences & Disorders (Speech-Language Pathology) is a pre-professional program designed to prepare the student for graduate study and the completion of professional requirements at that level. Full professional status, including certification by the American Speech-Language-Hearing Association and appropriate state licensure, requires completion of the master's degree. In addition to the undergraduate program, the department offers a graduate degree in Speech-Language Pathology (MSSLP) and is accredited in speech-language pathology by the Council on Academic Accreditation of the American Speech-Language-Hearing Association.

Advisement Sheet

## Student Learning Outcomes

- Explain and apply knowledge of the developmental norms for speech/language acquisition.
- Explain and apply knowledge of speech, language and hearing disorders.
- Explain how individual, cultural, and linguistic differences influence communication.
- Demonstrate knowledge of the basic clinical process for the evaluation and remediation of communication disorders and differences.
- Apply critical thinking, problem solving and logical reasoning skills to topics in CSD.
- Demonstrate effective written communication skills to explain and describe content and research knowledge, and critical thinking skills as they apply to topics in CSD.
- Demonstrate effective spoken communication skills to explain and describe content and research knowledge, and critical thinking skills as they apply to topics in CSD.

## Curriculum Requirements

### General Education

- Oral Communication - Any Course **Credit Hours:** 3
- Written Communication ENGL 1200 - College Composition **Credit Hours:** 3

- Quantitative Reason - STAT 2000 - Statistics for Health and Social Sciences **Credit Hours:** 3
  **OR**

- Quantitative Reason - STAT 2020 - Elements of Statistics **Credit Hours:** 3

- Technological Literacy - Any Course **Credit Hours:** 3 (Recommend ED 2333 (PDE course))
- Arts & Humanities- Any Course **Credit Hours:** 3 (Recommend any American or British Literature course (PDE) Recommend ENGL 2310 )
- Arts & Humanities - ENGL 3250 - Research Writing **Credit Hours:** 3
  Arts & Humanities- Any Course **Credit Hours:** 3 (Recommend PHIL 1000, PHIL 1040, PHIL 3100, PHIL 3220, SPAN 1001 )
- Social Sciences- PSYC 1000 - Introduction to Psychology **Credit Hours:** 3
- Social Sciences- Any Course **Credit Hours:** 3 (Recommend ED 1750 )
- Social Sciences- Any Course **Credit Hours:** 3

- Natural Sciences & Tech - BIOL 1101 - Fundamentals of Biology **Credit Hours:** 3
  **OR**
- Natural Sciences & Tech - BIOL 2811 - Human Anatomy and Physiology I Laboratory/ BIOL 2810 - Human Anatomy and Physiology I Lecture **Credit Hours:** 3

  Human Biology component required

- Natural Sciences & Tech - Any Chemistry or Physics Course **Credit Hours:** 3 (Recommend CHEM 1050, CHEM 1108, or PHYS 1500 /PHYS 1510 (co-req))
- Natural Sciences & Tech - Any Math Course **Credit Hours:** 3 (Recommend MATH 1030 or MATH 1220 )

## Competencies

- Quantitative Application - Any Course **Credit Hours:** 3
- Applied Methodologies - Any Course **Credit Hours:** 3 (Recommend ENGL 2000)
- Intercultural Fluency - Any Course **Credit Hours:** 3 (Recommend ED 2500, COMJ 4211, EDHH 1000, EDHH 2000, ENGL 2310, ENGL 2340)
- Ethical Reasoning - Any Course **Credit Hours:** 3 (Recommend ED 2500, COMJ 4211, EDHH 1000, EDHH 2000, ENGL 2310, ENGL 2340)
- Information Literacy - Any Course **Credit Hours:** 3 (Recommend ED 2500, COMJ 4211, EDHH 1000, EDHH 2000, ENGL 2310, ENGL 2340 )
- Writing Intensive - CSD 4300 - Information Literacy in CSD **Credit Hours:** 3
- Writing Intensive - ENGL 3250 - Research Writing **Credit Hours:** 3
- Keystone Experience - CSD 4200 - Clinical Observation / Experience **Credit Hours:** 3

## Major

### Required Major Courses

- CSD 1010 - Introduction to Communication Disorders **Credit Hours:** 3
- CSD 1500 - Speech & Language Development **Credit Hours:** 3
- CSD 2100 - Introduction to Audiology **Credit Hours:** 3
- CSD 3000 - Anatomy and Physiology of Speech and Hearing **Credit Hours:** 3
- CSD 2700 - Phonetics **Credit Hours:** 3
- CSD 3100 - Speech Science **Credit Hours:** 3
- CSD 3200 - Child Language Disorders **Credit Hours:** 3

- CSD 3300 - Speech and Fluency Disorders **Credit Hours:** 3
- CSD 3400 - Aural Rehabilitation **Credit Hours:** 3
- CSD 4000 - Assessment and Treatment in Communication Disorders **Credit Hours:** 3
- CSD 3500 - Adult Language Disorders **Credit Hours:** 3
- CSD 4100 - Neuroanatomy for the SLP **Credit Hours:** 3
- CSD 4300 - Information Literacy in CSD **Credit Hours:** 3
- CSD 4200 - Clinical Observation / Experience **Credit Hours:** 3

### Major Electives

Choose Two Courses From:

- CSD 3600 - Communication for Individuals with Hearing Loss **Credit Hours:** 3
- CSD 4400 - Special Populations in Speech-Language Pathology **Credit Hours:** 3
- CSD 4700 - Communication Disorders Across Cultures **Credit Hours:** 3
- CSD 4800 - Hearing Science **Credit Hours:** 3
- CSD 1800 - Intro to ASL and Other Communication Methods **Credit Hours:** 3

### Recommended Related Courses

- ED 3700 - ELL Foundations **Credit Hours:** 3
- SPED 1050 - Foundations of Special Education **Credit Hours:** 3

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Communication, BS

With the Bachelor of Science in Communication, you will combine elements of digital media, journalism and public relations / advertising / corporate communication to create an educational experience that brings together the highlights of specialized professions with your individual goals in mind. With courses in media foundations, writing, and communication regulations, you'll be ready to hit the ground running in a variety of job roles.

## Student Learning Outcomes

- Use oral communication to inform, direct, persuade, and inspire others.
- Apply research and analysis skills to write in forms and styles for communication professions, audiences and purposes they serve.
- Integrate and apply practical communication skills and knowledge in critical thinking and creative problem-solving.
- Design aesthetically pleasing and socially responsible media productions that integrate the latest technologies.
- Practice effective and ethical communication in a diverse global society.

## Curriculum Requirements

Communication (no concentration)

Communication, Digital Media Concentration

Communication, Strategic Communication Concentration

# Computer Information Systems, BS

This undergraduate degree combines knowledge of leading-edge information technologies and systems methodologies with an understanding of the evolving needs of today's dynamic business environment. The CIS degree is ideal for students who are interested in working with technology to find solutions to business problems. This program also is designed to critically analyze existing business processes and their systems, and to redesign them into streamlined, optimized processes. While a fundamental understanding of information technology is a cornerstone of the degree, an equally important and distinguishing element of the CIS degree is a solid foundation in basic business functions.

Advisement Sheet

## Student Learning Outcomes

- Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
- Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
- Communicate effectively in a variety of professional contexts.
- Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
- Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
- Support the delivery, use, and management of information systems within an information systems environment.

## Curriculum Requirements

### General Education

- Oral Communication - COMJ 1010 - Public Speaking **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - MATH 1510 - Discrete Structures **Credit Hours:** 3
- Technological Literacy - CMIS 1100 - Introduction to Information Systems **Credit Hours:** 3
- Arts and Humanities - Any course **Credit Hours:** 3
- Arts and Humanities - Any course **Credit Hours:** 3
- Arts and Humanities - Any course **Credit Hours:** 3
- Social Sciences - Any course **Credit Hours:** 3

Social Sciences - Pick One Course:

- ECON 1000 - Elements of Economics **Credit Hours:** 3
- ECON 2100 - Principles of Microeconomics **Credit Hours:** 3
- ECON 2200 - Principles of Macroeconomics **Credit Hours:** 3

- GEOG 1050 - People and the Planet: Geography in a Changing World **Credit Hours:** 3
- GEOG 1110 - World Geography **Credit Hours:** 3

- Social Sciences - Any course **Credit Hours:** 3

- Natural Sciences and Tech - MGMT 2400 - Business, Nature, and Well-Being **Credit Hours:** 3
  **OR**
- Natural Sciences and Tech - GEOG 2150 - Conservation of Natural Resources **Credit Hours:** 3

- Natural Sciences and Tech - Any course **Credit Hours:** 3

- Natural Sciences and Tech - STAT 2020 - Elements of Statistics **Credit Hours:** 3
  **OR**
- Natural Sciences and Tech - STAT 2010 - Statistics for Business **Credit Hours:** 3

- Student Elective - CMAC 2000 - Introduction to Cybersecurity **Credit Hours:** 3

## Competencies

- Quantitative Applications - CMIS 4250 - Applications of Machine Learning and Deep Learning **Credit Hours:** 3

- Applied Methodologies - CMIS 4250 - Applications of Machine Learning and Deep Learning **Credit Hours:** 3
  **OR**
- Applied Methodologies - CMIS 4920 - Senior Capstone II **Credit Hours:** 3

- Intercultural Fluency - CMIS 4900 - Senior Capstone I **Credit Hours:** 3
- Ethical Reasoning - CMIS 3000 - Principles of Responsible Computing **Credit Hours:** 3
- Information Literacy - CMIS 3000 - Principles of Responsible Computing **Credit Hours:** 3

- Writing Intensive - CMIS 4900 - Senior Capstone I **Credit Hours:** 3
  **AND**
- Any ENGL course

- Keystone Experience - CMIS 4920 - Senior Capstone II **Credit Hours:** 3

## Major

### Required Major Courses

- CMIS 1200 - Application Programming I **Credit Hours:** 3
- CMIS 2200 - Application Programming II **Credit Hours:** 3
- CMIS 3000 - Principles of Responsible Computing **Credit Hours:** 3
- CMIS 3125 - Systems Analysis & Design **Credit Hours:** 3
- CMIS 3150 - Database Design & Modeling **Credit Hours:** 3
- CMIS 3200 - Database Application Programming **Credit Hours:** 3
- CMIS 3250 - CISCO CCNA I **Credit Hours:** 0 TO 4

- CMIS 3500 - Web Programming I **Credit Hours:** 3
- CMIS 3600 - Systems Project Management **Credit Hours:** 3
- CMIS 4500 - Web Programming II **Credit Hours:** 3
- CMIS 4250 - Applications of Machine Learning and Deep Learning **Credit Hours:** 3
- CMIS 4900 - Senior Capstone I **Credit Hours:** 3
- CMIS 4920 - Senior Capstone II **Credit Hours:** 3

## Major Electives

Pick 11 Credits From:

[Restrictions apply for the number of graduate credits (level DSA, PSM and PSC courses) allowed for an undegraduate major and only a maximum of 4 credits of CMIS 4950 will be allowed for electives]

- CMIS 3260 - CISCO CCNA II **Credit Hours:** 0 TO 4
- CMIS 3270 - CISCO CCNA III **Credit Hours:** 0 TO 4
- CMIS 3340 - COBOL **Credit Hours:** 3
- CMIS 3720 - Decision Support Systems **Credit Hours:** 3
- CMIS 4720 - ERP **Credit Hours:** 3
- CMIS 4950 - CIS Internship **Credit Hours:** 0 TO 15
- CMSC 3380 - Python **Credit Hours:** 3
- CMAC 3740 - Mobile Application Development **Credit Hours:** 3
- DSA 5100 - Database Management Systems and Data Warehousing
- DSA 5200 - Python Programming for Data Science
- DSA 5300 - Analytical Methods and Optimization
- DSA 5400 - Applied Data Mining
- PSC 6000 - Operating Systems
- PSM 6450 - Applied Cryptography
- PSC 7350 - Biometrics
- PSC 7450 - Cyber Risk Mgmt & Assess
- PSC 7550 - Wireless Network & Security

## Required Related Electives

Choose 9 Credits from One of the Tracks:

### Business Track (9 Credits Include):

- MGMT 3000 - Principles of Management **Credit Hours:** 3

  Pick One Course From:
- any 2000 or 3000 level ACC or FINA

  Pick One Course From:
- any 2000 or 3000 level BLAW or MKTG or IENT

### Geosciences Track (9 Credits Include):

- GGIS 1510 - GeoBusiness **Credit Hours:** 3

Pick Any Two GGIS Courses From:

- GGIS 1210 - Mapping our Environment **Credit Hours:** 3
- GGIS 2300 - Environmental Remote Sensing I **Credit Hours:** 3
- GGIS 3050 - Spatial Methods in Energy and Natural Resources **Credit Hours:** 3
- GGIS 2100 - Geographic Information Systems **Credit Hours:** 3
- GGIS 3110 - Geospatial Data Handling and Integration **Credit Hours:** 3

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Computer Science, BS

The Bachelor of Science in Computer Science programs at PennWest, accredited by the Computing Accreditation Commission of ABET, helps prepare our graduates for career success in the computing industry. Our students learn at least five programming languages; being fluent in so many programing languages distinguishes PennWest graduates as excellent software developers and programmers. Students also benefit from a strong internship program. The program has successful track record in job placement and graduate-level study after graduation.

Advisement Sheet

## Student Learning Outcomes

- Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
- Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
- Communicate effectively in a variety of professional contexts.
- Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
- Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
- Apply computer science theory and software development fundamentals to produce computing-based solutions.

## Curriculum Requirements

### General Education

- Oral Communication - COMJ 1010 - Public Speaking **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - MATH 2410 - Analytical Geometry and Calculus I **Credit Hours:** 4
- Technological Literacy - CMSC 1200 - Problem Solving and Programming Constructs **Credit Hours:** 3

- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - MATH 2420 - Analytical Geometry and Calculus II **Credit Hours:** 4

Natural Sciences and Tech - Two Classes In:

- CHEM 1108 - General Chemistry I **Credit Hours:** 4
- CHEM 1128 - General Chemistry II **Credit Hours:** 4
- GEOL 1500 - Dynamic Earth **Credit Hours:** 4
- ATMS 1100 - Introduction to Weather and Climate **Credit Hours:** 4

- Program Elective - CMAC 1240 - Computer Programming I **Credit Hours:** 3

## Competencies

- Quantitative Applications - MATH 2420 - Analytical Geometry and Calculus II **Credit Hours:** 4
- Applied Methodologies - CMSC 4920 - Senior Project II **Credit Hours:** 3

Intercultural Fluency - One Class In:

- ANTH 1000 - Introduction to Anthropology **Credit Hours:** 3
- ARTH 1200 - Landmarks of World Art **Credit Hours:** 3
- ENGL 2310 - American Literature Survey I **Credit Hours:** 3
- ENGL 2330 - World Literature Survey I **Credit Hours:** 3

- Ethical Reasoning - PHIL 3210 - Engineering Ethics **Credit Hours:** 3
  **OR**
- Ethical Reasoning - CMIS 3000 - Principles of Responsible Computing **Credit Hours:** 3

- Information Literacy - CMSC 4900 - Senior Project I: Software Engineering **Credit Hours:** 3

- Writing Intensive - CMSC 4900 - Senior Project I **Credit Hours:** 3
  **AND**
- Writing Intensive - Any Course

- Keystone Experience - CMSC 4920 - Senior Project II **Credit Hours:** 3

## Major

### Required Major Courses

- CMSC 2040 - Object-Oriented Programming **Credit Hours:** 3
- CMSC 2100 - Logic and Switching Theory of the Computer **Credit Hours:** 3
- CMSC 3040 - Data Structures **Credit Hours:** 3
- CMSC 3100 - Assembly **Credit Hours:** 3
- CMSC 3140 - Analysis of Algorithms **Credit Hours:** 3

- CMSC 3180 - Data Communication and Networking **Credit Hours:** 3
- CMSC 3240 - Computer Architecture **Credit Hours:** 3
- CMSC 3320 - Technical Computing Using Java **Credit Hours:** 3
- CMSC 4000 - Operating Systems **Credit Hours:** 3
- CMSC 4080 - Structures of Programming Languages **Credit Hours:** 3
- CMSC 4140 - Theory of Languages **Credit Hours:** 3
- CMSC 4180 - Language Translation **Credit Hours:** 3
- CMSC 4900 - Senior Project I: Software Engineering **Credit Hours:** 3
- CMSC 4920 - Senior Project II **Credit Hours:** 3
- MATH 1510 - Discrete Structures **Credit Hours:** 3
- STAT 2020 - Elements of Statistics **Credit Hours:** 3
- MATH 3210 - Linear Algebra I **Credit Hours:** 3

### Major Electives

At Most Two Classes From This Programming Electives Block:

- CMSC 3340 - COBOL **Credit Hours:** 3
- CMSC 3360 - Fortran **Credit Hours:** 3
- CMSC 3380 - Python **Credit Hours:** 3
- CMSC 3700 - 2D Game Programming **Credit Hours:** 3
- CMSC 3720 - 3D Game Programming **Credit Hours:** 3
- CMSC 4950 - Internship **Credit Hours:** 1 TO 15

At Least One Class From This Advanced Electives Block:

- CMSC 3200 - Database Application Programming **Credit Hours:** 3
- CMSC 3780 - Computer Graphics **Credit Hours:** 3
- CMSC 3990 - Special Topics in Computer Science **Credit Hours:** 1 TO 3
- CMSC 4120 - Parallel Processing **Credit Hours:** 3
- CMSC 4200 - Artificial Intelligence **Credit Hours:** 3
- CMSC 4240 - Numerical Analysis **Credit Hours:** 3

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Criminal Justice, BS

At PennWest University, as a criminal justice major, you will learn from faculty scholars and skilled professionals with extensive career experience in criminal justice. In the B.S. in Criminal Justice program, the goal is to introduce you to the major functions and operations of the criminal justice field, examine components of the justice system, and understand the legal system in America through the eyes of those working in law enforcement, courts, and corrections. Students at PennWest University can opt for a general criminal justice program with no declared concentration or choose one of our four concentrations. Concentrations include criminology, forensic investigation and cyber forensics, homeland and international security, and law and justice.

The B.S. in Criminal Justice program brings together liberal arts and professional courses to develop your critical thinking and communication skills. Graduates are well-prepared to pursue leadership positions in law enforcement and

justice-related professions.

If your interest is focused on the vital areas of homeland and international security, PennWest can prepare you for a solid career through the specialized study of the major components and operations of security within criminal justice. For those interested in forensic investigation and cyber forensics,  our advanced, hands-on training is integral to PennWest's forensic investigations degree.

For those seeking law enforcement careers or plan to pursue law school, the B.S. in Criminal Justice with a law and justice concentration is excellent preparation for law or graduate school as well as gaining the knowledge and skills necessary to successfully enter into federal and state law enforcement positions. If you want in-depth study in criminology, PennWest  can provide you with a strong foundation in this specialized field. You will learn from criminologists whose goal is to introduce you to the major functions and operations of the criminal justice field and examine criminal behavior in the field of criminology.

Become a top criminal justice professional with specialized knowledge and in-demand skills!

## Student Learning Outcomes

- Discuss and apply major discipline-specific concepts, techniques, theories, policies, practices, and ethical principles to real-world situations related to criminal justice, criminology, and the student's chosen occupation.
- Examine current issues impacting the various branches of the American Criminal Justice System, develop solutions to overcome the issues, and use analytical and critical reasoning to defend the solutions.
- Recognize the importance of ethical behavior and respect for those with diverse backgrounds and demonstrate inclusiveness in applying these principles to real-world situations related to the criminal justice system.
- Apply quantitative, scientific, and analytical reasoning to draw and support conclusions related to criminological theory, research, policy, and application of law.
- Use technology ethically and efficiently to identify and assess the validity and credibility of criminal justice/criminological sources of information and clearly and effectively communicate information.

## Curriculum Requirements

Criminal Justice (no concentration)

Criminal Justice, Criminology Concentration

Criminal Justice, Forensic Investigation and Cyber Forensics Concentration

Criminal Justice, Homeland and International Security Concentration

Criminal Justice, Law and Justice Concentration

# Digital Media Technology, BS

The Bachelor of Science in Digital Media Technology degree program prepares students to design, create and deliver content using print and digital media technologies. The program includes a core curriculum of technical, hands-on laboratory and studio courses that explore relevant concepts, as well as managerial, marketing, and project planning courses.

Advisement Sheet

# Student Learning Outcomes

- Students will be able to evaluate trends, techniques and technologies in printing and digital industries.
- Students will be able to evaluate principles of design and layout.
- Students will be able to solve problems related to print and digital media.
- Students will be able to operate various conventional and digital output devices.
- Students will be able to interpret specifications involved in optimizing workflow.
- Students will be able to design multimedia elements for printing and digital media.

# Curriculum Requirements

## General Education

- Oral Communication - Any Course **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - MATH 1220 - College Algebra **Credit Hours:** 3
- Technological Literacy - DGMT 1800 - Foundations of Digital Media **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective **Credit Hours:** 3

## Competencies

- Quantitative Applications - Any Course **Credit Hours:** 3
- Applied Methodologies - Any Course **Credit Hours:** 3
- Intercultural Fluency - Any Course **Credit Hours:** 3
- Ethical Reasoning - Any Course **Credit Hours:** 3
- Information Literacy - Any Course **Credit Hours:** 3
- Writing Intensive - DGMT 4850 - DMT Senior Seminar **Credit Hours:** 3
- Writing Intensive - DGMT 4450 - Digital Media Project Planning **Credit Hours:** 3
- Keystone Experience - DGMT 4950 - Digital Media Technology Internship **Credit Hours:** 3

## Major

### Required Major Courses

- DGMT 1000 - Foundations of Print Media **Credit Hours:** 3
- DGMT 2000 - Print Media Production Processes **Credit Hours:** 3

- DGMT 2200 - Digital Photography **Credit Hours:** 3
- DGMT 2250 - Digital Page Layout **Credit Hours:** 3
- DGMT 2400 - Vector Based Graphics **Credit Hours:** 3
- DGMT 2500 - Digital Imaging **Credit Hours:** 3
- DGMT 3020 - Commercial Print Techniques **Credit Hours:** 3
- DGMT 3120 - Spec Graphics Print Techniques **Credit Hours:** 3
- DGMT 3200 - Digital Video **Credit Hours:** 3
- DGMT 3300 - Package Printing Processes **Credit Hours:** 3
- DGMT 3310 - Web Publishing **Credit Hours:** 3
- DGMT 3400 - 3D Computer Animation **Credit Hours:** 3
- DGMT 3420 - Cost AnalysisÂ Â Digital Media **Credit Hours:** 3
- DGMT 3500 - Motion Graphics **Credit Hours:** 0 TO 3
- DGMT 4060 - Digital Workflow & Print Technology **Credit Hours:** 0 TO 3
- DGMT 4450 - Digital Media Project Planning **Credit Hours:** 3
- DGMT 4850 - DMT Senior Seminar **Credit Hours:** 3
- DGMT 4950 - Digital Media Technology Internship **Credit Hours:** 3

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Early Childhood and Elementary, BSEd

The Bachelor of Science in Early Childhood and Elementary Education prepares candidates to meet the needs of students PreK through grade 4 in schools within the Commonwealth of Pennsylvania. Students are required to meet PennWest University's guidelines for "Admission to Teacher Education." Upon completion of the competencies in Early Childhood Education and 120 credit hours, the student is awarded a Bachelor of Science in Education Degree. After successfully passing the designated teacher certification examinations and meeting other Pennsylvania Department of Education requirements, students are recommended to the Commonwealth for teaching certification.

Advisement Sheet

## Student Learning Outcomes

- Learner Development - The teacher candidate understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning experiences.
- Learning Differences - The teacher candidate uses understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards.
- Learning Environments - The teacher candidate creates environments that support individual and collaborative learning, and that encourage positive social interaction, active engagement in learning, and self motivation.
- Content Knowledge - The teacher candidate understands the central concepts, tools of inquiry, and structures of the Pre-K - 4 curriculum and creates learning experiences that make these aspects of the discipline accessible and meaningful for learners to assure mastery of the content.

- Application of Content - The teacher candidate engages learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.
- Assessment - The teacher candidate understands and uses multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teacher's and learner's decision making.
- Planning for Instruction - The teacher candidate plans instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.
- Instructional Strategies - The teacher candidate understands and uses a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.
- Professional Learning and Ethical Practice - The teacher candidate engages in ongoing professional learning and uses evidence to continually evaluate his/her practice, particularly the effects of his/her choices and actions on others (learners, families, other professionals, and the community), and adapts practice to meet the needs of each learner.
- Leadership and Collaboration - The teacher candidate seeks appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth, and to advance the profession.

# Curriculum Requirements

## General Education

- Oral Communication - Any Course **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - MATH 1110 - Mathematics for Teachers I **Credit Hours:** 3
- Technological Literacy - Any Course **Credit Hours:** 3
- Arts and Humanities ECEE 1100 - Teaching Children's Literature **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - MATH 2120 - Mathematics for Teachers II **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Wellness Elective - ECEE 2440 - Motor Development and Learning **Credit Hours:** 3

## Competencies

- Quantitative Applications - ECEE 3700 - Teaching Mathematics in Grades K-4 **Credit Hours:** 3
  **OR**
- Quantitative Applications - MATH 2120 - Mathematics for Teachers II **Credit Hours:** 3

- Applied Methodologies ECEE 3710 - Teaching Science in Grades K-4 **Credit Hours:** 3
- Intercultural Fluency- Any Course **Credit Hours: 3**
- Ethical Reasoning - Any Course **Credit Hours: 3**
- Information Literacy ECEE 3600 - Components of Reading and Writing Instruction **Credit Hours:** 3
- Writing Intensive ED 4240 - Student Teaching **Credit Hours:** 6

- Writing Intensive ECEE 2440 - Motor Development and Learning **Credit Hours:** 3
- Keystone Experience - ED 4250 - Student Teaching **Credit Hours:** 6

## Major

### Required Major Courses

- SPED 2100 - Teaching Students with Disabilities **Credit Hours:** 3
- ECEE 1200 - Child Development and Learning **Credit Hours:** 3
- ECEE 1210 - Developmentally Appropriate Practices in PreK **Credit Hours:** 3
- ECEE 2300 - Family & Community Collaborative Partnerships **Credit Hours:** 3
- ECEE 2320 - Early Childhood and Elementary Education Learning Environments **Credit Hours:** 3
- ECEE 2340 - Creative Arts for Early Childhood Educators **Credit Hours:** 3
- ECEE 2400 - Emergent Literacy and Language **Credit Hours:** 3
- ECEE 2410 - Pre-K STEAM **Credit Hours:** 3
- ECEE 2420 - Culturally and Developmentally Responsive Teaching in PreK **Credit Hours:** 3
- ECEE 2430 - Observation & Assessment **Credit Hours:** 3
- ECEE 3500 - Curr & Inst K-4 **Credit Hours:** 3

- SPED 2000 - Assessment and Positive Behavior Interventions **Credit Hours:** 3
  **OR**
- SPED 3000 - Introduction to Applied Behavior Analysis **Credit Hours:** 3

- ECEE 3600 - Components of Reading and Writing Instruction **Credit Hours:** 3
- ECEE 3610 - Phonics and Structured Language Instruction **Credit Hours:** 3
- ECEE 3620 - Assessment K-4 **Credit Hours:** 3
- ECEE 3630 - Leadership and Advocacy in Childhood Education **Credit Hours:** 3
- ED 3700 - ELL Foundations **Credit Hours:** 3
- ECEE 3700 - Teaching Mathematics in Grades K-4 **Credit Hours:** 3
- ECEE 3710 - Teaching Science in Grades K-4 **Credit Hours:** 3
- ECEE 3720 - Teaching Social Studies in Grades K - 4 **Credit Hours:** 3
- ECEE 3730 - Content Area Literacy **Credit Hours:** 3
- ECEE 3740 - Integrated STEM **Credit Hours:** 3
- ED 4240 - Student Teaching **Credit Hours:** 6
- ED 4250 - Student Teaching **Credit Hours:** 6

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Early Childhood and Special Education, BSEd

Many employment opportunities exist in the state of Pennsylvania and throughout the country in pre-school and special education programs. The College of Education offers a program of study which will provide students with the academic preparation for dual certification in special education and early childhood education. Students who complete this program, and successfully pass the PDE required tests, are qualified to teach in special education programs as well as in

early childhood programs.
Advisement Sheet

## Student Learning Outcomes

- Demonstrate discipline specific content, child development, and pedagogical content knowledge.
- Demonstrate professional responsibility and ethical conduct while exhibiting respect for the cultural diversity of learners, families, colleagues, and communities.
- Differentiate instruction by implementing instructional strategies informed by assessment data.
- Students will analyze the needs of students with disabilities, or at risk for disabilities, using evidence-based practices and develop goals and design, as well as implement, an individualized education plan and instructional programming.

## Curriculum Requirements

### General Education

- Oral Communication - COMJ 1010 - Public Speaking **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - MATH 1110 - Mathematics for Teachers I **Credit Hours:** 3
- Technological Literacy - ED 2333 - Technology in Teaching and Learning **Credit Hours:** 3
- Arts and Humanitites ECEE 1100 - Teaching Children's Literature **Credit Hours:** 3
- Arts and Humanities - Any course **Credit Hours:** 3
- Arts and Humanities - Any course **Credit Hours:** 3
- Social Sciences - ED 1750 - Educational Psychology **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - MATH 2120 - Mathematics for Teachers II **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Wellness Elective - ECEE 2440 - Motor Development and Learning **Credit Hours:** 3

### Competencies

- Quantitative Applications - SPED 3090 - Assessment and Prescriptive Teaching **Credit Hours:** 3
- Applied Methodologies - SPED 3000 - Introduction to Applied Behavior Analysis **Credit Hours:** 3
- Intercultural Fluency - Any Course **Credit Hours:** 3
- Ethical Reasoning - Any Course **Credit Hours:** 3
- Information Literacy - ECEE 3600 - Components of Reading and Writing Instruction **Credit Hours:** 3
- Writing Intensive - SPED 3000 - Introduction to Applied Behavior Analysis **Credit Hours:** 3
- Keystone Experience - SPED 4240 - Student Teaching **Credit Hours:** 6

### Major

#### Required Major Courses

- SPED 1000 - Disability in Popular Media **Credit Hours:** 3
- SPED 1050 - Foundations of Special Education **Credit Hours:** 3
- SPED 2000 - Assessment and Positive Behavior Interventions **Credit Hours:** 3
- SPED 3000 - Introduction to Applied Behavior Analysis **Credit Hours:** 3
- SPED 3010 - Special Learning Disabilities and Emotional Behavior DisordersÂ  **Credit Hours:** 3
- SPED 3020 - Intellectual and Physical Disabilities **Credit Hours:** 3
- SPED 3060 - Special Reading and Writing Instruction **Credit Hours:** 3
- SPED 3070 - Special Mathematics Instruction **Credit Hours:** 3
- SPED 3090 - Assessment and Prescriptive Teaching **Credit Hours:** 3
- SPED 4010 - Assistive Technology for the Exceptional Learners **Credit Hours:** 3
- SPED 4040 - Transition Planning and Instruction **Credit Hours:** 3
- SPED 4050 - Advanced Evidence Based Practices and Methods for High Incidence Disabilities **Credit Hours:** 3
- SPED 4060 - Advanced Evidence Based Practices and Methods for Low Incidence Disabilities **Credit Hours:** 3
- SPED 4070 - Classroom Administration, Collaboration, and IEP Development **Credit Hours:** 3
- SPED 4240 - Student Teaching **Credit Hours:** 6
- ECEE 2300 - Family & Community Collaborative Partnerships **Credit Hours:** 3
- ECEE 1210 - Developmentally Appropriate Practices in PreK **Credit Hours:** 3
- ECEE 2340 - Creative Arts for Early Childhood Educators **Credit Hours:** 3
- ECEE 3600 - Components of Reading and Writing Instruction **Credit Hours:** 3
- ECEE 3610 - Phonics and Structured Language Instruction **Credit Hours:** 3
- ECEE 3620 - Assessment K-4 **Credit Hours:** 3
- ECEE 2400 - Emergent Literacy and Language **Credit Hours:** 3
- ECEE 2410 - Pre-K STEAM **Credit Hours:** 3
- ECEE 2420 - Culturally and Developmentally Responsive Teaching in PreK **Credit Hours:** 3
- ECEE 3700 - Teaching Mathematics in Grades K-4 **Credit Hours:** 3
- ECEE 3710 - Teaching Science in Grades K-4 **Credit Hours:** 3
- ECEE 3720 - Teaching Social Studies in Grades K - 4 **Credit Hours:** 3
- ED 3700 - ELL Foundations **Credit Hours:** 3
- ED 4250 - Student Teaching **Credit Hours:** 6
- ECEE 3740 - Integrated STEM **Credit Hours:** 3

## Total Credits: 138

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Economics, BSBA

The BSBA Economics is a STEM program that prepares learners to apply quantitative tools and micro- and macroeconomic theory to understand decision-making, solve problems and evaluate outcomes in business, government, non-profit and international sectors.

Advisement Sheet

## Student Learning Outcomes

**BSBA Program Level Outcomes**

- Demonstrate proficiency in foundational concepts of functional business areas
- Exhibit critical thinking skills for the collection, analysis, and application of data and concepts
- Display cultural competence for ethical, sustainable, inclusive, and collaborative leadership practices including a global perspective
- Effectively communicate in oral, written, visual, and digital formats

**Economics Major Outcomes**

- Solve complex problems by applying microeconomics and macroeconomics models and methodologies
- Demonstrate ability to form a research question, create testable hypotheses, and apply appropriate statistical tools to draw conclusions about hypotheses
- Evaluate the validity of information and data
- Effectively communicate results of an empirical analysis (in written and presentation formats, using appropriate data visualization techniques)

# Curriculum Requirements

## General Education

- Oral Communication - COMJ 1010 - Public Speaking **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - MATH 1010 - Quantitative Reasoning **Credit Hours:** 3
- Technological Literacy - BSIN 2000 - Management Information Systems **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - PSYC 1000 - Introduction to Psychology **Credit Hours:** 3
- Social Sciences - ECON 2100 - Principles of Microeconomics **Credit Hours:** 3
- Social Sciences - ECON 2200 - Principles of Macroeconomics **Credit Hours:** 3
- Natural Sciences and Tech - MATH 1220 - College Algebra **Credit Hours:** 3
- Natural Sciences and Tech - QBA 1000 - QBA 1: Optimization **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective **Credit Hours:** 3

## Competencies

- Quantitative Applications - QBA 2000 - QBA 2: Statistical Analysis **Credit Hours:** 3
- Applied Methodologies - QBA 3000 - QBA 3: Analytics and Applications **Credit Hours:** 3
- Intercultural Fluency - Any Course **Credit Hours:** 3
- Ethical Reasoning - BSAD 3200 - Business Ethics **Credit Hours:** 3
- Information Literacy - Any Course **Credit Hours:** 3
- Writing Intensive - BSAD 4900 - Business Capstone **Credit Hours:** 3
- Writing Intensive - ECON 4810 - Applied Econometrics **Credit Hours:** 3
- Keystone Experience - Any Course **Credit Hours:** 3

## Major

### Required Major Courses

- ACC 2000 - Financial Accounting **Credit Hours:** 3
- ACC 3000 - Managerial Accounting **Credit Hours:** 3
- BLAW 2000 - Legal and Ethical Environment of Business **Credit Hours:** 3
- BSAD 3200 - Business Ethics **Credit Hours:** 3
- BSAD 4900 - Business Capstone **Credit Hours:** 3
- ECON 4810 - Applied Econometrics **Credit Hours:** 3
- FINA 3000 - Financial Management **Credit Hours:** 3
- MGMT 3000 - Principles of Management **Credit Hours:** 3
- MKTG 3000 - Principles of Marketing **Credit Hours:** 3
- QBA 2000 - QBA 2: Statistical Analysis **Credit Hours:** 3
- QBA 3000 - QBA 3: Analytics and Applications **Credit Hours:** 3
- ECON 3100 - Intermediate Microeconomics **Credit Hours:** 3
- ECON 3200 - Intermediate Macroeconomics **Credit Hours:** 3
- ECON 4810 - Applied Econometrics **Credit Hours:** 3

### Major Electives

- ECON elective (3000+) **Credit Hours:** 3
- ECON elective (3000+) **Credit Hours:** 3
- ECON elective (3000+) **Credit Hours:** 3
- ECON elective (3000+) **Credit Hours:** 3
- ECON elective (3000+) **Credit Hours:** 3

### Required Minor/Certificate

- Required Minor/Certificate Course **Credit Hours:** 3
- Required Minor/Certificate Course **Credit Hours:** 3
- Required Minor/Certificate Course **Credit Hours:** 3
- Required Minor/Certificate Course **Credit Hours:** 3

## Program Notes

Students can choose a minor in Accounting, Forensic Accounting, Global Business, Human Resource Management, Management, Management Information Systems, or Marketing. 9 credits from these minors overlap with the Business Core courses, so only 12 credits are required to complete the minor. Students can choose the Spanish for Professions certificate (12 credits). Other minors or certificates may be chosen but will require more credits (which may apply to General Education or free electives). Students with dual majors or dual degrees are not required to complete a minor.

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Electrical Engineering Technology, BS

This program prepares individuals to apply basic engineering principles, mathematics and technical skills in support of electrical, electronics, communication and power system engineers. It includes courses in electric circuits, microcontroller interfacing, software engineering, power systems, controls, RF communications, prototype development and testing, system analysis and testing, and report preparation.

## Student Learning Outcomes

- Apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline.
- Design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline.
- Identify and use appropriate technical literature and apply written, oral, and graphical communication in broadly-defined technical and non-technical environments.
- Conduct standard tests, measurements, and experiments, and analyze and interpret the results to improve processes.
- Function effectively as a member as well as a leader on technical teams.

## Curriculum Requirements

Electrical Engineering Technology (no concentration)

Electrical Engineering Technology, Computer Engineering Technology Concentration

# English, BA

The BA in English at PennWest is taught by a diverse group of faculty with a range of expertise who are committed to providing English majors with challenging coursework that enhances their communication, critical thinking, and research skills. The training and expertise of the English faculty covers a more extensive vision of the traditions and future of English Studies than is commonly available, and our faculty have an average of 10-20 years of classroom teaching experience. English majors at PennWest can choose from three programs of study: Writing, Literary and Cultural Studies, and a General English option that invites a student to combine the study of writing, creative writing and literature. All of these programs are available at any of our three campuses in Clarion, Edinboro, or California, PA. English majors have the opportunity to build flexible schedules, combining on-campus courses with online courses, so that they can participate in campus productions, athletics, or other co-curricular activities. Graduates of PennWest's English program are prepared for a wide range of professions to compete in the constantly changing 21st century workforce.

## Student Learning Outcomes

- **Breadth:** English majors will demonstrate knowledge of a wide range of texts and contexts, encompassing conventions and innovations in the history and different areas of the field, as well as a variety of historical periods, authors, genres, cultures, and media.
- **Concepts:** English majors will demonstrate knowledge of grammatical, rhetorical, literary, and critical terms and apply them appropriately to analyze the conventions and features of a variety of texts, including literary, informational, print, digital, and multi-modal.

- **Written Communication:** English majors will apply appropriate rhetorical strategies (audience, purpose, context, style, tone, etc.) to the composition of a variety of forms and genres, including print, digital, and multi-modal texts, to generate written work that is clear and engaging.
- **Critical Reading:** English majors will recognize, understand, and interpret elements of a text and its context, drawing logical conclusions on the basis of analysis and evaluation.
- **Research:** English majors will gather, critically evaluate, and appropriately synthesize research from both academic and non-academic sources to develop thoughtful arguments and analyses.

## Curriculum Requirements

English (no concentration)

English, Literary & Cultural Studies Concentration

English, Writing Concentration

# Environmental Science, BS

Environmental Science is an interdisciplinary field that incorporates study of the living and physical world in order to provide creative solutions to environmental issues facing our planet and its people. The Environmental Science degree prepares students to be scientific thinkers who appreciate the diversity and complexity of the natural world. It prepares them for careers in environmental science, conservation, and ecology by providing rigorous training in the life sciences, ecology, and the associated fields of geology, geography, atmospheric science, and chemistry. Laboratory, field and internship experience are provided to help the student integrate knowledge and skills. A particular emphasis is placed on hands-on training and experiences. Students will become ethical citizens of the world and make valuable contributions to local, regional, national, and international improvements in health, environment and technology.

**Professional Geology Concentration**

The Professional Geology concentration provides the competencies, skills, and knowledge base required to enter the workforce as a Geologist or pursue Graduate studies in Geology or related Environmental and Earth Science fields. The program exceeds the requirements to become a licensed Professional Geologist in Pennsylvania. Career pathways include wide- ranging opportunities related to water, energy, and mineral resource management, geologic engineering and construction, natural hazards, and environmental fields addressing issues such as water resources and pollution.

**Sustainability and Climate Science Concentration**

The issues of conservation, sustainability, and climate change are of growing concern. The Sustainability and Climate Science concentration integrates the human, social, ethical, and scientific aspects of environmental issues and includes the rapidly expanding technologic field of Geographic Information Sciences (GIS). Students gain a natural science background sufficient to be conversant on the fundamental scientific issues involved in contemporary environmental problems and to gain social science skills useful to planning and understanding human interactions with the environment.

## Student Learning Outcomes

- Students will describe and explain the content knowledge of environmental sciences through its fundamental theories, terminology, and principles with particular emphasis on topics of relevance to understanding and solving environmental problems.
- Students will use the scientific method to develop hypotheses, and design and conduct laboratory or field research that addresses the environmentally related question(s) under investigation.

- Students will critically review, synthesize, interpret, and assess scientific data using a variety of methods and tools.
- Students will access, assess, and use available sources of information (including primary sources and databases) related to environmental sciences.
- Students will synthesize information and use written and oral skills to effectively communicate with environmental science professionals and the general public.
- Students will be able to recognize social and ethical issues related to the environment.

## Curriculum Requirements

Environmental Science (no concentration)

Environmental Science, Professional Geology Concentration

Environmental Science, Sustainability and Climate Science Concentration

# Exercise Science, BS

## Student Learning Outcomes

**Exercise Physiology Concentration Outcomes**

- Students will acquire an understanding of physiological adaptations related to metabolic, cardiorespiratory, and neuromuscular systems as a result of acute and chronic participation in various levels of physical activity, sports, and/or exercise.
- Students will demonstrate the ability to administer and interpret appropriate preparticipation health screening procedures, fitness assessments, and exercise prescription for apparently healthy populations, individuals with controlled disease, and other special populations.
- Students will gain a basic understanding of nutrition priciples related to metabolic processes, sports participation, and weight management programs.
- Students will obtain the ability to optimize adoption and adherence of exercise and other healthy behaviors by applying effective behavioral strategies and motivational techniques.
- Students will demonstrate the ability to evaluate and conduct scientific research in the field of Exercise Physiology.
- Students will acquire the ability to develop and disseminate risk management guidelines for a health/fitness facility to reduce member, employee, and business risk.
- Students will demonstrate the ability to ensure that emergency policies and procedures are in place.
- Students will understand the effective use of technology as it relates to the field of Exercise Physiology.

**Golf Performance Conentration Outcomes**

- Explain physiological adaptations related to metabolic, cardiorespiratory, and neuromuscular sytems as a result of acute and chronic participation in various levels of physical activity, sports, and/or exercise.
- Explain nutrition principles related to metabolic processes, sports participation, and weight management programs.
- Optimize adoption and adherence of exercise and other healthy behaviors by applying effective behavioral strategies and motivational techniques.
- Develop and write a comprehensive business plan
- While on each required internship, PGM students will demonstrate career specific knowledge and skills along with industry acceptable personality and professionalism

- Students will successfully complete the Player Development Program (PDP) requirements each semester until passing the PGA's PAT
- PGM students will recognize the need for and the ability to effectively develop a simple food and beverage outlet at a golf facility
- Research existing literature on an area relating to golf equipment, golf fitness and/or golf teaching methodologies
- Conduct hypothesis testing in the areas of golf equipment, golf fitness or golf teaching methodologies and report results in writing
- PGM students will demonstrate the knowledge, skills and techniques needed to successfully construct a golf club from component stage to finished product ensuring the proper fit and measurements for a particular customer

**Human Performance and Wellness Concentration Outcomes**

- Explain physiological adaptations related to metabolic, cardiorespiratory, and neuromuscular sytems as a result of acute and chronic participation in various levels of physical activity, sports, and/or exercise.
- Explain nutrition principles related to metabolic processes, sports participation, and weight management programs.
- Optimize adoption and adherence of exercise and other healthy behaviors by applying effective behavioral strategies and motivational techniques.
- Apply analytical and critical thinking to advance exercise and wellness initiatives for individuals and communities
- Design safe and effective exercise programs to achieve desired outcomes and goals
- Outline exercise progression guidelines for resistance, aerobic and flexibility activity to achieve the goals of apparently healthy participants
- Assess muscluar strength, endurance, and flexibility
- Disseminate education resources to support clients in the adoption and maintenance of healthy lifestyle behaviors
- Seek new research of evidence-based practices within the human performance area
- Develop meaningful community wellness programming benefitting defined populations

**Nutrition and Fitness Concentration Outcomes**

- Students will demonstrate content knowledge related to the principles and practice of nutrition assessment and counseling, fitness assessment and prescription, community nutrition education, and the influence of nutrition on exercise performance, training, and recovery.
- Students will communicate the importance of nutrition and fitness in a healthy lifestyle.
- Students will interpret and apply nutrition concepts to evaluate and improve the nutritional health of individuals with medical conditions.
- Students will demonstrate competence in the skills of assessment, planning, management and evaluation of nutrition and fitness programs.
- Students will practice identifying peer-reviewed, reliable nutrition and fitness information and locate, understand, evaluate, and use the information effectively.
- Students will identify employment opportunities available within the field.
- Students will develop and practice the beliefs, values, attitudes and behaviors for an entry-level professional in nutrition and fitness.

## Curriculum Requirements

Exercise Science, Exercise Physiology Concentration

Exercise Science, Golf Performance Concentration

Exercise Science, Wellness and Human Performance Concentration

Exercise Science, Nutrition and Fitness Concentration

# Finance and Personal Financial Planning, BSBA

The BSBA in Finance and Personal Financial Planning at PennWest University prepares students to enter the finance and personal financial planning professions. This program prepares students for careers in banking, corporate/treasury management, financial analytics, corporate forecasting, and personal financial planning. This program is registered with the Certified Financial Planner Board of Standards, Inc.; therefore, program graduates are eligible to sit for the CFP® exam. This program also prepares students to take the Securities Industry Essentials ® (SIE®) Exam.

Advisement Sheet

## Student Learning Outcomes

**BSBA Program Level Outcomes**

- Demonstrate proficiency in foundational concepts of functional business areas
- Exhibit critical thinking skills for the collection, analysis, and application of data and concepts
- Display cultural competence for ethical, sustainable, inclusive, and collaborative leadership practices including a global perspective
- Effectively communicate in oral, written, visual, and digital format

**Finance and Personal Financial Planning Major Outcomes**

- Integrate financial theories, methods, and concepts to achieve financial goals
- Evaluate how to best maximize efficiency through effective risk management, capital allocation, and management of resources
- Develop and communicate sound financial recommendations through an analysis of financial and market related information

## Curriculum Requirements

### General Education

- Oral Communication - COMJ 1010 - Public Speaking **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - MATH 1010 - Quantitative Reasoning **Credit Hours:** 3
- Technological Literacy - BSIN 2000 - Management Information Systems **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - PSYC 1000 - Introduction to Psychology **Credit Hours:** 3
- Social Sciences - ECON 2100 - Principles of Microeconomics **Credit Hours:** 3
- Social Sciences - ECON 2200 - Principles of Macroeconomics **Credit Hours:** 3
- Natural Sciences and Tech - MATH 1220 - College Algebra **Credit Hours:** 3
- Natural Sciences and Tech - QBA 1000 - QBA 1: Optimization **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3

- Wellness Elective - PFPL 1010 - Wealth Building and Personal Financial Planning **Credit Hours:** 3

## Competencies

- Quantitative Applications - QBA 2000 - QBA 2: Statistical Analysis **Credit Hours:** 3
- Applied Methodologies - QBA 3000 - QBA 3: Analytics and Applications **Credit Hours:** 3
- Intercultural Fluency - Any Course **Credit Hours:** 3
- Ethical Reasoning - BSAD 3200 - Business Ethics **Credit Hours:** 3
- Information Literacy - Any Course **Credit Hours:** 3
- Writing Intensive - BSAD 4900 - Business Capstone **Credit Hours:** 3 and ANY OTHER WI COURSE
- Keystone Experience - FINA 4200 - Securities Industry Essential Exam Preparation **Credit Hours:** 3

## Major

### Required Major Courses

- ACC 2000 - Financial Accounting **Credit Hours:** 3
- ACC 3000 - Managerial Accounting **Credit Hours:** 3
- BLAW 2000 - Legal and Ethical Environment of Business **Credit Hours:** 3
- BSAD 3200 - Business Ethics **Credit Hours:** 3
- BSAD 4900 - Business Capstone **Credit Hours:** 3
- FINA 3000 - Financial Management **Credit Hours:** 3
- MGMT 3000 - Principles of Management **Credit Hours:** 3
- MKTG 3000 - Principles of Marketing **Credit Hours:** 3
- QBA 2000 - QBA 2: Statistical Analysis **Credit Hours:** 3
- QBA 3000 - QBA 3: Analytics and Applications **Credit Hours:** 3
- ACC 3200 - Federal Income Tax I **Credit Hours:** 3
- FINA 1100 - Finance & Personal Financial Planning Professions **Credit Hours:** 3
- FINA 3100 - Advanced Financial Management **Credit Hours:** 3
- FINA 3200 - Financial Institutions & Markets **Credit Hours:** 3
- FINA 3500 - Risk Management **Credit Hours:** 3
- FINA 3600 - International Finance **Credit Hours:** 3
- FINA 4000 - Investments **Credit Hours:** 3
- FINA 4200 - Securities Industry Essential Exam Preparation **Credit Hours:** 3
- PFPL 4300 - Retirement Planning **Credit Hours:** 3
- PFPL 4400 - Estate Planning **Credit Hours:** 3
- PFPL 4750 - Financial Plan Development **Credit Hours:** 3

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Fisheries and Wildlife Biology, BS

The fisheries and wildlife science degree program at PennWest provides a broad-based curriculum that introduces a student to the various techniques and philosophies of fisheries and wildlife conservation and management. Almost all courses include a laboratory portion where a student will study the practical application of scientific theories and learn how to apply the scientific method with inquiry-based investigations.

The undergraduate curriculum includes those courses identified by The Wildlife Society and The American Fisheries Society as essential to becoming certified by either society upon graduation. This undergraduate program also incorporates many applied education experiences, so students can network with future employers and develop professional contacts. Many of our graduates continue their studies in graduate school, while others enter the workforce.

Advisement Sheet

# Student Learning Outcomes

- Apply socio-cultural, economic, and ecological knowledge to develop, implement, and assess fisheries and wildlife conservation and management strategies.
- Apply the scientific method as a process of inquiry and use the method in the process of decision-making.
- Apply quantitative tools to address fisheries and wildlife conservation and management strategies.
- Demonstrates proficiency with field, laboratory, and computer-based techniques for studying and managing fisheries and wildlife resources.
- Demonstrate proficiency with written and oral communication.

# Curriculum Requirements

## General Education

- Oral Communication - COMJ 1010 - Public Speaking **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - MATH 1220 - College Algebra **Credit Hours:** 3
- Technological Literacy - GGIS 1210 - Mapping our Environment **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - CHEM 1108 - General Chemistry I **Credit Hours:** 4
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective - STAT 2020 - Elements of Statistics **Credit Hours:** 3

## Competencies

- Quantitative Applications - Any Course **Credit Hours:** 3
- Applied Methodologies - Any Course **Credit Hours:** 3
- Intercultural Fluency - Any Course **Credit Hours:** 3
- Ethical Reasoning - Any Course **Credit Hours:** 3

- Information Literacy - Any Course **Credit Hours:** 3
- Writing Intensive - Any Courses **Credit Hours:** 6

Keystone Experience - Select From:

- BIOL 4480 - Topics in Field Biology **Credit Hours:** 1 TO 6
- BIOL 4951 - Internship in Biology **Credit Hours:** 1 TO 4
- BIOL 4999 - Research in Biology **Credit Hours:** 1 TO 4

## Major

- BIOL 1700 - Introduction to Organismal Biology **Credit Hours:** 4
- BIOL 1400 - Introduction to Ecology and Evolution **Credit Hours:** 4
- BIOL 1900 - Introduction to Cellular and Molecular Biology **Credit Hours:** 4
- BIOL 2248 - Principles of General Ecology **Credit Hours:** 4

Upper Division Botany (3000/4000-level) - Taxonomy Course - Select One From:

- BIOL 3707 - Plant Taxonomy **Credit Hours:** 0 TO 4
- BIOL 4442 - Dendrology **Credit Hours:** 4
- BIOL 4475 - Wetlands Ecology **Credit Hours:** 4
- BIOL 4770 - Forest Ecology and Management **Credit Hours:** 4
- BIOL 4800 - Vegetation Sampling and Analysis **Credit Hours:** 4

- FWSC 4492 - Animal Population Dynamics **Credit Hours:** 4

Quantitative Methods Course-Select From:

- BIOL 4402 - Biometry **Credit Hours:** 3
- BIOL 4484 - Quantitative Methods in Aquatic Environmental Biology **Credit Hours:** 0 TO 3
- BIOL 4570 - Biological Study Design and Data Analysis **Credit Hours:** 3
- FWSC 4950 - Applied Biological Methodology and Scientific Communication **Credit Hours:** 4

Wildlife Techniques or Fisheries Management- Select One From:

- FWSC 4423 - Wildlife Management Techniques **Credit Hours:** 0 TO 4
- FWSC 4424 - Fisheries Management **Credit Hours:** 4

Cons. Bio or Princ. Of Widlife Man. or Aquaculture- Select Two From:

- BIOL 3399 - Conservation Biology **Credit Hours:** 3
- FWSC 4420 - Principles of Wildlife Management **Credit Hours:** 3
- FWSC 4425 - Aquaculture **Credit Hours:** 3

Biology Taxonomy Related Electives- Select Two From:

- BIOL 3337 - Ornithology **Credit Hours:** 0 TO 4
- BIOL 3820 - Vertebrate Zoology **Credit Hours:** 3
- BIOL 4435 - Ichthyology **Credit Hours:** 0 TO 4
- BIOL 4473 - Freshwater Ecology **Credit Hours:** 4
- BIOL 4700 - Mycology **Credit Hours:** 0 TO 4
- BIOL 4740 - Marine and Freshwater Invertebrates **Credit Hours:** 3
- BIOL 4750 - Terrestrial Invertebrates **Credit Hours:** 3
- BIOL 4745 - Entomology **Credit Hours:** 0 TO 4
- BIOL 4810 - Herpetology **Credit Hours:** 3

Law Policy and Planning Course-Select One From:

- BIOL 2411 - Environmental Science and Sustainability **Credit Hours:** 3
- GGIS 4220 - Environmental Applications in GIS **Credit Hours:** 3
- FWSC 4435 - Natural Resource Law and Policy **Credit Hours:** 3
- RECR 3620 - Recreation Site Design and Management **Credit Hours:** 3
- RECR 3650 - Recreation Resource Management **Credit Hours:** 3

- Any Chemistry Course besides CHEM 1108 - General Chemistry I **Credit Hours:** 3

Writing Course-Select One From:

- ENGL 2230 - Writing and the Natural Sciences **Credit Hours:** 3
- ENGL 3220 - Grant and Proposal Writing **Credit Hours:** 3
- ENGL 3250 - Research Writing **Credit Hours:** 3

Select One From:

- BIOL 4480 - Topics in Field Biology **Credit Hours:** 1 TO 6
- BIOL 4951 - Internship in Biology **Credit Hours:** 1 TO 4
- BIOL 4999 - Research in Biology **Credit Hours:** 1 TO 4

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Graphic Design, BDes

PennWest's Bachelor of Design (BDes) degree in Graphic Design prepares majors to enter the growing and dynamic field of visual communication in graphic design. Graphic designers give form to visual ideas through the creative problem solving process-planning, analyzing, defining, creating, and evaluating the role their visual solutions have within the context of today's communication.

More than ever, we live in a visually designed world. Visual forms continue to be redefined, restructured, and developed to solve unique problems for their target audience needs in cross-platform environments. At PennWest, students are encouraged to develop an individual aesthetic while studying the broader contexts and challenges that shape a successful design including the formal principles, conceptual approaches, techniques and applications, technologies and processes, theory and criticism, as well as more experimental methods to graphic design.

Keystone experiences of PennWest's BDes degree in Graphic Design focus on professional preparation for the diverse pathways within the field of graphic & interactive design. Culminating experiences include the production of a final portfolio of work that best represents the abilities and focus of each student as they enter the professional field of graphic design.

The curriculum is further enhanced through internships and client-based projects, workshops and lectures by visiting lecturers, involvement in graphic design club and the student chapter of AIGA, portfolio reviews, studio tours, museum visits, and participation in regional and national competitions.

Advisement Sheet

## Student Learning Outcomes

- Students will demonstrate a high level of proficiency with the primary material, tools, technique, and technology used in their concentration area supplemented by experience with other media.
- Students will fully investigate in their work conceptual issues and expressive potential of their medium.
- Students will integrate aesthetic principles in the development of their own artwork.
- Students will recognize that the making and study of art can be approached from a variety of perspectives.
- Students will defend meaningful interpretations and critical evaluations about their own artworks and the works of other artists both orally and in writing.
- Students will construct informed discussion of art as an essential component of viewing, producing, and evaluating art.
- Students will explain cultural and historical contexts surrounding works of art in general and in their field of study.
- Students will conclude that art communicates, challenges and shapes cultural and societal values.
- Students will reframe their practices through experimentation.
- Students will organize and produce a resume, a written statement about, and an appropriate visual documentation of their work.

# Curriculum Requirements

## General Education

- Oral Communication - Any Course **Credit Hours:** 3
- Written Communication - Any Course **Credit Hours:** 3
- Quantitative Reason - Any Course **Credit Hours:** 3
- Technological Literacy ART 1300 - Digital Art Foundations **Credit Hours:** 3

- Arts and Humanities - ARTH 1200 - Landmarks of World Art **Credit Hours:** 3
  **OR**
- Arts and Humanities - ARTH 1302 - Global Art History II **Credit Hours:** 3

- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective **Credit Hours:** 3

## Competencies

- Quantitative Applications - Any Course **Credit Hours:** 3
- Applied Methodologies - Any Course **Credit Hours:** 3
- Intercultural Fluency - Any ARTH Course **Credit Hours:** 3
- Ethical Reasoning - Any Course **Credit Hours:** 3
- Information Literacy - Any Course **Credit Hours:** 3
- Writing Intensive - ARTH Course and Any Other Course **Credit Hours:** 6

- Keystone Experience - ART 4308 - Senior Design Portfolio **Credit Hours:** 3

## Major

## Required Major Courses

- ART 1100 - 2D Design **Credit Hours:** 3
- ART 1200 - 3 Dimensional Design **Credit Hours:** 3
- ART 1106 - Drawing I **Credit Hours:** 3
- ART 1206 - Drawing II **Credit Hours:** 3
- ART 1300 - Digital Art Foundations **Credit Hours:** 3
- ART 2008 - Typography **Credit Hours:** 3
- ART 2108 - Visual Literacy **Credit Hours:** 3
- ART 3008 - Advanced Typography **Credit Hours:** 3
- ART 3108 - Visual Communication **Credit Hours:** 3
- ART 3208 - Designing for the Web **Credit Hours:** 3
- ART 3308 - Branding Design **Credit Hours:** 3
- ART 4008 - Motion Design **Credit Hours:** 3
- ART 4108 - Graphic Design Systems **Credit Hours:** 3
- ART 4208 - Contextual Design **Credit Hours:** 3
- ART 4308 - Senior Design Portfolio **Credit Hours:** 3

- 2D Studio Art Elective - ART 2012 - Printmaking I **Credit Hours:** 3
  **OR**
- 2D Studio Art Elective - ART 2011 - Painting I **Credit Hours:** 3

3D Studio Art Elective - Select From:

- ART 2010 - Introduction to Jewelry and Metals **Credit Hours:** 3
- ART 2004 - Ceramics I **Credit Hours:** 3
- ART 2013 - Sculpture I **Credit Hours:** 3
- ART 2014 - Wood Furniture I **Credit Hours:** 3

Art Cognate:

- ART 3511 - Digital Drawing and Painting **Credit Hours:** 3
- ART 3309 - Graphic Novel Art and Design **Credit Hours:** 3
- ART 2005 - Introduction to Photography **Credit Hours:** 3
- ART 2105 - Introduction to Digital Filmmaking **Credit Hours:** 3
- ART 2101 - 2D Animation Principles **Credit Hours:** 3
- ART 2001 - 3D Animation Principles **Credit Hours:** 3

- ARTH 1200 - Landmarks of World Art **Credit Hours:** 3
  **OR**
- ARTH 1302 - Global Art History II **Credit Hours:** 3

- Any Art History **Credit Hours:** 3
- Any 3000-Level or higher Art History **Credit Hours:** 3
- Any 3000-Level or higher Art History **Credit Hours:** 3

### Major Electives

- Any ART, ARED, or ARTH course **Credit Hours:** 3
- Any ART, ARED, or ARTH course **Credit Hours:** 3
- Any ART, ARED, or ARTH course **Credit Hours:** 3
- Any ART, ARED, or ARTH course **Credit Hours:** 3
- Any ART, ARED, or ARTH course **Credit Hours:** 3

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Health Sciences, BS

This applied science discipline includes the study of human health and the application of that knowledge to improve health and treat disease. Pennwest California's Health Science program combines traditional science courses with specialized courses in multicultural healthcare, special populations, and complimentary healthcare. This program prepares you to pursue the post-graduate education required for a career as an Athletic Trainer, Physical Therapist, Occupational Therapist, Physician's Assistant, and more.

## Student Learning Outcomes

- Students graduating with a BS in Health Science will demonstrate proficiency and skill in Health Science content areas.
- Students graduating with a BS in Health Science will be able to present scientific data in an appropriate context and in a variety of ways at different levels.
- Students graduating with a BS in Health Science will be demonstrate foundational knowledge essential to enter a post-graduate healthcare related profession.
- Students will demonstrate an understanding of the Healthcare Professions, required education, licensing laws, and career opportunities.

## Curriculum Requirements

Health Sciences (no concentration)

Health Sciences, Pre-Athletic Training Concentration

# History, BA

The study of history encourages students to examine the values of their society and those of other societies. It prepares students to read critically, think analytically, and argue logically about the events and forces that have shaped past and present worlds. These skills exhibited in research, writing, and presentations have served students well in a wide range of careers in business, law, public policy and advocacy, education, journalism, historical societies, museums, and archives.

The history faculty's goal is to help students develop historical thought while preparing for a rapidly shifting job market. Our degree provides students with a technologically adapt education for the 21st century that focuses on skills in demand in the modern liberal arts market. Students will be challenged to blend traditional history and intercultural skills with background skills in communications, digital media, geographic information system (GIS) mapping, public history, computer science, and/or library science. Within the degree, students will be able to choose from a wide variety of courses in the history of the United States, Europe, Global, and a range of topical issues. These combined courses build a knowledge set that allow our students to pursue diverse and rewarding career opportunities.

Advisement Sheet

# Student Learning Outcomes

- Demonstrate appropriate writing skills to develop a well supported historical argument.
- Demonstrate a broad knowledge of history.
- Produce a scholarly, written work with proper evidence and documentation.
- Use historical terminology to identify the general principles of historical thought.
- Apply the professional standards of the historical discipline.
- Communicate historical knowledge and interpretations to a variety of audiences.

# Curriculum Requirements

## General Education

- Oral Communication - Any Course **Credit Hours:** 3
- Written Communication - Any Course **Credit Hours:** 3
- Quantitative Reason - Any Course **Credit Hours:** 3
- Technological Literacy - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective **Credit Hours:** 3

## Competencies

- Quantitative Applications - Any Course **Credit Hours:** 3
- Applied Methodologies - Any Course **Credit Hours:** 3
- Intercultural Fluency - Any Course **Credit Hours:** 3
- Ethical Reasoning - Any Course **Credit Hours:** 3
- Information Literacy - Any Course **Credit Hours:** 3
- Writing Intensive - HIST 2990 - Historical Methods **Credit Hours:** 3
  Writing Intensive - HIST 4990 **Credit Hours:** 3

- Keystone Experience - HIST 4900 - History Capstone **Credit Hours:** 3

## Major

### Required Major Courses

- HIST 1010 - US History to 1877 **Credit Hours:** 3
- HIST 1015 - US History since 1877 **Credit Hours:** 3
- HIST 1510 - World History to 1500 **Credit Hours:** 3
- HIST 1515 - World History from 1500 **Credit Hours:** 3
- HIST 2990 - Historical Methods **Credit Hours:** 3
- HIST 4900 - History Capstone **Credit Hours:** 3

### Major Electives

US History: Two of the following:

- HIST 3000 - Topics in US History **Credit Hours:** 3
- HIST 4000 - Advanced Topics in US History **Credit Hours:** 3
- HIST 2010 - History of Pennsylvania **Credit Hours:** 3

Global History: Two of the following:

- HIST 2040 - History of Western Society to 1500 **Credit Hours:** 3
- HIST 2045 - History of Western Society since 1500 **Credit Hours:** 3
- HIST 3400 - Topics in Global History **Credit Hours:** 3
- HIST 4400 - Advanced Topics in Global History **Credit Hours:** 3

Historical Culture, Diversity and Inclusion: Two of the following:

- HIST 3700 - Topics in Historical Culture, Diversity, Inclusion **Credit Hours:** 3
- HIST 4700 - Advanced Topics in Historical Culture, Diversity, Inclusion **Credit Hours:** 3
- HIST 3010 - African American History to 1877 **Credit Hours:** 3
- HIST 3015 - African American History Since 1877 **Credit Hours:** 3
- HIST 3019 - Readings in African American/Africana Studies **Credit Hours:** 3
- HIST 3030 - Women in U.S. History **Credit Hours:** 3
- HIST 3055 - Africa 1850 to the Present **Credit Hours:** 3
- HIST 3840 - Modern Global Women's History **Credit Hours:** 3
- HIST 3890 - Race and Ethnicity in America **Credit Hours:** 3
- HIST 4120 - US Civil Rights Movement **Credit Hours:** 3
- HIST 4140 - History of Hip Hop **Credit Hours:** 3

Any History Course: Any two courses HIST 3000-4999 **Credit Hours:** 6

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Human Services and Rehabilitation, BS

The Human Services and Rehabilitation program is an interdisciplinary program that along with human services and rehabilitation, combines the expertise of the departments of sociology, psychology, and special education. The program prepares students for generalist human service positions in the areas of addictions, aging, pre-occupational therapy, intellectual disabilities, and physical and psychosocial disabilities.

Graduates of the program assume a variety of roles, including case managers, residential program managers, therapeutic staff support, day service directors, rehabilitation program specialists, children and youth personnel, substance abuse prevention specialists, activities directors, corrections and probation/parole and similar positions. Students will work with faculty who are experienced, human service practitioners and will participate in a variety of on- and off-campus field experiences involving increasingly levels of responsibility, with a culminating/semester-long internship in a human service agency. Field experience opportunities are available throughout the region and state. Acceptances in to the Human Services and Rehabilitation program is contingent upon a 2.5 GA in the first four semesters and Act 33, Act 34, and FBI clearances.

Advisement Sheet

# Student Learning Outcomes

- Students will be familiar with the range of human service delivery models.
- Students will demonstrate professional attitudes, behavior, and skills.
- Students will demonstrate appreciation and awareness of diversity.
- Students will demonstrate an understanding of the importance and relevance of the constantly evolving knowledge base of the field of human services and its related disciplines and use this knowledge to better inform practice decisions and evaluate outcomes.
- Students will apply meaningful connections between classroom learning and experiences in the field throughout the program.
- Students will analyze the needs of clients/consumers, develop goals and design as well as implement a plan of action.

# Curriculum Requirements

## General Education

- Oral Communication - Any Course **Credit Hours:** 3
- Written Communication - Any Course **Credit Hours:** 3
- Quantitative Reason - Any Course **Credit Hours:** 3
- Technological Literacy - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - PSYC 1000 - Introduction to Psychology **Credit Hours:** 3
- Social Sciences - SOCI 1000 - Introduction to Sociology **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective **Credit Hours:** 3

## Competencies

- Quantitative Applications - Any Course **Credit Hours:** 3
- Applied Methodologies - HSRH 4950 - Internship in Human Services and Rehabilitation **Credit Hours:** 3 TO 10
- Applied Methodologies - SPED 3000 - Introduction to Applied Behavior Analysis **Credit Hours:** 3
- Intercultural Fluency - SOCI 1000 - Introduction to Sociology **Credit Hours:** 3
- Ethical Reasoning - Any Course **Credit Hours:** 3
- Information Literacy - HSRH 2270 - Neurological Impairments and Physical Disorders **Credit Hours:** 3
- Writing Intensive HSRH 3995 - Seminar for Human Services and Rehabilitation Internship **Credit Hours:** 2
- Writing Intensive - SPED 3000 Introduction to Applied Behavior Analysis **Credit Hours:** 3
- Keystone Experience - HSRH 4950 Internship in Human Services and Rehabilitation **Credit Hours:** 3

## Major

### Required Major Courses

- HSRH 1260 - Introduction to Rehabilitation and Human Services **Credit Hours:** 3
- HSRH 2270 - Neurological Impairments and Physical Disorders **Credit Hours:** 3
- HSRH 2500 - Human Relations Skills **Credit Hours:** 3
- HSRH 3050 - Case Management **Credit Hours:** 3
- HSRH 3700 - Assessment in Human Services and Rehabilitation **Credit Hours:** 3
- HSRH 4700 - Intervention Strategies in Human Services & Rehabilitation **Credit Hours:** 3
- HSRH 4750 - Administration Rehabilitation Delivery Systems **Credit Hours:** 3
- SOCI 3110 - Family and Intimate Relationships **Credit Hours:** 3
- SOCI 2100 - Social Inequalities: Who Gets What, and Why? **Credit Hours:** 3

- SOCI 2300 - Sociology of Life Course **Credit Hours:** 3
  **OR**
- PSYC 2200 - Lifespan Developmental Psychology **Credit Hours:** 3

- HSRH 4950 - Internship in Human Services and Rehabilitation **Credit Hours:** 3 TO 10
- HSRH 2950 - Internship in Human Services and Rehabilitation **Credit Hours:** 3 TO 10
- HSRH 3995 - Seminar for Human Services and Rehabilitation Internship **Credit Hours:** 2
- PSYC 3350 - Abnormal Psychology **Credit Hours:** 3
- SPED 3000 - Introduction to Applied Behavior Analysis **Credit Hours:** 3

### Major Electives

- Any SOCI-, SOWK-, PSYC,- or HSRH-listed course **Credit Hours:** 12

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Integrated Business, BSBA

The Bachelor of Science in Business Administration Integrated Business degree prepares students for the 21st century global business environment. This program takes an integrative approach to key areas for business success, including accounting, economics, finance, human resources, management and marketing. A concentration is not required for Integrated Business majors. However, PennWest does offer three academic concentrations in integrated business to specialize broad business skills in event planning and management, intelligent enterprise, or parks and recreation management.

# Student Learning Outcomes

**Integrated Business, BSBA Program Level Outcomes**

- Demonstrate foundational knowledge in functional business areas
- Exhibit critical thinking skills for the collection, analysis, and application of data and concepts
- Displays cultural competence for ethical, sustainable, inclusive, and collaborative leadership practices including a global perspective
- Effectively communicates in oral, written, visual, and digital formats

**Intelligent Enterprise Outcomes**

- Apply digital transformation to business strategy and competition.
- Compare integrated process views of organizations.
- Execute enterprise resource planning (ERP) integrated business processes and recognize organizational, master, and transactional data.
- Apply key Enterprise Systems (ES) and Enterprise Resource Planning (ERP) systems concepts and terminology.

**Event Planning and Managment Outcomes**

- Apply the major concepts from the core functional areas of business in the planning and implementation of a range of events and venues.
- Evaluate data to support event management decision-making and facilitate event planning and management organizational processes.
- Display leadership, professionalism, and career readiness skills through experiential learning.
- Effectively communicate to diverse audiences, purposes, and situations in a variety of events, settings, and contexts.
- Design creative event solutions within the interconnected tourism, hospitality, entertainment, education, sport, cultural, heritage, and recreation sectors.

**Parks and Recreation Management Outcomes**

- Demonstrate foundational knowledge in functional business areas.
- Exhibit critical thinking skills for the collection, analysis, and application of data and concepts.
- Displays cultural competence for ethical, sustainable, inclusive, and collaborative leadership practices including a global perspective.
- Effectively communicates in oral, written, visual, and digital formats.

# Curriculum Requirements

Integrated Business (no concentration)

Integrated Business, Intelligent Enterprise Concentration

Integrated Business, Event Planning and Management Concentration

Integrated Business, Parks and Recreation Management Concentration

# Integrated Business, Intelligent Enterprise Concentration

Students learn current and emerging concepts, technologies, and methodologies to successfully implement and maintain enterprise systems to run businesses competitively. The intelligent enterprise continues to evolve with emerging technologies such as digital transformation. The program includes experiential learning that is integrated with the use of SAP systems. Students experience real-world scenarios and team dynamics using ERP simulation games, engaging projects, and professional communities. Education and skills are highly transferable to other technology platforms such as SuccessFactors, Workday, and Oracle. Students are introduced to leading industry certifications.

Advisement Sheet

## General Education

- Oral Communication - COMJ 1010 - Public Speaking **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - MATH 1010 - Quantitative Reasoning **Credit Hours:** 3
- Technological Literacy - BSIN 2000 - Management Information Systems **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - PSYC 1000 - Introduction to Psychology **Credit Hours:** 3
- Social Sciences - ECON 2100 - Principles of Microeconomics **Credit Hours:** 3
- Social Sciences - ECON 2200 - Principles of Macroeconomics **Credit Hours:** 3
- Natural Sciences and Tech - MATH 1220 - College Algebra **Credit Hours:** 3
- Natural Sciences and Tech - QBA 1000 - QBA 1: Optimization **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective **Credit Hours:** 3

## Competencies

- Quantitative Applications - QBA 2000 - QBA 2: Statistical Analysis **Credit Hours:** 3
- Applied Methodologies - QBA 3000 - QBA 3: Analytics and Applications **Credit Hours:** 3
- Intercultural Fluency - Any Course **Credit Hours:** 3
- Ethical Reasoning - BSAD 3200 - Business Ethics **Credit Hours:** 3
- Information Literacy - Any Course **Credit Hours:** 3
- Writing Intensive - BSAD 4900 - Business Capstone **Credit Hours:** 3 and Any Course

- Keystone Experience - BSAD 4950 - Internship for Department of Management and Marketing Programs **Credit Hours:** 1 TO 12
  **OR**
- Keystone Experience - IENT 4950 - Internship for the Department of Management and Marketing Programs **Credit Hours:** 3 TO 12 or Any Course

## Major

## Required Major Courses

- ACC 2000 - Financial Accounting **Credit Hours:** 3
- ACC 3000 - Managerial Accounting **Credit Hours:** 3
- BLAW 2000 - Legal and Ethical Environment of Business **Credit Hours:** 3
- BSAD 3200 - Business Ethics **Credit Hours:** 3
- BSAD 4900 - Business Capstone **Credit Hours:** 3 and Any Course
- FINA 3000 - Financial Management **Credit Hours:** 3
- MGMT 3000 - Principles of Management **Credit Hours:** 3
- MKTG 3000 - Principles of Marketing **Credit Hours:** 3
- QBA 2000 - QBA 2: Statistical Analysis **Credit Hours:** 3
- QBA 3000 - QBA 3: Analytics and Applications **Credit Hours:** 3

## Required Concentration Courses

- IENT 2000 - Introduction to Enterprise Systems **Credit Hours:** 3
- IENT 3000 - ERP Business Process Integration **Credit Hours:** 3
- IENT 3050 - ERP Configuration **Credit Hours:** 3
- IENT 3100 - Enterprise Systems Implementation **Credit Hours:** 3
- IENT 3150 - Enterprise Systems Business Analytics **Credit Hours:** 3
- IENT 4000 - Digital Transformation and Innovation **Credit Hours:** 3
- CMIS 1200 - Application Programming I **Credit Hours:** 3

## Concentration Electives

Select One From:

- Any BSIN or CMIS course (any level) **Credit Hours:** 3
- BSAD 4950 - Internship for Department of Management and Marketing Programs **Credit Hours:** 1 TO 12
- IENT 4950 - Internship for the Department of Management and Marketing Programs **Credit Hours:** 3 TO 12

## Major Electives

- Required Minor/Certificate Course **Credit Hours:** 3
- Required Minor/Certificate Course **Credit Hours:** 3
- Required Minor/Certificate Course **Credit Hours:** 3
- Required Minor/Certificate Course **Credit Hours:** 3

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Interdisciplinary Studies, BA

The Bachelor of Arts in Interdisciplinary Studies is a multidisciplinary degree program designed to provide students with a structured yet flexible path that encourages students to explore their interests across academic disciplines, establish a breadth of knowledge, and develop strong critical thinking, reading, and writing skills. Many students choose the Interdisciplinary Studies program to create individualized programs of study that combine their academic interests and professional goals. Students also choose the Interdisciplinary Studies program to complete their undergraduate degrees when their career goals have changed or new opportunities arise.

Advisement Sheet

# Student Learning Outcomes

- Graduates can demonstrate strong written communication skills.
- Graduates can demonstrate information literacy skills.
- Graduates can demonstrate problem-solving and critical thinking skills.
- Graduates can evaluate diverse perspectives on contemporary social issues.

# Curriculum Requirements

## General Education

- Oral Communication - Any Course **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - Any Course **Credit Hours:** 3
- Technological Literacy - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective **Credit Hours:** 3

## Competencies

- Quantitative Applications - Any Course **Credit Hours:** 3
- Applied Methodologies - Any Course **Credit Hours:** 3
- Intercultural Fluency - Any Course **Credit Hours:** 3
- Ethical Reasoning - Any Course **Credit Hours:** 3
- Information Literacy - Any Course **Credit Hours:** 3
- Writing Intensive - Any Course **Credit Hours:** 6
- Keystone Experience - Any Course **Credit Hours:** 3

## Major

### Required Major Courses

- INST 4900 - Seminar in Interdisciplinary Studies **Credit Hours:** 3
- Courses within a single discipline or related field, 3000 level or above **Credit Hours:** 24

### Major Electives

- Courses numbered 1000 or above (from any discipline) **Credit Hours:** 15

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Legal Studies, BA

The B.A. in Legal Studies prepares students to work in a multi-disciplinary legal environment without the credential of a Juris Doctorate. Students who want specialized knowledge of laws and regulations and the development of analytical, critical thinking, legal communication, and research skills will benefit from this degree. The ABA-approved B.A. in Legal Studies provides a foundation for work in law firms, law enforcement, government and nonprofit agencies, court systems, and business. The degree also serves as an excellent foundation for the future study of law.

Advisement Sheet

## Student Learning Outcomes

- Effectively complete legal research tasks
- Effectively prepare legal documents
- Explain the ethical responsibilities of a paralegal
- Analyze complicated issues of substantive law

## Curriculum Requirements

### General Education

- Oral Communication - COMJ 1010 - Public Speaking **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - Any Course **Credit Hours:** 3
- Technological Literacy - Any Course **Credit Hours:** 3
- Arts and Humanities - HIST 1010 - US History to 1877 **Credit Hours:** 3
- Arts and Humanities - HIST 1015 - US History since 1877 **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - POLI 1100 - Introduction to American Politics **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3

- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective **Credit Hours:** 3

## Competencies

- Quantitative Applications - Any Course **Credit Hours:** 3
- Applied Methodologies - LAW 2001 - Legal Writing **Credit Hours:** 3
- Intercultural Fluency - Any Course **Credit Hours:** 3
- Ethical Reasoning - LAW 1000 - Introduction to Legal Studies **Credit Hours:** 3
- Ethical Reasoning - LAW 4900 - Legal Studies Experience **Credit Hours:** 3
- Information Literacy - LAW 2000 - Methods of Legal Research **Credit Hours:** 3
- Writing Intensive - LAW 2001 - Legal Writing **Credit Hours:** 3
- Writing Intensive - LAW 3450 - Environmental Law **Credit Hours:** 3
- Keystone Experience - LAW 4900 - Legal Studies Experience Credit Hours: 3

## Major

### Required Major Courses

- LAW 1000 - Introduction to Legal Studies **Credit Hours:** 3
- LAW 2000 - Methods of Legal Research **Credit Hours:** 3
- LAW 2001 - Legal Writing **Credit Hours:** 3
- LAW 3450 - Environmental Law **Credit Hours:** 3
- LAW 3460 - Principles and Practices of Litigation **Credit Hours:** 3
- LAW 4900 - Legal Studies Experience **Credit Hours:** 3
- BLAW 2000 - Legal and Ethical Environment of Business **Credit Hours:** 3
- BLAW 3000 - Legal and Ethical Environment of Business II **Credit Hours:** 3
- PSYC 1000 - Introduction to Psychology **Credit Hours:** 3
- SOCI 1000 - Introduction to Sociology **Credit Hours:** 3

### Major Electives

Choose 6 credits from the following:

- LAW 3390 - Family Law **Credit Hours:** 3
- LAW 3430 - Wills, Trusts, and Estates **Credit Hours:** 3
- LAW 3440 - Administrative Law **Credit Hours:** 3
- LAW 3470 - Real Estate Law **Credit Hours:** 3

Choose 6 credits from the following:

- LAW 4700 - Immigration Law **Credit Hours:** 3
- LAW 4600 - Elder Law **Credit Hours:** 3
- LAW 3700 - Bankruptcy Law **Credit Hours:** 3
- LAW 4300 - Law and Conflict Resolution **Credit Hours:** 3

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Management, BSBA

The Bachelor of Science in Business Administration Management degree prepares students for the 21st century global business environment. This program takes an integrative approach to managing people and processes.

Advisement Sheet

## Student Learning Outcomes

- Demonstrates proficiency in managerial theories and organizational processses
- Integrates analytical skills and communication skills with application to managerial decision-making and organizational change
- Develops professional skills and qualities within a collaborative environment

## Curriculum Requirements

### General Education

- Oral Communication - COMJ 1010 - Public Speaking **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - MATH 1010 - Quantitative Reasoning **Credit Hours:** 3
- Technological Literacy - BSIN 2000 - Management Information Systems **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - PSYC 1000 - Introduction to Psychology **Credit Hours:** 3
- Social Sciences - ECON 2100 - Principles of Microeconomics **Credit Hours:** 3
- Social Sciences - ECON 2200 - Principles of Macroeconomics **Credit Hours:** 3
- Natural Sciences and Tech - MATH 1220 - College Algebra **Credit Hours:** 3
- Natural Sciences and Tech - QBA 1000 - QBA 1: Optimization **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective **Credit Hours:** 3

### Competencies

- Quantitative Applications - QBA 2000 - QBA 2: Statistical Analysis **Credit Hours:** 3
- Applied Methodologies - QBA 3000 - QBA 3: Analytics and Applications **Credit Hours:** 3
- Intercultural Fluency - Any Course **Credit Hours:** 3
- Ethical Reasoning - BSAD 3200 - Business Ethics **Credit Hours:** 3
- Information Literacy - BSAD 4900 - Business Capstone **Credit Hours:** 3
- Writing Intensive - BSAD 4900 - Business Capstone **Credit Hours:** 3
- Writing Intensive - MGMT 4100 - Management Research **Credit Hours:** 3

- Keystone Experience - MGMT 4950 - Internship for the Department of Management and Marketing Programs **Credit Hours:** 1 TO 12

## Major

### Required Major Courses

- ACC 2000 - Financial Accounting **Credit Hours:** 3
- ACC 3000 - Managerial Accounting **Credit Hours:** 3
- BLAW 2000 - Legal and Ethical Environment of Business **Credit Hours:** 3
- BSAD 3200 - Business Ethics **Credit Hours:** 3
- BSAD 4900 - Business Capstone **Credit Hours:** 3
- MGMT 4100 - Management Research **Credit Hours:** 3
- FINA 3000 - Financial Management **Credit Hours:** 3
- MGMT 3000 - Principles of Management **Credit Hours:** 3
- MKTG 3000 - Principles of Marketing **Credit Hours:** 3
- QBA 2000 - QBA 2: Statistical Analysis **Credit Hours:** 3
- QBA 3000 - QBA 3: Analytics and Applications **Credit Hours:** 3
- HRMG 3000 - Principles of Human Resource Management **Credit Hours:** 3
- MGMT 3110 - Organizational Behavior **Credit Hours:** 3
- MGMT 3330 - Teamwork and Leadership **Credit Hours:** 3
- MGMT 4100 - Management Research **Credit Hours:** 3

- MGMT 3700 - Operations Management **Credit Hours:** 3
  **OR**
- MGMT 4500 - Supply Chain Management **Credit Hours:** 3

- MGMT 3400 - Introduction to Sustainable Business **Credit Hours:** 3
- MGMT 4600 - International Business Management **Credit Hours:** 3
- MGMT 4950 - Internship for the Department of Management and Marketing Programs **Credit Hours:** 1 TO 12 or other approved experience

### Major Electives

Note: A Minor is required. If the minor is in a business discipline, 9 credits double count with Business Core requirements. Management students may NOT choose a general business minor or management minor.

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Marketing, BSBA

The bachelor's degree in business administration program is built on business core courses that provide a solid foundation. In addition, students can choose to develop focused expertise in the discipline of marketing by selecting eight separate specialized courses directed toward the core facets of the marketing discipline.

Advisement Sheet

# Student Learning Outcomes

- Demonstrate proficiency in foundational concepts of functional business areas.
- Exhibit critical thinking skills for the collection, analysis, and application of data and concepts.
- Display cultural competence for ethical, sustainable, inclusive, and collaborative leadership practices including a global perspective.
- Effectively communicate in oral, written, visual, and digital formats.
- Integrate business concepts across the spectrum of business disciplines.
- Critically analyze ambiguous, interconnected situations and communicate findings.
- Balance competing values and needs of different constituencies when crafting business solutions.

# Curriculum Requirements

## General Education

- Oral Communication - COMJ 1010 - Public Speaking **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - MATH 1010 - Quantitative Reasoning **Credit Hours:** 3
- Technological Literacy - BSIN 2000 - Management Information Systems **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - PSYC 1000 - Introduction to Psychology **Credit Hours:** 3
- Social Sciences - ECON 2100 - Principles of Microeconomics **Credit Hours:** 3
- Social Sciences - ECON 2200 - Principles of Macroeconomics **Credit Hours:** 3
- Natural Sciences and Tech - MATH 1220 - College Algebra **Credit Hours:** 3
- Natural Sciences and Tech - QBA 1000 - QBA 1: Optimization **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective **Credit Hours:** 3

## Competencies

- Quantitative Applications - QBA 2000 - QBA 2: Statistical Analysis **Credit Hours:** 3
- Applied Methodologies - QBA 3000 - QBA 3: Analytics and Applications **Credit Hours:** 3
- Intercultural Fluency - Any Course **Credit Hours:** 3
- Ethical Reasoning - BSAD 3200 - Business Ethics **Credit Hours:** 3
- Information Literacy - Any Course **Credit Hours:** 3
- Writing Intensive - BSAD 4900 - Business Capstone **Credit Hours:** 3
- Writing Intensive - MKTG 4610 - Marketing Research **Credit Hours:** 3
- Keystone Experience - MKTG 4950 - Internship for the Department of Management and Marketing Programs **Credit Hours:** 1 TO 12 or Any Course

## Major

### Required Major Courses

- ACC 2000 - Financial Accounting **Credit Hours:** 3
- ACC 3000 - Managerial Accounting **Credit Hours:** 3
- BLAW 2000 - Legal and Ethical Environment of Business **Credit Hours:** 3
- BSAD 3200 - Business Ethics **Credit Hours:** 3
- BSAD 4900 - Business Capstone **Credit Hours:** 3
- MKTG 4610 - Marketing Research **Credit Hours:** 3
- FINA 3000 - Financial Management **Credit Hours:** 3
- MGMT 3000 - Principles of Management **Credit Hours:** 3
- MKTG 3000 - Principles of Marketing **Credit Hours:** 3
- QBA 2000 - QBA 2: Statistical Analysis **Credit Hours:** 3
- QBA 3000 - QBA 3: Analytics and Applications **Credit Hours:** 3
- MKTG 3200 - Principles of Selling **Credit Hours:** 3
- MKTG 3210 - Sales Management **Credit Hours:** 3
- MKTG 3410 - Marketing for Non-Profits **Credit Hours:** 3
- MKTG 3510 - Advertising Management **Credit Hours:** 3
- MKTG 4010 - Marketing Management **Credit Hours:** 3
- MKTG 4210 - Consumer Behavior **Credit Hours:** 3
- MKTG 4610 - Marketing Research **Credit Hours:** 3
- MKTG Free Marketing Elective (choose one from the list below) **Credit Hours:** 3

### Major Electives

Note: A Minor is required. If the minor is in a business discipline, 9 credits double count with Business Core requirements. Marketing students may NOT choose a general business minor or marketing minor.

- MKTG 3610 - Entrepreneurial Marketing **Credit Hours:** 3
- MKTG 3640 - Integrated Marketing Communications **Credit Hours:** 3
- MKTG 3690 - Services Marketing **Credit Hours:** 3
- MKTG 3700 - Business to Business (B2B) Marketing **Credit Hours:** 3
- MKTG 3710 - Customer Relationship Management **Credit Hours:** 3
- MKTG 3800 - Social Media Marketing **Credit Hours:** 3
- MKTG 4650 - Marketing Problems **Credit Hours:** 3
- MKTG 4680 - Digital Retailing **Credit Hours:** 3
- MKTG 4690 - International Marketing **Credit Hours:** 3
- MKTG 4910 - Digital Marketing and Analytics **Credit Hours:** 3

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Mathematics, BS

Mathematics is the science of numbers and the abstract formulation of their operations. Quantitative skills acquired through this study are useful in career fields which include computer science, business, actuarial science, engineering,

life and physical sciences, medicine, and research. Actuaries concentrate on the study of actuarial science and usually work for the government, an insurance agency, or a consulting firm. They interpret statistics to determine the likelihood of injury, sickness, death, or loss of property among various population groups and develop insurance rates and plans for these groups. Entry-level jobs available to graduates in this field include: actuary, computer programmer, engineer, internal revenue agent, military intelligence officer, pension administrator, rate analyst, research mathematician, statistician, systems analyst, cryptanalyst, and teacher. Among the employers who hire graduates: banks, computer services, consulting firms, corporations, educational institutions, engineering firms, government agencies, insurance companies, manufacturing firms, pharmaceutical companies, and research and development laboratories. Most mathematics graduates go directly into the field where they can earn good salaries, even at entry level. A few go immediately into graduate schools for further study.

Advisement Sheet

## Student Learning Outcomes

**Mathematics, BS Program Level Outcomes**

- Students graduating with a B.S. in Mathematics will demonstrate proficiency in mathematics content and skills.
- Students graduating with a B.S. in Mathematics will be able to effectively formulate and communicate proofs in mathematics.
- Students graduating with a B. S. in Mathematics will be able to interpret and solve mathematical problems.
- Students graduating with a B.S. in Mathematics will be able to read and evaluate the validity of a mathematical argument.
- Students graduating with a B.S. in Mathematics will present mathematics in written and oral forms consistent with the standards of the regional mathematics associations.

**Actuarial Science Concentration Outcomes**

- B.S. in Mathematics-Actuarial track will demonstrate proficiency in mathematics content and skills including the mathematical theory of interest, statistical models, and economics.
- Students graduating with a B. S. in Mathematics-Actuarial track will be able to interpret and solve mathematical problems including problems related to the Society of Actuaries and Casualty Actuarial Society professional examinations.
- Students graduating with a B. S. in Mathematics-Actuarial track will be able to interpret and solve mathematical problems.
- Students graduating with a B.S. in Mathematics-Actuarial track will be able to read and evaluate the validity of a mathematical argument.
- Students graduating with a B.S. in Mathematics-Actuarial track will present mathematics in written and oral forms consistent with the standards of the regional mathematics and actuarial associations.

## Curriculum Requirements

Mathematics (no concentration)

Mathematics, Actuarial Science Concentration

# Mechatronics Engineering Technology, BS

This program prepares individuals to apply mathematical and scientific principles to the design, development, operation, and evaluation of computer controlled electro-mechanical systems and products with

embedded electronics, sensors, and actuators. The program focuses on industrial robots and automated systems. Includes instruction in mechanical engineering, electronic and electrical engineering, computer and software engineering, and control engineering.

Advisement Sheet

# Student Learning Outcomes

- Select and apply knowledge, techniques, skills, and modern tools appropriate to mechatronics engineering technology.
- Apply concepts of circuit analysis, analog and digital electronics, automation and controls, motors, electric drives, power systems, instrumentation, and computers to aid in the design, characterization, analysis, and troubleshooting of mechatronics systems.
- Use advanced principles of statics, dynamics, fluid mechanics, strength of materials, engineering materials, engineering standards, and manufacturing processes to aid in the design, characterization, analysis, and troubleshooting of mechatronic systems.
- Use differential and integral calculus in the characterization and analysis of mechatronics systems.
- Conduct standard tests, measurements, and experiments, and analyze and interpret the results to improve processes.
- Use appropriate computer languages and application software that pertain to mechatronics engineering technology systems.
- Function effectively as a member as well as a leader on technical teams.
- Apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and demonstrate an ability to identify and use appropriate technical literature.
- Understand the need for and demonstrate an ability to engage in self-directed continuing professional development.
- Address professional and ethical responsibilities, including a respect for diversity.
- Explain and analyze the impact of engineering technology solutions in both local and global contexts.
- Apply commitment to quality, timeliness, and continuous improvement.
- Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental and / or social.

# Curriculum Requirements

## General Education

- Oral Communication - Any Approved Oral Communication **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - MATH 2410 - Analytical Geometry and Calculus I **Credit Hours:** 4
- Technological Literacy - CMSC 1380 - Introduction to Programming with Python **Credit Hours:** 3
- Arts and Humanities - ENGL 2230 - Writing and the Natural Sciences **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - PHYS 1500 - General Physics I **Credit Hours:** 3
- Natural Sciences and Tech - MATH 2420 - Analytical Geometry and Calculus II **Credit Hours:** 4

- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Program Elective - ENGT 1100 - Introduction to Engineering Technology **Credit Hours:** 3

## Competencies

- Quantitative Applications - MECH 4200 - Machine Design and Kinematics **Credit Hours:** 3
- Applied Methodologies - MECH 3100 - Principles of Automatic Control **Credit Hours:** 3
- Intercultural Fluency - MECH 4910 - Senior Project Implementation **Credit Hours:** 3
- Ethical Reasoning - MECH 4900 - Senior Project Design **Credit Hours:** 3
- Information Literacy - MECH 4900 - Senior Project Design **Credit Hours**: 3
- Writing Intensive - MECH 3100 - Principles of Automatic Control **Credit Hours:** 3
- Writing Intensive - ENGL 2230 - Writing and the Natural Sciences **Credit Hours:** 3
- Keystone Experience - MECH 4910 - Senior Project Implementation **Credit Hours:** 3

## Major

### Required Major Courses

- ECET 1110 - Electrical Circuits I **Credit Hours:** 4
- ECET 2160 - Electrical Circuits II **Credit Hours:** 4
- ECET 2535 - Digital Electronics Design **Credit Hours:** 4
- ECET 3325 - Introduction to Electric Power **Credit Hours:** 4
- PHYS 1510 - General Physics I Laboratory **Credit Hours:** 1
- MECH 2000 - Manufacturing Processes **Credit Hours:** 3
- MECH 2200 - Statics **Credit Hours:** 3
- MECH 2300 - Fundamentals of Programmable Logic Controllers **Credit Hours:** 3
- MECH 2400 - Engineering Graphics and Computer Aided Design **Credit Hours:** 3
- MECH 3100 - Principles of Automatic Control **Credit Hours:** 3
- MECH 3200 - Dynamics **Credit Hours:** 3
- MECH 3210 - Fluid Power **Credit Hours:** 3
- MECH 3220 - Properties and Strength of Materials **Credit Hours:** 3
- MECH 3300 - Advanced PLCs and Integration **Credit Hours:** 3
- MECH 3500 - Numerical Solution of Engineering Problems **Credit Hours:** 3
- MECH 4000 - Computer-Integrated Manufacturing **Credit Hours:** 3
- MECH 4100 - Process Control **Credit Hours:** 3
- MECH 4200 - Machine Design and Kinematics **Credit Hours:** 3
- MECH 4900 - Senior Project Design **Credit Hours:** 3
- MECH 4910 - Senior Project Implementation **Credit Hours:** 3
- PHYS 1600 - General Physics II **Credit Hours:** 3
- PHYS 1610 - General Physics II Laboratory **Credit Hours:** 1

### Major Electives

Technical Elective - Choose 1 course from below:

- CMSC 3380 - Python **Credit Hours:** 3
- CMIS 3250 - CISCO CCNA I **Credit Hours:** 0 TO 4

- CMIS 3600 - Systems Project Management **Credit Hours:** 3
- ECET 2570 - Intro to Microprocessor Design **Credit Hours:** 4
- ITE 3050 - OSHA Industrial Safety **Credit Hours:** 3
- ITE 3750 - Principles of Production **Credit Hours:** 3
- ITE 3850 - Industrial Cost Estimating **Credit Hours:** 3
- ITE 4200 - Production Analysis **Credit Hours:** 3
- ITE 4610 - Supply Chain Fundamentals **Credit Hours:** 3
- ITE 4710 - Project Management **Credit Hours:** 3
- MECH 4950 - Mechatronics Engineering Technology - Internship **Credit Hours:** 4
- ROBO 2100 - Robotic Teaming **Credit Hours:** 3

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Media Arts, BFA

The degree in Media Arts builds on studio fundamentals to explore Animation, Digital Filmmaking, and Photography. Course design balances competitive industry standards with traditional practice drawn from the study of World Cinema. A concentration in Animation covers hand-drawn and computer-generated animation, stop-motion, storyboarding, character design, and visual development. The Digital Filmmaking and Photography concentration features lighting, camera operation and movement, audio recording (including dual-system dialogue, effects, and music), and post-production (editing, color grading, and audio mixing). Practical projects drive a robust, four-year curriculum, with ten percent of the 120-credit degree comprised of general education courses.

## Student Learning Outcomes

- Students will demonstrate a high level of proficiency with the primary material, tools, technique, and technology used in their concentration area supplemented by experience with other media.
- Students will fully investigate in their work conceptual issues and expressive potential of their medium.
- Students will integrate aesthetic principles in the development of their own artwork.
- Students will recognize that the making and study of art can be approached from a variety of perspectives.
- Students will defend meaningful interpretations and critical evaluations about their own artworks and the works of other artists both orally and in writing.
- Students will construct informed discussion of art as an essential component of viewing, producing, and evaluating art.
- Students will explain cultural and historical contexts surrounding works of art in general and in their field of study.
- Students will conclude that art communicates, challenges and shapes cultural and societal values.
- Students will reframe their practices through experimentation.
- Students will organize and produce a resume, a written statement about, and an appropriate visual documentation of their work.

## Curriculum Requirements

Media Arts, Animation Concentration

Media Arts, Digital Film & Photography Concentration

# Medical Imaging Sciences, BS

Face-to-Face Option for Traditional On-Campus Students

The 120-credit Bachelor of Science degree in medical imaging sciences is a two-plus-two program that requires completion of approximately 60 credits of allied health, science, math, and general education course work followed by completion of a two-year program of clinical study in either radiologic technology or ultrasound (diagnostic medical sonography) offsite at a JRCERT or CAAHEP accredited clinical school with which PennWest has a formal affiliation agreement. Most of the coursework in the four-year program is completed face-to-face.

Affiliated clinical schools have limited capacity and competitive admission standards. Admission to PennWest's medical imaging sciences program does not guarantee admission to an affiliated clinical school for radiologic technology or ultrasound.

Graduates of the four-year medical imaging sciences program are eligible to sit for the national credentialing examination in radiography or ultrasound.

Online Degree Completion Option for Credentialed Professionals

Individuals who have already completed a formal accredited program in medical imaging sciences (radiologic technology, ultrasound, radiation therapy, nuclear medicine, or medical dosimetry) and who are professionally credentialed may earn the 120-credit Bachelor of Science degree in medical imaging sciences completely online through PennWest. Eligible candidates will be awarded between 30-60 clinical credits for successful completion of a formal educational program and with proof of professional credentialing as follows:

• Radiologic Technology and Radiation Therapy: ARRT credential and JRCERT accreditation of educational program completed.

• Ultrasound (Diagnostic Medical Sonography), ARDMS or ARRT credential and CAAHEP accreditation of educational program completed.

• Nuclear Medicine Technology: ARRT or NMTCB credential and JRCNMT accreditation of educational program completed.

• Medical Dosimetry: MDCB credential and JRCERT accreditation of educational program completed.

Clinical credits will be awarded based on accreditation of the education program, length of clinical education program, and professional credential and is determined solely at the discretion of the College of Health Sciences. Educational programs housed in a college/university that holds regional accreditation is also acceptable.

## Student Learning Outcomes

- Upon graduation, medical imaging sciences majors will demonstrate clinical competency in all mandatory discipline-specific examinations identified by the American Registry of Radiologic Technologists (ARRT) or the Commission on Accreditation of Allied Health Education Programs (CAAHEP).
- Upon graduation, students will be able to employ information literacy knowledge and skills to critically analyze the quality, reliability, credibility, and relevancy of sources of healthcare related information that will inform their clinical decision making.

- Upon graduation, students will be able to apply leadership theory and concepts to diagnose problems in a work envrionment that stem from leadership deficiences, to suggest solutions, and to initiate positive change.

## Curriculum Requirements

Medical Imaging Sciences, Medical Dosimetry Concentration

Medical Imaging Sciences, Nuclear Medicine Concentration

Medical Imaging Sciences, Radiation Therapy Concentration

Medical Imaging Sciences, Radiologic Technology Concentration

Medical Imaging Sciences, Ultrasound Concentration

# Middle Level Education, BSEd

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

## Student Learning Outcomes

- Candidates will develop, implement, assess, and modify curriculum and lessons that integrate research-based pedagogy and are developmentally appropriate to their content area, the PA PreK-12 Academic Standards, and concentration level: Middle school.
- Candidates will plan, adapt, and implement developmentally, culturally, and linguistically appropriate evidence-based instructional practices and strategies that integrate appropriate and effective classroom management in various educational settings.
- Candidates will communicate deep content knowledge as they plan and implement lessons and instructional practices that use active student engagement and formal and/or informal assessment to measure student responsiveness to instruction.
- Candidates will develop professional dispositions with respect to students, parents and families, and will demonstrate integrity, ethical behavior and professional conduct as stated in Pennsylvania's Code of Professional Practice & Conduct for Educators.
- Candidates will identify, administer, and interpret multiple assessments (formative, summative, benchmark, behavioral, diagnostic, cognitive, and/or affective and psychomotor) that are developmentally appropriate and aligned with content area standards and learning objectives to inform planning and instruction for groups and individual students.

## Curriculum Requirements

Middle Level Education, Middle Level English Concentration

Middle Level Education, Middle Level Math Concentration

Middle Level Education, Middle Level Science Concentration

Middle Level Education, Middle Level Social Studies Concentration

# Nursing Traditional, BSN

The four-year Bachelor of Science in Nursing ( BSN) degree program is innovative in its approach to nursing education. Students must complete 120 credits to graduate. Students in Pennsylvania Western University BSN program will participate in nursing courses and critical thinking preparation for nursing practice beginning in the first semester. The curriculum combines professional nursing courses and a wealth of science courses to develop knowledge in preparation for the delivery of quality and safe patient care. The four-year Bachelor of Science in Nursing (BSN) degree program is innovative in its approach to nursing education. Students must complete 120 credits to graduate. Students in Pennsylvania Western University BSN program will participate in nursing courses and critical thinking preparation for nursing practice beginning in the first semester. The curriculum combines professional nursing courses and a wealth of science courses to develop knowledge in preparation for delivering quality and safe patient care.

Advisement Sheet

## Student Learning Outcomes

- Incorporates concepts of health promotion in the care of individuals, families, and communities including diverse and vulnerable populations
- Engage in effective professional communication
- Demonstrate clinical judgement within contemporary nursing practice
- Apply leadership concepts to ensure quality in complex health care systems
- Integrate scholarly inquiry, research, and theory into evidence-based nursing practice
- Use information technology to improve patient outcomes

## Curriculum Requirements

### General Education

- Oral Communication - Any Course **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - STAT 2020 - Elements of Statistics **Credit Hours:** 3
- Technological Literacy - Any Course **Credit Hours:** 3
- Arts and Humanities - ENGL 2210 - Writing in the Health and Human Services Professions **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - SOCI 1000 - Introduction to Sociology **Credit Hours:** 3
- Social Sciences - PSYC 1000 - Introduction to Psychology **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - BIOL 2226 - Basic Microbiology **Credit Hours:** 3
- Natural Sciences and Tech - BIOL 2810 - Human Anatomy and Physiology I Lecture **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective - BIOL 3810 - Human Anatomy and Physiology II Lecture **Credit Hours:** 3

### Competencies

- Quantitative Applications - NURS 2240 - Nursing Interventions Theory **Credit Hours:** 2

- Applied Methodologies - BIOL 2811 - Human Anatomy and Physiology I Laboratory **Credit Hours:** 1
- Intercultural Fluency - NURS 4440 - Community Health Nursing Theory **Credit Hours:** 2
- Ethical Reasoning - NURS 4400 - Nursing Leadership **Credit Hours:** 3
- Information Literacy - NURS 3420 - Healthcare Informatics **Credit Hours:** 3
- Writing Intensive - NURS 4415 - Research and Evidence-Based Practice **Credit Hours:** 3
- Writing Intensive - ENGL 2210 - Writing in the Health and Human Services Professions **Credit Hours:** 3
- Keystone Experience - NURS 4453 - Psychiatric and Behavioral Health Nursing Theory **Credit Hours:** 3

## Major

### Required Major Courses

- NURS 1101 - Intro to Professional Nursing **Credit Hours:** 2.00
- NURS 2230 - Nursing Assessment Theory **Credit Hours:** 3.00
- NURS 2231 - Nursing Assessment Clinical **Credit Hours:** 2.00
- NURS 2240 - Nursing Interventions Theory **Credit Hours:** 2
- NURS 2241 - Nursing Interventions Clinical **Credit Hours:** 1
- NURS 3100 - Medical Nutrition **Credit Hours:** 3
- NURS 4435 - Pathophysiology **Credit Hours:** 4
- NURS 3320 - Pharmacology **Credit Hours:** 3
- NURS 2250 - Health Promotion **Credit Hours:** 3
- NURS 2245 - Basic Nursing Care Clinical **Credit Hours:** 2
- NURS 3330 - Adult Health I Theory **Credit Hours:** 3
- NURS 3331 - Adult Health I Clinical **Credit Hours:** 4
- NURS 3340 - Maternal Child Health Nursing Theory **Credit Hours:** 3
- NURS 3342 - Maternity and Pediatrics Clinical **Credit Hours:** 2
- NURS 3350 - Pediatrics Nursing Theory **Credit Hours:** 3
- NURS 4400 - Nursing Leadership **Credit Hours:** 3
- NURS 4415 - Research and Evidence-Based Practice **Credit Hours:** 3
- NURS 4442 - Community/Psych Health Nursing Clinical **Credit Hours:** 2
- NURS 4440 - Community Health Nursing Theory **Credit Hours:** 2
- NURS 4433 - Adult Health II Theory **Credit Hours:** 2
- NURS 4453 - Psychiatric and Behavioral Health Nursing Theory **Credit Hours:** 3
- NURS 4431 - Adult Health Nursing II Clinical **Credit Hours:** 2
- NURS 4498 - Nursing Capstone **Credit Hours:** 3.00
- BIOL 1104 - Introduction to Human Genetics **Credit Hours:** 3
- CHEM 1140 - Fundamentals of Chemistry I **Credit Hours:** 4
- PSYC 2200 - Lifespan Developmental Psychology **Credit Hours:** 3
- Nursing Elective **Credit Hours:** 3
- BIOL 2811 - Human Anatomy and Physiology I Laboratory **Credit Hours:** 1
- BIOL 3811 - Human Anatomy and Physiology II Laboratory **Credit Hours:** 1

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Political Science, BA

Political Science students at Pennsylvania Western University gain a broad and sophisticated understanding of politics, including knowledge of American politics, comparative politics, international relations, law, and political theory. Students develop skills in critical thinking, information literacy, ethical reasoning, oral and written communication, and policy analysis. Through a series of carefully designed and integrated courses, students learn to use their knowledge and developed skills to address real-life problems in politics and policy and are prepared to serve roles of responsibility in the community. Students have the option of earning academic credit by participating in a politics- or law-related internship, and PennWest's Political Science program can be complemented by one or more academic minors and, in certain cases, a second bachelor's degree. Political Science graduates are prepared to work in almost any field, but are especially suited for exciting and rewarding careers in government, political advocacy, non-governmental organizations, and law.

Advisement Sheet

## Student Learning Outcomes

- Political information: Graduates can evaluate the quality of sources of political information and utilize that information ethically.
- Political analysis: Graduates can apply knowledge of American politics, comparative and international politics, law, and political theory to analyze and evaluate political conditions and issues.
- Political ethics: Graduates can apply ethical reasoning to evaluate normative issues in politics.
- Political communication: Graduates can effectively speak and write about political conditions and issues.
- Political action: Graduates can design concrete, realistic, and ethical strategies for addressing political or policy problems.

## Curriculum Requirements

### General Education

- Oral Communication - Any Course **Credit Hours:** 3
- Written Communication - Any Course **Credit Hours:** 3
- Quantitative Reason - Any Course **Credit Hours:** 3
- Technological Literacy - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - ECON 2200 - Principles of Macroeconomics **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - STAT 2020 - Elements of Statistics **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective **Credit Hours:** 3

## Competencies

- Quantitative Applications - Any Course **Credit Hours:** 3
- Applied Methodologies - POLI 4900 - Public Policy Analysis **Credit Hours:** 3
- Intercultural Fluency - Any Course **Credit Hours:** 3
- Ethical Reasoning - POLI 3400 - Ancient and Medieval Political Thought **Credit Hours:** 3
- Ethical Reasoning - POLI 3410 - Modern Political Thought **Credit Hours:** 3
- Information Literacy - POLI 3100 - Congress and the Legislative Process **Credit Hours:** 3
- Writing Intensive - POLI 3100 - Congress and the Legislative Process **Credit Hours:** 3
- Writing Intensive - POLI 3400 - Ancient and Medieval Political Thought **Credit Hours:** 3
- Writing Intensive - POLI 3510 - Constitutional Law **Credit Hours:** 3
- Keystone Experience - POLI 4900 - Public Policy Analysis **Credit Hours:** 3

## Major

### Required Major Courses

- POLI 1000 - Introduction to Politics **Credit Hours:** 3
- POLI 1100 - Introduction to American Politics **Credit Hours:** 3
- POLI 3000 - Ideas and Issues in American Politics **Credit Hours:** 3
- POLI 3100 - Congress and the Legislative Process **Credit Hours:** 3
- POLI 3110 - The American Presidency **Credit Hours:** 3
- POLI 3140 - Parties, Elections, and the Media **Credit Hours:** 3
- POLI 3400 - Ancient and Medieval Political Thought **Credit Hours:** 3
- POLI 3410 - Modern Political Thought **Credit Hours:** 3
- POLI 3510 - Constitutional Law **Credit Hours:** 3
- POLI 3520 - Civil Liberties **Credit Hours:** 3
- POLI 4900 - Public Policy Analysis **Credit Hours:** 3

### Major Electives

- POLI 3300 - International Relations **Credit Hours:** 3
- POLI 3310 - Comparative Politics **Credit Hours:** 3
- POLI 3350 - Politics of the World Economy **Credit Hours:** 3
- POLI 3370 - American Foreign Policy and National Security **Credit Hours:** 3
- Any 3000-Level POLI Course **Credit Hours:** 3

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Psychology, BS

The Psychology Department at Penn West is a friendly department with dedicated high-quality teachers and award-winning advisors who focus exclusively on you- our undergraduate students. The department's faculty will help you prepare for your future career with individual attention, research opportunities, and supervised internships.

We offer a very flexible Bachelor of Science degree designed to serve students interested in a wide range of career paths. This includes students who are preparing for graduate training in psychology and related fields as well as those who directly enter a career. Students find work in almost any field but are especially suited in fields including mental health, counseling, social work, art therapy, pre-med and health-related careers, neuroscience, schools, business and industry, law and the criminal justice system, the non-profit sector, as well as government service and the military.

Advisement Sheet

# Student Learning Outcomes

- Key Concepts - Students will be able to describe, apply, and synthesize key concepts, principals, overarching themes, theoretical perspectives, historical trends or empirical findings in psychology.
- Problem-Solving and Information Literacy Skills - Students will develop problem-solving, critical thinking and information literacy skills and apply them in the interpretation of psychological phenomena.
- Ethical Standards - Students will apply ethical standards to their work (oral, written, interpersonal, service learning) and endorse values that build community. For instance: furthers science, addresses justice, reduces dysfunction.
- Communication - Students will be able to communicate effectively orally and in writing. They will apply APA style in all written communication.
- Professional Direction - Students will synthesize material and discoveries from their experiences at PennWest (courses, advising meetings, service/research learning) to create a meaningful professional direction after graduation by applying self-efficacy and self-regulation, teamwork and project management skills.

# Curriculum Requirements

## General Education

- Oral Communication - Any Course **Credit Hours:** 3
- Written Communication - Any Course **Credit Hours:** 3
- Quantitative Reason - Any Course **Credit Hours:** 3
- Technological Literacy - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Student Elective **Credit Hours:** 3

## Competencies

- Quantitative Applications - PSYC 3000 - Psychological Statistics **Credit Hours:** 3
  **and**
- Applied Methodologies - PSYC 3010 - Research Methods in Psychology **Credit Hours:** 3

- Intercultural Fluency - PSYC 2100 - Social Psychology **Credit Hours:** 3
  **OR**
- Intercultural Fluency - PSYC 3120 - Cross Cultural Psychology **Credit Hours:** 3

- Ethical Reasoning - Any Course **Credit Hours:** 3
- Information Literacy - Any Course **Credit Hours:** 3
- Writing Intensive - PSYC 3010 - Research Methods in Psychology **Credit Hours:** 3

Writing Intensive - Select From:

- PSYC 4800 - Capstone Seminar in History & Systems **Credit Hours:** 3
- PSYC 4900 - Capstone Seminar in Psychology **Credit Hours:** 3
- PSYC 4910 - Capstone Lab in Psychology **Credit Hours:** 3
- PSYC 4920 - Capstone Research Project in Psychology **Credit Hours:** 3

Keystone Experience - Select From:

- PSYC 4800 - Capstone Seminar in History & Systems **Credit Hours:** 3
- PSYC 4900 - Capstone Seminar in Psychology **Credit Hours:** 3
- PSYC 4910 - Capstone Lab in Psychology **Credit Hours:** 3
- PSYC 4920 - Capstone Research Project in Psychology **Credit Hours:** 3

## Major

## Required Major Courses

- PSYC 1000 - Introduction to Psychology **Credit Hours:** 3
- PSYC 3000 - Psychological Statistics **Credit Hours:** 3
- PSYC 3010 - Research Methods in Psychology **Credit Hours:** 3

- PSYC 2100 - Social Psychology **Credit Hours:** 3
  **OR**
- PSYC 3120 - Cross Cultural Psychology **Credit Hours:** 3

- PSYC 3200 - Child and Adolescent Developmental Psychology **Credit Hours:** 3
  **OR**
- PSYC 3240 - Psychology of Adulthood and Aging **Credit Hours:** 3

- PSYC 1300 - Psychology of Personal Growth and Wellness **Credit Hours:** 3
  **OR**
- PSYC 2330 - Stress Management **Credit Hours:** 3
  **OR**
- PSYC 3300 - Health Psychology **Credit Hours:** 3

- PSYC 3600 - Cognitive Psychology **Credit Hours:** 3
  **OR**
- PSYC 3620 - Learning Theory **Credit Hours:** 3

- PSYC 3720 - Brain and Behavior **Credit Hours:** 3
  **OR**
- PSYC 3740 - Sensation and Perception **Credit Hours:** 3

- PSYC 3900 - Independent Study in Psychology **Credit Hours:** 1 TO 3
  **OR**
- PSYC 3995 - Research Seminar in Psychology **Credit Hours:** 3
  **OR**
- PSYC 4950 - Field Experience in Psychology **Credit Hours:** 3 TO 6
  **OR**
- PSYC 4955 - Internship in Psychology **Credit Hours:** 3 TO 12
  **OR**
- PSYC 3600 - Cognitive Psychology **Credit Hours:** 3 (if not counted above)
  **OR**
- PSYC 3620 - Learning Theory **Credit Hours:** 3 (if not counted above)
  **OR**
- PSYC 3720 - Brain and Behavior **Credit Hours:** 3 (if not counted above)
  **OR**
- PSYC 3740 - Sensation and Perception **Credit Hours:** 3 (if not counted above)

- 4 PSYC 3000 or higher courses **Credit Hours:** 12 (not counted above)

- PSYC 4800 - Capstone Seminar in History & Systems **Credit Hours:** 3
  **OR**
- PSYC 4900 - Capstone Seminar in Psychology **Credit Hours:** 3
  **OR**
- PSYC 4910 - Capstone Lab in Psychology **Credit Hours:** 3
  **OR**
- PSYC 4920 - Capstone Research Project in Psychology **Credit Hours:** 3

### Major Electives

- Any 4 additional PSYC courses (or approved cognate courses) not counted above in MAJOR **Credit Hours:** 12

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# RN to BSN, BSN

This Bachelor of Science in Nursing Degree is an accredited RN-BSN completion program. This program is intended for students who are Registered Nursing, recent graduates of a prelicensure RN program awaiting licensure exam results, or seniors in an associate degree program who meet eligible criteria. The program provides students with educational experiences designed to promote scientific inquiry, critical judgment, and evidence-based knowledge.

Advisement Sheet

## Student Learning Outcomes

- Incorporates concepts of health promotion in the care of individuals, families, and communities including diverse and vulnerable populations
- Engage in effective professional communication.
- Demonstrate clinical judgement within contemporary nursing practice
- Apply leadership concepts to ensure quality in complex health care systems
- Integrate scholarly inquiry, research, and theory into evidence-based nursing practice
- Use information technology to improve patient outcomes

## Curriculum Requirements

### General Education

- Oral Communication - Any course **Credit Hours:** 3
- Written Communication - Any course **Credit Hours:** 3
- Quantitative Reason - MATH 1220 - College Algebra **Credit Hours:** 3
- Technological Literacy - Any course **Credit Hours:** 3
- Arts and Humanities - Any course **Credit Hours:** 3
- Arts and Humanities - Any course **Credit Hours:** 3
- Arts and Humanities - Any course **Credit Hours:** 3
- Social Sciences - Any course **Credit Hours:** 3
- Social Sciences - Any course **Credit Hours:** 3
- Social Sciences - Any course **Credit Hours:** 3
- Natural Sciences and Tech - BIOL 2810 - Human Anatomy and Physiology I Lecture **Credit Hours:** 3
- Natural Sciences and Tech - BIOL 3810 - Human Anatomy and Physiology II Lecture **Credit Hours:** 3
- Natural Sciences and Tech - Any course **Credit Hours:** 3
- Student Elective - Prior learning equivalence- Diploma or ASN **Credit Hours:** 3

### Competencies

- Quantitative Applications - NURS 4901 - Nursing Capstone II **Credit Hours:** 3
- Applied Methodologies - NURS 4600 - Nursing Inquiry **Credit Hours:** 3
- Intercultural Fluency - NURS 4630 - Epidemiology & Population Health in Community Health Nursing **Credit Hours:** 3
- Ethical Reasoning - NURS 3410 - Health Policy and Advocacy in Nursing **Credit Hours:** 3
- Information Literacy - NURS 3420 - Healthcare Informatics **Credit Hours:** 3
- Writing Intensive - NURS 4900 - Nursing Evidence-Based Practice: Capstone I **Credit Hours:** 3
- Writing Intensive - NURS 4620 - Health Promotion in Nursing **Credit Hours:** 3
- Keystone Experience - NURS 4901 - Nursing Evidence-Based Practice: Capstone II **Credit Hours:** 3

### Free Electives

- Pre-Licensure Nursing Classes **Credit Hours:** 46

### Major

### Required Major Courses

- NURS 3400 - Transitioning to Contemporary Nursing Practice **Credit Hours:** 3
- NURS 3410 - Health Policy and Advocacy in Nursing **Credit Hours:** 3
- NURS 3420 - Healthcare Informatics **Credit Hours:** 3
- NURS 4600 - Nursing Inquiry **Credit Hours:** 3
- NURS 4610 - Leadership in Professional Nursing **Credit Hours:** 3
- NURS 4620 - Health Promotion in Nursing **Credit Hours:** 3
- NURS 4630 - Epidemiology & Population Health in Community Health Nursing **Credit Hours:** 3
- NURS 4900 - Nursing Evidence-Based Practice: Capstone I **Credit Hours:** 3
- NURS 4901 - Nursing Evidence-Based Practice: Capstone II **Credit Hours:** 3
- BIOL 2811 - Human Anatomy and Physiology I Laboratory **Credit Hours:** 1
- BIOL 3811 - Human Anatomy and Physiology II Laboratory **Credit Hours:** 1

### Major Electives

Select 1 of the following:

- NURS 3010 - Disaster Management **Credit Hours:** 3
- NURS 3020 - Health Promotion for the Elderly **Credit Hours:** 3
- NURS 3030 - Death and Grief **Credit Hours:** 3
- NURS 3040 - Creating a Wellness Lifestyle **Credit Hours:** 2 TO 3
- NURS 3050 - Integrative Therapies for Wellness **Credit Hours:** 3
- NURS 4010 - Comprehensive Treatment of Chemical Dependency **Credit Hours:** 3

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Secondary Education, BSEd

The Bachelor of Science in Education (B.S.Ed.) :Secondary Education degree is designed for students seeking to teach various subject areas in secondary school settings or K-12 Settings (Art, HPE). Through this program, students build knowledge of pedagogical principles as well as Educational theory. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

## Student Learning Outcomes

- Candidates will develop, implement, assess, and modify curriculum and lessons that integrate research-based pedagogy and are developmentally appropriate to their content area, the PA PreK-12 Academic Standards, and concentration level: Secondary Education, Technology Education, Health and Physical Education, and Art Education.
- Candidates will plan, adapt, and implement developmentally, culturally, and linguistically appropriate evidence-based instructional practices and strategies that integrate appropriate and effective classroom management in various educational settings.

- Candidates will communicate deep content knowledge as they plan and implement lessons and instructional practices that use active student engagement and formal and/or informal assessment to measure student responsiveness to instruction.
- Candidates will develop professional dispositions with respect to students, parents and families, and will demonstrate integrity, ethical behavior and professional conduct as stated in Pennsylvania's Code of Professional Practice & Conduct for Educators.
- Candidates will identify, administer, and interpret multiple assessments (formative, summative, benchmark, behavioral, diagnostic, cognitive, and/or affective and psychomotor) that are developmentally appropriate and aligned with content area standards and learning objectives to inform planning and instruction for groups and individual students.

## Curriculum Requirements

Secondary Education, Art Education

Secondary Education, Biology

Secondary Education, Chemistry

Secondary Education, English

Secondary Education, General Science

Secondary Education, Health & Physical Education

Secondary Education, Mathematics

Secondary Education, Social Studies

Secondary Education, Technology Education

# Social Work, BSW

The Bachelor of Social Work (BSW) in Social Work degree builds knowledge and skills related to the delivery of social services to individuals, families and groups. Students complete 450 hours of practicum with a social services agency or organization as part of this program.

Advisement Sheet

## Student Learning Outcomes

- Demonstrate Ethical and Professional Behavior
- Advance Human Rights and Social, Racial, Economic, and Environmental Justice
- Engage Anti-Racism, Diversity, Equity, and Inclusion (ADEI) in Practice
- Engage in Practice-Informed Research and Research-Informed Practice
- Engage with Individuals, Families, Groups, Organizations, and Communities
- Evaluate Practice with Individuals, Families, Groups, Organizations, and Communities
- Assess Individuals, Families, Groups, Organizations, and Communities
- Intervene with Individuals, Families, Groups, Organizations, and Communities
- Evaluate Practice with Individuals, Families, Groups, Organizations, and Communities

# Curriculum Requirements

## General Education

- Oral Communication - SOWK 1500 - Interviewing and Engaging: Skills for Professionals **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - Any MATH or STAT Class in Menu **Credit Hours:** 3
- Technological Literacy - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - PSYC 1000 - Introduction to Psychology **Credit Hours:** 3
- Social Sciences - SOCI 1000 - Introduction to Sociology **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Program Elective - SOWK 3300 - Let's Talk About Sex **Credit Hours:** 3 recommended but not required

## Competencies

- Quantitative Applications - SOWK 4100 - Social Work Research Methods **Credit Hours:** 3
- Applied Methodologies - SOWK 4000 - Social Work Practice with Organizations and Communities **Credit Hours:** 3
- Intercultural Fluency - SOWK 2000 - Diversity in a Changing World **Credit Hours:** 3
- Ethical Reasoning - SOWK 3100 - Social Work Practice with Individuals **Credit Hours:** 3
- Information Literacy - SOWK 4100 - Social Work Research Methods **Credit Hours**: 3
- Writing Intensive - SOWK 3400 - Social Welfare Policy **Credit Hours:** 3
- Writing Intensive - SOWK 4000 - Social Work Practice with Organizations and Communities **Credit Hours:** 3
- Keystone Experience - SOWK 4800 - Social Work Field Practicum **Credit Hours:** 12

## Major

### Required Major Courses

- SOWK 1000 - Introduction to Social Work **Credit Hours:** 3
- SOWK 2000 - Diversity in a Changing World **Credit Hours:** 3
- SOWK 2500 - Human Behavior in the Social Environment: Life Course **Credit Hours:** 3
- SOWK 3100 - Social Work Practice with Individuals **Credit Hours:** 3
- SOWK 3250 - Social Work Practice with Families **Credit Hours:** 3
- SOWK 3200 - SW Practice w/Groups **Credit Hours:** 3
- SOWK 4000 - Social Work Practice with Organizations and Communities **Credit Hours:** 3
- SOWK 3000 - Human Behavior and the Social Environment II **Credit Hours:** 3
- SOWK 3400 - Social Welfare Policy **Credit Hours:** 3

- SOWK 3500 - Policy Practice in SW **Credit Hours:** 3
- SOWK 4100 - Social Work Research Methods **Credit Hours:** 3
- SOWK 4800 - Social Work Field Practicum **Credit Hours:** 12
- SOWK 4900 - Social Work Field Seminar **Credit Hours:** 3

### Major Electives

- Any SOWK course 3000+ not already required for the BSW **Credit Hours:** 6

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Sociology, BA

The Bachelor of Arts degree in Sociology is a comprehensive program structured to give students a background in Sociological analysis and applied skills in social research methods with program content focused on social inequality social change. In addition to preparing the student for possible graduate education, the general goal of the program is to provide students with basic applied sociological skills necessary to assume a variety of professional positions and positively contribute to society at large. Penn West's BA Sociology degree prepares students to work in a variety of professional settings including local, regional, and federal agencies, nonprofit organizations, and for-profit enterprises. The training graduates receive allows them to assume a variety of occupations, as well as positively contribute to societal change. The Sociology program offers concentrations in Social Deviance and Human Services.

## Student Learning Outcomes

- Goal 1- Sociological Knowledge: Demonstrate an understanding of the complex interplay of history, social structure, and personal biography in order to critically evaluate social forces.
- Goal 2- Social Diversity: Analyze and explain intersections of social diversity with regard to individual identity, structural inequality, and implications for social change.
- Goal 3- Sociological Theory: Distinguish between and integrate various sociological perspectives and apply them to contemporary societal problems.
- Goal 4- Sociological Research Methods: Identify strategies of social scientific research design, utilize data collection and analysis techniques, and illustrate a working knowledge of ethical research practice.
- Goal 5- Professional Practice: Develop applied sociological skills useful in professional employment and civic behavior.

## Curriculum Requirements

Sociology (no concentration)

Sociology, Human Services Concentration

Sociology, Social Deviance Concentration

# Special Education, BSEd

Those prepared as special educators are teachers who have received specialized training and certification to teach students with cognitive, behavior, and/or physical disabilities. Special education, arguably one of the most challenging fields of education, requires teachers to use a variety of creative and critical thinking skills to develop and implement alternative instructional strategies and/or accommodations for individuals complex needs. The Special Education Program is nationally accredited and is highly regarded throughout the Mid-Atlantic region as a producer of high quality and skillful teachers. Personnel from school districts throughout the United States regularly visit PennWest's campuses to recruit graduates from the Special Education Program. Students who are accepted in PennWest's Special Education Program will work with faculty who are experts in the field and earn the opportunity to participate in a variety of field experiences involving increasing levels of responsibility and culminating in a student teaching experience. Early in the professional studies, students focus on an in-depth understanding of the specific disabling conditions, relevant variables and assessment procedures and their related implications for learning, intervention and instruction. During this period of study, the student is required to engage in specified field experiences that move the student from observation into direct experience and application of empirically-based strategies and instruction with individuals with disabilities. In the next phase, the student further extends and refines the knowledge and skill base through applications in specifically selected field placements and supervised projects. During the final undergraduate semester, the student engages in student teaching experiences under joint supervision and guidance of a selected cooperating professional and department faculty.

The program is currently approved by the Pennsylvania Department of Education.

Advisement Sheet

# Student Learning Outcomes

- Students will be competent special educators.
- Students will analyze the needs of students with disabilites, or at risk for disabilities, using evidence-based practices and develop goals and design, as well as implement, an individualized edcuation plan and instructional programming.
- Students will exhibit teacher behaviors consistent with the range of evidence-based models of education.

# Curriculum Requirements

## General Education

- Oral Communication - COMJ 1010 - Public Speaking **Credit Hours:** 3
- Written Communication - ENGL 1200 - College Composition **Credit Hours:** 3
- Quantitative Reason - MATH 1110 - Mathematics for Teachers I **Credit Hours:** 3
- Technological Literacy - ED 2333 - Technology in Teaching and Learning **Credit Hours:** 3
- Arts and Humanities - ENGL 2300 - Topics in Literature **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - ED 2500 - Multicultural Education and Intercultural Competence **Credit Hours:** 3
- Social Sciences - ED 1750 - Educational Psychology **Credit Hours:** 3
- Social Sciences - PSYC 2200 - Lifespan Developmental Psychology **Credit Hours:** 3
- Natural Sciences and Tech - MATH 2120 - Mathematics for Teachers II **Credit Hours:** 3
- Natural Sciences and Tech - Any course **Credit Hours:** 3
- Natural Sciences and Tech - Any course **Credit Hours:** 3
- Wellness Elective - SPT 1211 - Health and Personal Performance **Credit Hours:** 3

## Competencies

- Quantitative Applications - SPED 3090 - Assessment and Prescriptive Teaching **Credit Hours:** 3
- Applied Methodologies - SPED 3000 - Introduction to Applied Behavior Analysis **Credit Hours:** 3
- Intercultural Fluency - ED 2500 - Multicultural Education and Intercultural Competence **Credit Hours:** 3
- Ethical Reasoning - SPED 4000 - History, Theory, and Exceptionalities **Credit Hours:** 3
- Information Literacy - SPED 3995 - Nature of Autism Spectrum Disorder **Credit Hours:** 3
- Writing Intensive - SPED 3080 - Special Education: Field-Based Skills **Credit Hours:** 3
- Writing Intensive - SPED 3000 - Introduction to Applied Behavior Analysis **Credit Hours:** 3
- Keystone Experience - SPED 4240 - Student Teaching **Credit Hours:** 6
- Keystone Experience - SPED 4250 - Student Teaching **Credit Hours:** 6

## Major

### Required Major Courses

- SPED 1000 - Disability in Popular Media **Credit Hours:** 3
- SPED 1050 - Foundations of Special Education **Credit Hours:** 3
- SPED 2000 - Assessment and Positive Behavior Interventions **Credit Hours:** 3
- SPED 2050 - Introduction to Special Education with Field Observation **Credit Hours:** 3
- SPED 3000 - Introduction to Applied Behavior Analysis **Credit Hours:** 3
- SPED 3010 - Special Learning Disabilities and Emotional Behavior DisordersÂ **Credit Hours:** 3
- SPED 3020 - Intellectual and Physical Disabilities **Credit Hours:** 3
- SPED 3050 - Early Intervention in Special Education **Credit Hours:** 3
- SPED 3060 - Special Reading and Writing Instruction **Credit Hours:** 3
- SPED 3070 - Special Mathematics Instruction **Credit Hours:** 3
- SPED 3080 - Special Education: Field-Based Skills **Credit Hours:** 3
- SPED 3090 - Assessment and Prescriptive Teaching **Credit Hours:** 3
- SPED 4000 - History, Theory, and Exceptionalities **Credit Hours:** 3
- SPED 4010 - Assistive Technology for the Exceptional Learners **Credit Hours:** 3
- SPED 4040 - Transition Planning and Instruction **Credit Hours:** 3
- SPED 4050 - Advanced Evidence Based Practices and Methods for High Incidence Disabilities **Credit Hours:** 3
- SPED 4060 - Advanced Evidence Based Practices and Methods for Low Incidence Disabilities **Credit Hours:** 3
- SPED 4070 - Classroom Administration, Collaboration, and IEP Development **Credit Hours:** 3
- SPED 4240 - Student Teaching **Credit Hours:** 6
- SPED 4250 - Student Teaching **Credit Hours:** 6
- ED 3700 - ELL Foundations **Credit Hours:** 3
- SPED 4020 - Trauma Informed Practices **Credit Hours:** 3
- SPED 3995 - Nature of Autism Spectrum Disorder **Credit Hours:** 3
- PHIL 3400 - Philosophy of Human Nature **Credit Hours:** 3
- COMJ 1101 - Exploring Human Communication **Credit Hours:** 3

## Total Credits: 123

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Sport Management Studies, BS

The Sport Management program at PennWest blends theoretical knowledge with practical, hands-on experiences, to acquire the skills that employers in today's sport business environment demand.

## Student Learning Outcomes

**Sport Management, BS Program Level Outcomes**

- Students will be able to think critically and solve sport-related industry problems to add value to existing sport organizations
- Students will develop effective communication skills: interpersonal, oral, and written
- Students will be able to articulate their professional preparedness
- Students will be able to work effectively in a team environment to develop goals, complete tasks, measure progress, and provide a sense of leadership.
- Students will communicate the importance of sport as a medium for integrating ethical decision making, race and gender issues, religious, and disability interests in society
- Students will be competent in applying marketing, sales, financial, and legal principles to sport industry.
- Students will recognize the importance of professional and ethical obligations, cultivating an advanced understanding of global awareness and diversity.
- Students will understand the effective use of current technology trends as it relates to the sport industry today.
- Students will demonstrate an understanding of the governance and organizational oversight that exists within the sport industry.
- Students will be able to effectively apply knowledge and skills learned throughout the curriculum in real world settings.

**Professional Golf Management Concentration Outcomes**

- Students will be able to think critically and solve sport-related industry problems to add value to existing sport organizations
- Students will develop effective communication skills: interpersonal, oral, and written
- While on each required internship, PGM students will demonstrate career specific knowledge and skills along with industry acceptable personality and professionalism
- Students will be able to work effectively in a team environment to develop goals, complete tasks, measure progress, and provide a sense of leadership.
- Research existing literature on an area relating to golf equipment, golf fitness and/or golf teaching methodologies
- Conduct hypothesis testing in the areas of golf equipment, golf fitness or golf teaching methodologies and report results in writing
- PGM students will demonstrate the knowledge, skills and techniques needed to successfully construct a golf club from component stage to finished product ensuring the proper fit and measurements for a particular customer
- Students will successfully complete the Player Development Program (PDP) requirements each semester until passing the PGA's PAT
- To understand the symbiotic relationships which exist between individuals and departments within the golf industry
- To understand golf's environmental impact and the importance of sustainability practices

## Curriculum Requirements

Students can select to study Sport Management or Sport Management with a Professional Golf Management concentration.

Sport Management Studies (no concentration)

Sport Management Studies, Professional Golf Management Concentration

# Studio Arts, BFA

The BFA in Studio Arts combines the creation, evaluation, and professional exhibition of innovative visual work in a variety of disciplines with a strong grounding in the history of art. Students develop the skills and experience necessary to pursue a career in a wide range of contemporary visual arts industries. The four-year, 120-credit curriculum fuses traditional and current approaches to art production while considering cultural and historical contexts, aesthetics and critical theory, and the development and practice of professional proficiencies.

Concentrations: Ceramics, Illustration, Metals, Painting and Drawing, Sculpture, Wood Furniture Design

## Student Learning Outcomes

- Students will demonstrate a high level of proficiency with the primary material, tools, technique, and technology used in their concentration area supplemented by experience with other media.
- Students will fully investigate in their work conceptual issues and expressive potential of their medium.
- Students will integrate aesthetic principles in the development of their own artwork.
- Students will recognize that the making and study of art can be approached from a variety of perspectives.
- Students will defend meaningful interpretations and critical evaluations about their own artworks and the works of other artists both orally and in writing.
- Students will construct informed discussion of art as an essential component of viewing, producing, and evaluating art.
- Students will explain cultural and historical contexts surrounding works of art in general and in their field of study.
- Students will conclude that art communicates, challenges and shapes cultural and societal values.
- Students will reframe their practices through experimentation.
- Students will organize and produce a resume, a written statement about, and an appropriate visual documentation of their work.

## Curriculum Requirements

Studio Arts (no concentration)

Studio Arts, Ceramics Concentration

Studio Arts, Drawing & Painting Concentration

Studio Arts, Illustration Concentration

Studio Arts, Jewelry & Metals Concentration

Studio Arts, Sculpture Concentration

Studio Arts, Wood/Furniture Design Concentration

# Theatre, BA

The Bachelor of Arts in Theatre degree is a flexible program, offering the traditional degree or coupling concentrations in either Design & Entertainment Technology or Musical Theatre. No matter the path you choose, you will begin to hone your craft in your first semester. Through your journey, you will dig deeply into your theatre studies, balancing them with a broad general education component while emphasizing collaboration, time management, self-motivation, and empathy. Graduating with our Bachelor of Arts In Theatre degree prepares you for entry-level professional positions, graduate study, or a path of your own design.

## Student Learning Outcomes

**Theater, BA Program Level Outcomes**

- Ability to think conceptually and critically about text, performance, and production
- Understanding of process from playwrighting through production
- Describe a wide selection of theatre repertory including the principal eras, genres, and cultural sources
- Understanding of procedures and approaches for realizing a wide variety of theatrical styles
- Ability to develop and defend informed judgments about theatre

**Theater, No Concentration Outcomes**

- Ability and proficiency in technical skills required in areas of performance, production, playwrighting or other specific areas of interest
- Intermediate to advanced competence in one or more theatre specializations in creation, performance, scholarship or teaching
- Presentation skills including resume and audition package/portfolio

**Design & Entertainment Technology Concentration Outcomes**

- Ability and proficiency in technical skills required in areas of design and entertainment technology
- Competence in one or more specializations in design and entertainment technology
- Presentation skills including resume portfolio

**Musical Theater Concentration Outcomes**

- Ability and proficiency in technical skills required in areas of performance, production, playwrighting or other specific areas of interest
- Intermediate to advanced competence in one or more theatre specializations in creation, performance, scholarship or teaching
- Presentation skills including resume and audition package/portfolio

## Curriculum Requirements

Theatre (no concentration)

Theatre, Design & Entertainment Technology Concentration

Theatre, Musical Theatre Concentration

# Veterinary Technology, BS

The bachelor's degree in veterinary technology at PennWest California equips you with the knowledge, practical skills and confidence to enter the field as a "vet tech" with specialized training in fields such as small- or large-animal care, laboratory animal management, or shelter medicine. You'll gain hands-on experience caring for animals while this accredited four-year, on-campus program prepares you for leadership in the workplace.

Advisement Sheet

# Student Learning Outcomes

- Students will be successful on the Veterinary Technician National Exam.
- Students will be able to perform diagnostic and therapeutic procedures.
- Students will be able to communicate effectively with other veterinary professionals and clientele.
- Students will be able to critically evaluate diagnostic findings and relate to animal health and wellness.
- Students will work cooperatively to achieve optimum and compassionate patient care.

# Curriculum Requirements

## General Education

- Oral Communication - Any Course **Credit Hours:** 3
- Written Communication - Any Course **Credit Hours:** 3
- Quantitative Reason - MATH 1030 - Mathematics for Health Sciences **Credit Hours:** 3 or higher
- Technological Literacy - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Arts and Humanities - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Social Sciences - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Course **Credit Hours:** 3
- Natural Sciences and Tech - Any Chemistry Course **Credit Hours:** 3
- Natural Sciences and Tech - BIOL 2226 - Basic Microbiology **Credit Hours:** 3
- Student Elective - Any Course **Credit Hours:** 3

## Competencies

- Quantitative Applications - Any Course **Credit Hours:** 0
- Applied Methodologies - VETT 2100 - Veterinary Clinical Technology and Laboratory Procedures **Credit Hours:** 4
- Intercultural Fluency - Any Course **Credit Hours:** 0
- Ethical Reasoning - VETT 1600 - Care and Management of Exotic and Laboratory Animals **Credit Hours:** 3
- Information Literacy - VETT 1600 - Care and Management of Exotic and Laboratory Animals **Credit Hours:** 3
- Writing Intensive VETT 2920 and Any Course **Credit Hours:** 6
- Keystone Experience - VETT 4500 - Case Studies in Veterinary Medicine **Credit Hours:** 3

## Free Electives

- Free Electives **Credit Hours:** 18

## Major

### Required Major Courses

- VETT 1010 - Introduction to Veterinary Technology **Credit Hours:** 3
- VETT 1600 - Care and Management of Exotic and Laboratory Animals **Credit Hours:** 3
- VETT 2020 - Small Animal Management and Clinical Procedures **Credit Hours:** 0 TO 4
- VETT 2100 - Veterinary Clinical Technology and Laboratory Procedures **Credit Hours:** 4
- VETT 2200 - Large Animal Management and Clinical Procedures **Credit Hours:** 0 TO 4
- VETT 2300 - Digital Diagnostic Imaging **Credit Hours:** 4
- VETT 2400 - Veterinary Pharmacy and Pharmacology **Credit Hours:** 3
- VETT 2500 - Â  Surgical Nursing, Anesthesia, and Pain Management **Credit Hours:** 0 TO 4
- VETT 2920 - Clinical Experience **Credit Hours:** 3
- VETT 3010 - Contemporary Issues in Veterinary Medicine **Credit Hours:** 3
- VETT 4500 - Case Studies in Veterinary Medicine **Credit Hours:** 3
- VETT 4950 - Specialty Internship **Credit Hours:** 3
- BIOL 2710 - Anatomy and Physiology of Domestic Animals I **Credit Hours:** 4
- BIOL 2720 - Anatomy and Physiology of Domestic Animals II **Credit Hours:** 4
- Related electives: 3000-4000 level in VETT or BIOL or CHEM **Credit Hours:** 10

## Total Credits: 120

Depending on the program of study, students may need to complete additional credits to ensure the total credit hour requirement is met.

# Sub Baccalaureate Certificate Programs

# Cannabis Science and Industry, Certificate

The certificate in Cannabis Science and Industry at Pennsylvania Western University prepares students for exciting careers in the cannabis industry. Designed for professional seeking to work in a variety of positions within the industry, this certificate introduces students to the foundational scientific principles and organizational practices of the legal cannabis sector. Students will learn an overview of the cannabis business sector, including the industry outlay (growers, processors, labs and dispensaries), operational practices, policy and compliance requirements, and industry best practices. Students will discuss industry specific practices including licensing, retail and sales, marketing, accounting and operations, and liability. Moreover, students will gain a strong  understanding of industry challenges regarding taxation, banking and finance, real estate, workforce development, good manufacturing practices and much more. Students will also take a deep dive into cannabusiness policy and compliance specific to each sector of the industry covering topics from security, to waste disposal, to labeling products. Students who complete the program will also gain an overview of the basic agricultural and industrial practices necessary for cultivating and processing cannabis. Basic principles of cannabis anatomy, physiology, and biochemistry will lay the foundation for an exploration into growing practices including plant breeding and propagation, soil monitoring, environmental conditions, harvesting and post-harvest handling techniques, etc. Students will also be introduced to chemical analysis

and extraction techniques used in processing cannabis for a variety of products. Students who complete this certificate will also gain an introduction to medical research and clinical practices, as well as modes of administration of cannabis for therapeutic use. An overview of the medical history of cannabis, the endocannabinoid system and its components, and medical applications will educate students in the fundamental human biological impacts of cannabis use. Clinical research and current medical practices will be reviewed to gain an understanding of medicinal cannabis for treating a variety of psychiatric, neurological, anti-inflammatory and other illnesses. Students will also gain an understating of the processes necessary for patients to navigate medical marijuana programs in a state specific context. This certificate allows for a deep dive into the medical and commercial cannabis sectors, and it would be a steppingstone for a variety of industry specific careers.

## Student Learning Outcomes

- Explore clinical research regarding and the medical therapeutic use of cannabis in the context of the US health care system.
- Demonstrate an understanding of Federal and State Cannabis policy and regulations relative to the Cannabis Industry
- Gain a physiological understanding of cultivation, harvesting, and post-harvest processing, extraction and testing practices of different cannabis products.

## Curriculum Requirements

### Required Courses

- PSYC 1420 - Medical Cannabis **Credit Hours:** 3
- SOCI 1420 - Cannabiz Policy and Compliance **Credit Hours:** 3
- BIOL 1420 - Cannabis Agriculture Science **Credit Hours:** 3

## Total Credits: 9

# Creative Writing, Certificate

A certificate in creative writing allows students to compile a portfolio of original writing in a variety of literary genres. By completing workshop courses at the introductory and advanced levels, students will practice the techniques common to all good writing, apply a variety of styles and approaches unique to individual genres, situate their creative texts in a larger literary tradition, and deepen their experience of writing as an artistic discipline.

## Student Learning Outcomes

- Make appropriate choices regarding form, diction, style, structure, and mechanics to produce compelling literature that ruptures, or aligns with, the conventions of a chosen literary genre.
- Critically read and analyze "mentor" texts in a variety of literary genres to acquire an understanding of successful creative writing technique.
- Develop a critical and theoretical vocabulary to assess creative texts.
- Develop an understanding that original literature emerges from a complex matrix of social, historical, and aesthetic contexts.
- Compile a revised portfolio of creative work that can help prepare alumni for the rigors of graduate study or professional employment in the fields of writing, editing, or publishing.

## Admission Requirements

Prerequisite:  ENGL 1200 - College Composition

## Curriculum Requirements

### Required Courses

- ENGL 2400 - Introduction to Creative Writing **Credit Hours:** 3
- ENGL 4400 - Studies in Advanced Creative Writing **Credit Hours:** 3

Choose one from:

- ENGL 3400 - Studies in Poetry Writing **Credit Hours:** 3
- ENGL 3410 - Studies in Fiction Writing **Credit Hours:** 3
- ENGL 3420 - Studies in Nonfiction Writing **Credit Hours:** 3
- ENGL 3430 - Studies in Screenwriting **Credit Hours:** 3
- ENGL 3440 - Studies in Drama Writing **Credit Hours:** 3
- ENGL 3450 - Studies in Graphic Novel Writing **Credit Hours:** 3

Choose one from:

- ENGL 2205 - Writing in the Genres **Credit Hours:** 3
- ENGL 2270 - Digital Storytelling **Credit Hours:** 3
- ENGL 4000 - Publishing Workshop **Credit Hours:** 3
- ENGL 4200 - Writing, Editing & Style **Credit Hours:** 3
  OR Additional 3400-level Creative Writing course

## Total Credits: 12

# Data Science, Certificate

A (STEM) program that prepares individuals to apply data science to generate insights from data and identify and predict trends. Includes instruction in computer databases, data warehousing, querying databases and reporting, data mining, predictive modeling and analytics, computer programming, inference, machine learning, optimization, probability and stochastic models, statistics, big data analytics, and visual analytics (data visualization).

## Student Learning Outcomes

- Perform quantitative data analysis using appropriate statistical methods and tools (SAS) to aid business decisions and reduce the risks and optimize solutions.
- Explore data to understand relationships among variables and harness / mine very large data sets to make business decisions using machine learning techniques.
- Apply data visualization best practices to communicate visual insights through charts, dashboards and communicate data-driven stories.
- Integrate, apply and implement the concepts, techniques and tools of data analytics learnt in the MS DSA Program using capstone projects with real-world datasets.

- Identify and explain knowledge in data science, big data, and technology used for processing big data and data science methods
- Formulate and solve data science and big data problems using appropriate data management and analysis skills
- Identify and apply the technology necessary to aid in solving real-world problems
- Effectively use technology to solve data science problems
- Be literate in the language of data science and in data analysis skills for data science and big data

## Curriculum Requirements

### Required Courses

- MATH 2070 - Data Preparation and Cleaning **Credit Hours:** 3
- MATH 2130 - Data Visualization **Credit Hours:** 3
- MATH 2510 - Big Data Tools **Credit Hours:** 3
- MATH 2610 - Big Data Analytics **Credit Hours:** 3
- MATH 4010 - Data Analysis Capstone Project **Credit Hours:** 3

## Total Credits: 15

# Geographic Information Systems, Certificate

The GIS Certificate enables students to acquire a wide variety of technical and applied skills in geospatial technologies, preparing them for professional employment in areas that require expertise in the design, implementation, and analysis of spatial information. While online GIS certification helps achieve professional goals and advancement in different careers, it offers an affordable and convenient option for those with a busy schedule. This certificate helps fulfill some of the requirements for GISP, ASPRS and Esri certification programs.

## Student Learning Outcomes

- Recognize, state essential GIS concepts, and solve spatial problems using GIS Software (ArcGIS)
- Identify geographic problems and how to approach it using Geospatial Technologies, and applying GIS tools to real-world problem solving
- Manipulate geographic and non-geographic datasets (i.e., create, edit, and modify datasets)
- Demonstrate familiarity with the concepts and applications of geographic analysis

## Admission Requirements

Students with the GIS Minor do not qualify for the certificate.

## Curriculum Requirements

### Required Courses

- GGIS 2100 - Geographic Information Systems **Credit Hours:** 3

- GGIS 3110 - Geospatial Data Handling and Integration **Credit Hours:** 3
- GGIS 2300 - Environmental Remote Sensing I **Credit Hours:** 3

### Electives

Select two courses:

- GGIS 2990 - Crime Mapping and Spatial Analysis **Credit Hours:** 3
- GGIS 3120 - Computer Cartography **Credit Hours:** 3
- GGIS 4200 - Geospatial Analysis **Credit Hours:** 3
- GGIS 4900 - Capstone in Geographic Information Technologies **Credit Hours:** 3

## Total Credits: 15

# Human Resource Management, Certificate

The Certificate in Human Resources Management (CHRM) is designed to offer non-traditional students (e.g., older, working adults) the knowledge, skills, abilities, and others (KSAOs) needed to assume entry to higher levels of professional HRM.

## Student Learning Outcomes

- Apply important concepts surrounding the study of human resources in today's diverse work environment.
- Execute entry level HR strategies that contribute to strategic business goals.
- Evaluate global HR challenges such as compensation, benefits, recruitment, and training.
- Demonstrate proficiency in the SHRM Body Competency of Knowledge.

## Admission Requirements

- GPA (to start or complete): 2.5 or better
- Grade requirements: "C" or better for an average 2.0 GPA
- Majors not permitted to get this minor: The HRM minor and the HRM certificate are mutually exclusive

## Curriculum Requirements

### Required Courses

- BSAD 1000 - Introduction to Business **Credit Hours:** 3
- HRMG 3000 - Principles of Human Resource Management **Credit Hours:** 3
- HRMG 4900 - Human Resource Management Capstone **Credit Hours:** 3
- HRMG 4990 - SHRM-CP/SHRM-SCP Certification Preparation **Credit Hours:** 3

Choose two courses from:

- HRMG 3100 - Compensation Management **Credit Hours:** 3
- HRMG 3200 - Labor Relations **Credit Hours:** 3
- HRMG 3520 - Human Resource Information Systems **Credit Hours:** 3

- HRMG 4600 - Global Talent Management **Credit Hours:** 3
- HRMG 3400 - Occupational Safety Management **Credit Hours:** 3
- HRMG 3630 - Diversity, Equity, and Inclusion at Work **Credit Hours:** 3
- HRMG 4750 - Employment Regulations **Credit Hours:** 3
- HRMG 4950 - Internship for the Department of Management and Marketing Programs **Credit Hours:** 1 TO 12

## Total Credits: 18

# Legal Studies, Certificate

The program is designed to facilitate the application of law to those majoring in other academic areas. As an example, for those students majoring in business a Legal Studies Certificate makes them great candidates for a corporate law department. Those involved in social work frequently are required to involve themselves in the court system. There is no major that this certification would not be an enhancement of.

## Student Learning Outcomes

- Effectively complete legal research tasks
- Effectively prepare legal documents
- Explain the ethical responsibilities of a paralegal.
- Analyze complicated issues of substantive law.

## Admission Requirements

Available to all non-Legal Studies Majors

As approved by PASSHE and accredited by the American Bar Association the Certificate in Legal Studies is open to a student who has:

- Completed a bachelor's degree from a regionally accredited institution of higher education, or has
- Completed no less than sixty credits from a regionally accredited institution of higher education, or is
- Currently enrolled at PennWest in a bachelor's program.

## Curriculum Requirements

### Required Courses

- BLAW 2000 - Legal and Ethical Environment of Business **Credit Hours:** 3
- LAW 1000 - Introduction to Legal Studies **Credit Hours:** 3
- LAW 2000 - Methods of Legal Research **Credit Hours:** 3
- LAW 3460 - Principles and Practices of Litigation **Credit Hours:** 3
- LAW 2001 - Legal Writing **Credit Hours:** 3
- LAW 4900 - Legal Studies Experience **Credit Hours:** 3

Select two of the following courses:

- LAW 3390 - Family Law **Credit Hours:** 3

- LAW 3430 - Wills, Trusts, and Estates **Credit Hours:** 3
- LAW 3440 - Administrative Law **Credit Hours:** 3
- LAW 3470 - Real Estate Law **Credit Hours:** 3
- LAW 3450 - Environmental Law **Credit Hours:** 3

## Total Credits: 24

# Literature and Culture, Certificate

A student completing a literature certificate will encounter readings covering the breadth and depth of literary writing. The student will be introduced to the relationships among art, history, and culture while developing specific skills in writing, analysis, and critical thinking.

## Student Learning Outcomes

- Demonstrate practical knowledge of a broad range of literatures and theoretical perspectives as well as an in-depth knowledge of a particular area of study.
- Conduct ethical research and analysis that executes critical and theoretical responses to literary and cultural topics and that demonstrates a working knowledge of conventions of professional literary scholarship.
- Critically assess through written and oral communication how social difference, cultural constructs, and discourses of power shape the production and interpretations of texts.

## Admission Requirements

Prerequisite: ENGL 1200 - College Composition

## Curriculum Requirements

### Required Courses

- Any two 2000 level literature courses **Credit Hours:** 6
- Any two 3000 or 4000 level literature course **Credit Hours:** 6

## Total Credits: 12

# Professional Writing, Certificate

The certificate in Professional Writing helps learners build a broad and deep skill set necessary for effective writing in a variety of contexts, and it teaches them how to design and tailor their writing to meet the needs of their intended readers. The certificate's flexible, practical curriculum will help writers stand out amongst peers in their disciplines and in the workforce as it provides them with essential skills and opportunities in increasingly competitive arenas where thoughtful, articulate writing is in-demand.

## Student Learning Outcomes

- Critically read, analyze, and critique "mentor" texts in various genres and fields in order to understand what makes them rhetorically successful.
- Make appropriate choices regarding style, structure, and mechanics in order to produce compelling, rhetorically successful prose in a variety of genre(s) that responds appropriately to audience, purpose, and context.
- Prepare for future personal and professional writing contexts by producing revised, polished documents that can be used in a portfolio.

## Admission Requirements

Successful completion of ENGL 1200 or equivalent OR permission of department chair.

## Curriculum Requirements

### Required Courses

Choose two courses from:

- ENGL 2200 - Reading and Writing **Credit Hours:** 3
- ENGL 2205 - Writing in the Genres **Credit Hours:** 3
- ENGL 2210 - Writing in the Health and Human Services Professions **Credit Hours:** 3
- ENGL 2220 - Writing for the Community **Credit Hours:** 3
- ENGL 2230 - Writing and the Natural Sciences **Credit Hours:** 3
- ENGL 2240 - Writing and the Social Sciences **Credit Hours:** 3
- ENGL 2250 - Visual Rhetoric, Writing, and Design **Credit Hours:** 3
- ENGL 2260 - Writing Argument and Persuasion **Credit Hours:** 3
- ENGL 2270 - Digital Storytelling **Credit Hours:** 3
- ENGL 2280 - Writing for Business **Credit Hours:** 3
- ENGL 2610 - Traditional Grammar **Credit Hours:** 3

Choose two courses from:

- ENGL 3200 - Advanced Topics in Writing Studies **Credit Hours:** 3
- ENGL 3210 - Studies in Professional Writing **Credit Hours:** 3
- ENGL 3220 - Grant and Proposal Writing **Credit Hours:** 3
- ENGL 3230 - Technical Writing **Credit Hours:** 3

## Total Credits: 12

# Remote Sensing, Certificate

The certificate in remote sensing provides students with a solid core of theoretical and lab-based remote sensing education, using state-of-the-art equipment and software. Students gain a solid grounding in vegetation science, which helps them understand the relationships between vegetation patterns seen in imagery and the environmental drivers that mediate these patterns. Additionally, students are offered the opportunity to enroll in electives that strengthen their geospatial skills, with specialized courses in remote sensing (e.g., RADAR), geographic information systems (GIS). A minor in Remote Sensing prepares students to work in a variety of environmental careers such as natural resource management, Geology, Forestry and environmental conservation. While online RS certification helps achieve professional goals and advancement in different careers, it offers an affordable and convenient option for those with an

existing employment and busy schedules. This certificate helps fulfill some of the requirements for the ASPRS certification programs.

## Student Learning Outcomes

- Recognize, state essential RS concepts, and solve spatial problems using RS Software (ENVI)
- Identify patterns and problems that facilitate real-world problem solving through use of RS software
- Manipulate geographic and non-geographic datasets (i.e., create, edit, and modify datasets)
- Demonstrate familiarity with the concepts and applications of geographic analysis
- List the major sources of remote sensing data, and describe their spatial, temporal, spectral, and radiometric characteristics.

## Curriculum Requirements

### Required Courses

- GGIS 2300 - Environmental Remote Sensing I **Credit Hours:** 3
- GGIS 3300 - Environmental Remote Sensing II **Credit Hours:** 3
- ATMS 3650 - Radar and Satellite Meteorology **Credit Hours:** 3
- GGIS 2100 - Geographic Information Systems **Credit Hours:** 3

### Electives

Select two of the following courses:

- GGIS 3120 - Computer Cartography **Credit Hours:** 3
- GGIS 4200 - Geospatial Analysis **Credit Hours:** 3
- GGIS 4900 - Capstone in Geographic Information Technologies **Credit Hours:** 3

## Total Credits: 18

# Spanish for the Professions, Certificate

A certificate in Spanish for the professions provides students with a basic understanding of the Spanish language and cultures, as well as basic Spanish language skills to conduct daily life and to perform tasks of interpretation, translation, and other tasks of communication in a variety of professional fields.

## Student Learning Outcomes

- Students demonstrate listening, speaking, reading, and writing skills at the beginner to intermediate level of Spanish, consistent with the National Standards for Foreign Language Education.
- Students identify and analyze literary, historical and cultural products of the Spanish-speaking world within a broad historical framework.
- Students demonstrate critical thinking skills in comparing cultural products and practices of the Spanish-speaking world with their own cultures.

## Admission Requirements

GPA 2.0

Grade requirements, "C" or better

## Curriculum Requirements

### Required Courses

Elementary and Intermediate Courses (9 credits)

- SPAN 1001 - Elementary Spanish I **Credit Hours:** 3
- SPAN 1002 - Spanish Two **Credit Hours:** 3
- SPAN 2001 - Spanish III **Credit Hours:** 3

Advanced Courses (3 credits)

- SPAN 3001 - Spanish IV **Credit Hours:** 3
- SPAN 3004 - Spanish for Law Enforcement **Credit Hours:** 3
- SPAN 3005 - Spanish for Business **Credit Hours:** 3
- SPAN 3006 - Medical Spanish **Credit Hours:** 3
- SPAN 3007 - Spanish for Social Services **Credit Hours:** 3
- SPAN 3008 - Spanish for Educators **Credit Hours:** 3
- SPAN 3009 - Spanish for the Professions **Credit Hours:** 3
- SPAN 3100 - Spanish Conversation, Composition, and Phonetics **Credit Hours:** 3
- SPAN 3200 - Hispanic Short Stories **Credit Hours:** 3
- SPAN 3300 - Introduction to Spanish Phonetics and Pronunciation **Credit Hours:** 3
- SPAN 3400 - Hispanic Film **Credit Hours:** 3
- SPAN 3440 - Translation **Credit Hours:** 3
- SPAN 3500 - Studies in Hispanic Language and Culture **Credit Hours:** 3
- SPAN 3600 - Immersion in Hispanic Language and Culture **Credit Hours:** 3

## Total Credits: 12

# Trauma Informed Care, Certificate

The trauma-informed care (TIC) sub-baccalaureate certificate combines discipline-specific approaches to TIC in psychology and social work to provide students with a well-rounded generalist approach to providing such care.

## Student Learning Outcomes

- Students will be able to define Trauma Informed Care
- Students will understand trauma across the lifespan
- Students will be able to identify different stressors that contribute to trauma
- Students will be aware of how to apply Trauma Informed Care

## Admission Requirements

Prerequisite:PSYC 1000 - Introduction to Psychology; Sophomore or higher

## Curriculum Requirements

### Required Courses

- SOWK 1500 - Interviewing and Engaging: Skills for Professionals **Credit Hours:** 3
- PSYC 2330 - Stress Management **Credit Hours:** 3
- SOWK 4500 - SW Seminar in Special Topics **Credit Hours:** 3
- PSYC 3544 - Childhood Trauma: Theory, Research, & Practice **Credit Hours:** 3

## Total Credits: 12

# Minor

# Accounting, Minor

In the accounting minor, students will enhance their ability to critically assess the flow of transactional data throughout an organization. Furthermore, students will be better prepared to use the accounting data to make informed and strategic decisions, at both the business and personal level. Students from any major will find relevant applications of accounting concepts and theories, which will improve their ability to make data driven decisions.

## Student Learning Outcomes

- Apply the rules of common financial reporting frameworks, including, but not limited to U.S. GAAP, cash basis and IFRS to routine business transactions.
- Analyze cost and pricing data to recommend strategic product decisions.
- Measure the impact of income tax and its related effects on an entity.

## Curriculum Requirements

### Required Courses

- ACC 2000 - Financial Accounting **Credit Hours:** 3
- ACC 3000 - Managerial Accounting **Credit Hours:** 3

- FINA 3000 - Financial Management **Credit Hours:** 3
  **OR**
- ECON 2100 - Principles of Microeconomics **Credit Hours:** 3
  **OR**
- ECON 2200 - Principles of Macroeconomics **Credit Hours:** 3

- ACC 3050 - Cost Accounting **Credit Hours:** 3
- ACC 3100 - Intermediate Accounting I **Credit Hours:** 3
- ACC 4400 - Auditing **Credit Hours:** 3

- ACC 3200 - Federal Income Tax I **Credit Hours:** 3
  **OR**
- ACC 3250 - Federal Income Tax II **Credit Hours:** 3

## Total Credits: 21

# Actuarial Science, Minor

The Minor in Actuarial Science covers the topics of calculus, probability and statistics, and interest theory that provide the initial preparation for a student to take Actuarial Exams P and FM.

## Student Learning Outcomes

- Demonstrate proficiency in mathematics content and skills.
- Interpret and solve theoretical and applied mathematical problems.
- Interpret and solve problems related to the Society of Actuaries and Casualty Actuarial Society professional examinations.

## Curriculum Requirements

### Required Courses

- MATH 2410 - Analytical Geometry and Calculus I **Credit Hours:** 4
- MATH 2420 - Analytical Geometry and Calculus II **Credit Hours:** 4
- MATH 3430 - Analytical Geometry and Calculus III **Credit Hours:** 4
- STAT 3010 - Mathematical Probability and Statistics **Credit Hours:** 3
- STAT 3800 - Introduction to Actuarial Science **Credit Hours:** 3
- MATH 3810 - Mathematical Interest Theory **Credit Hours:** 3

## Total Credits: 21

# Arts Administration, Minor

The Arts Administration minor is designed to give students enrolled in undergraduate fine arts programs (Art, Graphic Design, Music, Theater, etc.) a relevant background in the business disciplines in order to meet growing demand for people able to apply specialized business knowledge to the arts industries. Arts administration can refer to the management of arts organizations of all kinds. Relevant positions can be found in the nonprofit sector, for performance groups, for arts councils, and for museums, or in the for-profit sector (for example, artist management in the music industry, or managing an art gallery). Through the study of both art and contemporary business theory and practice, and a required internship students will gain a first-hand experience of the art marketplace.

## Student Learning Outcomes

- Describe the functions of management and compare, contrast and provide examples of creativity, invention and innovation.
- Describe the external environment of business and show how markets affect resource distribution in the United States.
- Define leadership and relate it to decision making and discuss both rational and behavioral perspectives on decision making.

## Curriculum Requirements

### Required Courses

Select 6 credits from:

- ACC 2000 - Financial Accounting **Credit Hours:** 3
- BSAD 1000 - Introduction to Business **Credit Hours:** 3
- BLAW 2000 - Legal and Ethical Environment of Business **Credit Hours:** 3
- MGMT 3000 - Principles of Management **Credit Hours:** 3
- MKTG 3000 - Principles of Marketing **Credit Hours:** 3

Select 12 credits from:

- ACC 3300 - Non-Profit Accounting **Credit Hours:** 3
- EVPM 3300 - Meetings, Events, and Convention Operations **Credit Hours:** 3
- EVPM 4120 - Recreation Program Planning and Evaluation **Credit Hours:** 3
- FINA 3000 - Financial Management **Credit Hours:** 3
- HOSP 1001 - Hospitality Operations and Management **Credit Hours:** 3
- MGMT 3020 - Entrepreneurship I **Credit Hours:** 3
- MGMT 3100 - Entrepreneurship II **Credit Hours:** 3
- MKTG 3410 - Marketing for Non-Profits **Credit Hours:** 3
- MKTG 3610 - Entrepreneurial Marketing **Credit Hours:** 3
- MKTG 3800 - Social Media Marketing **Credit Hours:** 3
- MKTG 4910 - Digital Marketing and Analytics **Credit Hours:** 3
- PFPL 1010 - Wealth Building and Personal Financial Planning **Credit Hours:** 3

Select at least 3 credits from:

- BSAD 4930 - Field Studies in Business **Credit Hours:** 3
- BSAD 4950 - Internship for Department of Management and Marketing Programs **Credit Hours:** 1 TO 12
- MUSI 4951 - Music Technology Internship **Credit Hours:** 3
- Or any other internship course

## Total Credits: 21

# Athletic Coaching, Minor

Our nationally accredited athletic coaching program provides students with the knowledge and skills necessary to become a successful coach. Students will learn the national standards for athletic coaching to ensure that they will provide quality training and have a positive impact on their athletes. Students will gain the fundamental knowledge, skills, and coaching experience that is essential to work with youth, interscholastic and intercollegiate athletes.

## Student Learning Outcomes

- Develop competencies to become effective instructors, communicators, and motivators.
- Create and develop organizational strategies including leadership, instructional planning for individual and team settings, and time management.
- Construct an athletic coaching philosophy and coaching objectives that will demonstrate a commitment to athletes who are diverse in maturation, cultural heritage, gender, sexual orientation, and abilities.
- Apply the physiological principles and applications for training athletes.
- Illustrate professional and ethical behavior that is reflective of athletic coaching.

## Admission Requirements

2.0 GPA minimum

## Curriculum Requirements

### Required Courses

- SPT 3500 - Thy & Technique Of Coaching **Credit Hours:** 3
- EXSC 3105 - Motivation in Wellness & Fitness **Credit Hours:** 3
- EXSC 3314 - Kinesiology **Credit Hours:** 3
- EXSC 3350 - Exercise Physiology **Credit Hours:** 3
- EXSC 4206 - Athletic Injury: Prevention, Recogntion, Evaluation **Credit Hours:** 3
- EXSC 4952 - Internship in Nutrition and Fitness **Credit Hours:** 3

## Total Credits: 18

# Biology, Minor

The biology minor provides students with broad training in the biological sciences. Students receive hands-on training in the methods and technology of the discipline, build their critical thinking and problem-solving skills, and participate in original research as part of the many laboratory and field courses offered.

## Student Learning Outcomes

- Students will describe and explain the content knowledge of biology (cells through ecosystems) through its fundamental theories, terminology, and principles.
- Students will access, assess, and use available sources of information (including primary sources and databases) in the biological sciences.
- Students will critically review, synthesize, interpret, and assess scientific data using a variety of methods and tools.

## Curriculum Requirements

### Required Courses

- BIOL 1400 - Introduction to Ecology and Evolution **Credit Hours:** 4
  **or**
- BIOL 1700 - Introduction to Organismal Biology **Credit Hours:** 4
  **or**
- BIOL 2248 - Principles of General Ecology **Credit Hours:** 4
- BIOL 1900 - Introduction to Cellular and Molecular Biology **Credit Hours:** 4
- BIOL 2202 - Genetics **Credit Hours:** 4

### Electives

6-8 Required Credits from the following:

Select any two 3000 or 4000 level PLE, BIOL, FWSC courses with permission of minor advisor

## Total Credits: 18-20

# Chemistry, Minor

The chemistry minor provides students with broad training in chemistry. Students receive hands-on training in the theory, techniques, and technology of the discipline to develop critical thinking and problem-solving skills common to the natural sciences.

## Student Learning Outcomes

- Apply theoretical knowledge of chemistry.
- Develop laboratory knowledge and skills while sustaining a commitment to safety.
- Use technology to obtain, utilize, and communicate chemical information.

## Curriculum Requirements

### Required Courses

Required Chemistry Introductory-level Courses (8 credits)

- CHEM 1108 - General Chemistry I **Credit Hours:** 4
- CHEM 1128 - General Chemistry II **Credit Hours:** 4

Required Chemistry Foundation-level Course (4 credits)

- CHEM 2200 - Organic Chemistry I **Credit Hours:** 3
  **and**
- CHEM 2205 - Organic Chemistry I Laboratory **Credit Hours:** 1

**OR**

- CHEM 3400 - Quantitative Chemical Analysis **Credit Hours:** 3
  **and**
- CHEM 3405 - Quantitative Chemical Analysis Laboratory **Credit Hours:** 1
  **or**
- CHEM 3415 - Intermediate Chemistry II Lab **Credit Hours:** 1

Elective Chemistry Foundation/Advanced-level Courses (7+ credits)
Any combination of courses above the CHEM2200+ level,* Combination of credits must include 6+ credits in lecture courses and 1+ credit(s) in laboratory courses.

*CHEM2010 and CHEM3010 courses do not qualify for credits in the chemistry minor.

## Total Credits: 19+

# Climate Change, Minor

The minor in Climate Change is designed to introduce the student to the science of climatology and its application to global climate change, including the knowledge and skills required to understand the Earth climate system, its history, processes, and impacts of climate change on the environment and society. A Minor in Climate Change will enable students from any discipline to broaden their education, and skill set related to impacts of climate change, and will be a valuable credential for students in a variety of Major academic programs, including Education, Business, History, Chemistry, Biology, and Pre-Law, among others.

## Student Learning Outcomes

Students are required to demonstrate the:

- Ability to apply the principles of climatology to analyze problems related to climate change
- Ability to design and/or conduct experiments and/or observations using principles of meteorology and climate science
- Ability to properly analyze and interpret data and make meaningful comparisons to current earth science related issues

## Curriculum Requirements

### Required Courses

- ATMS 1100 - Introduction to Weather and Climate **Credit Hours:** 4
- ATMS 1700 - Climate Change I **Credit Hours:** 3
- ATMS 2700 - Climate Change II **Credit Hours:** 3

### Electives

3 Credits Required - Select From:

- ATMS 3200 - Environmental Instrumentation and Measurement **Credit Hours:** 3
- ATMS 3650 - Radar and Satellite Meteorology **Credit Hours:** 3

- ATMS 4100 - Synoptic Meteo & Climatology **Credit Hours:** 4
- ATMS 4300 - Paleoclimatology **Credit Hours:** 3
- ATMS 4400 - Climate Risk Assessment **Credit Hours:** 3

Total Credits: 19-20

# Communication Sciences and Disorders, Minor

The minor in Communication Sciences and Disorders (CSD) is offered by the Department of Communication Sciences and Disorders in the College of Health Sciences. The minor can complement many academic majors and provide students from various majors (such as allied healthcare, education, psychology, social work, and special education) with basic knowledge related to communication and swallowing disorders. The CSD minor may assist students from various majors to be better equipped to assist individuals with communication disorders.

## Student Learning Outcomes

The student will:

- Explain and apply knowledge of the developmental norms for speech/language acquisition.
- Explain and apply knowledge of the theoretical and scientific foundations of CSD.
- Explain and apply knowledge of speech, language, and hearing disorders across the lifespan.
- Describe how individual, cultural, and linguistic differences contribute to understanding of language and communication.
- Apply critical thinking, problem solving and logical reasoning skills to topics in CSD.

## Curriculum Requirements

### Core Courses

- CSD 1010 - Introduction to Communication Disorders **Credit Hours:** 3
- CSD 1500 - Speech & Language Development **Credit Hours:** 3
- CSD 2100 - Introduction to Audiology **Credit Hours:** 3
- CSD 3200 - Child Language Disorders **Credit Hours:** 3

### Electives

6 Credits Required - Select From:

- CSD 2700 - Phonetics **Credit Hours:** 3
- CSD 3000 - Anatomy and Physiology of Speech and Hearing **Credit Hours:** 3
- CSD 3100 - Speech Science **Credit Hours:** 3
- CSD 3200 - Child Language Disorders **Credit Hours:** 3
- CSD 3300 - Speech and Fluency Disorders **Credit Hours:** 3
- CSD 3400 - Aural Rehabilitation **Credit Hours:** 3
- CSD 3500 - Adult Language Disorders **Credit Hours:** 3
- CSD 3600 - Communication for Individuals with Hearing Loss **Credit Hours:** 3
- CSD 4700 - Communication Disorders Across Cultures **Credit Hours:** 3

- CSD 4800 - Hearing Science **Credit Hours:** 3

## Total Credits: 18

# Communication, Minor

With a minor in Communication, you will focus on communication-related career ready skills to prepare for success in the workplace and everyday life. Adding value to any major, you will explore the areas of critical thinking, speaking, writing, creativity, and leadership skills through a series of theoretical and hands-on courses. A wide variety of course options allow students to focus their minor to best meet their unique goals.

## Student Learning Outcomes

- Use communication to inform, direct, persuade, and inspire others
- Apply research and analysis skills to write in forms and styles for communication professions, audiences, and purposes they serve
- Integrate and apply practical communication skills and knowledge in critical thinking and creative problem-solving
- Practice effective and ethical communication in a diverse global society

## Curriculum Requirements

### Required Courses

3 Credits Required - Select From:

- COMJ 1010 - Public Speaking **Credit Hours:** 3
- COMJ 1210 - Civil Discourse & Difficult Conversations **Credit Hours:** 3

3 Credits Required - Select From:

- COMJ 1101 - Exploring Human Communication **Credit Hours:** 3
- COMJ 1106 - Exploring Strategic Communication **Credit Hours:** 3
- COMJ 1107 - Exploring Mass Media **Credit Hours:** 3
- Any COMJ 1101-1108 Exploring Communication topics

6 Credits Required - Select From:

- Any 2 COMJ courses at the 1000-level or above

6 Credits Required - Select From:

- Any 2 COMJ courses at the 3000-level or above

## Total Credits: 18

# Computer Information Systems, Minor

This undergraduate minor combines knowledge of leading-edge information technologies and systems methodologies with an understanding of the evolving needs of today's dynamic business environment. The program provides

fundamentals courses to develop analytical and programming skills required to analyze and document system requirements and to design, develop and implement information solutions. The program should be of interest to students who wish to consider the use and development of information systems in their own professional disciplines.

## Student Learning Outcomes

- Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
- Design a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
- Implement and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.

## Admission Requirements

GPA : no restrictions or grade requirement to start the program

A maximum of 9 credits will be allowed to be shared between a major and minor.

## Curriculum Requirements

### Required Courses

Required Courses from CIS Core (19 credits)

- CMIS 1100 - Introduction to Information Systems **Credit Hours:** 3
- CMIS 1200 - Application Programming I **Credit Hours:** 3
- CMIS 2200 - Application Programming II **Credit Hours:** 3
- CMIS 3125 - Systems Analysis & Design **Credit Hours:** 3
- CMIS 3150 - Database Design & Modeling **Credit Hours:** 3
- CMIS 3250 - CISCO CCNA I **Credit Hours:** 0 TO 4

Elective (2-3 credits) - any one of the following

- CMAC 2000 - Introduction to Cybersecurity **Credit Hours:** 3
- CMIS 3500 - Web Programming I **Credit Hours:** 3
- CMIS 3200 - Database Application Programming **Credit Hours:** 3
- CMIS 4950 - CIS Internship **Credit Hours:** 0 TO 15
- CMIS 4250 - Applications of Machine Learning and Deep Learning **Credit Hours:** 3
- CMIS 3600 - Systems Project Management **Credit Hours:** 3

## Total Credits: 21

# Computer Science, Minor

The Computer Science minor provides students the opportunity to cover fundamental concepts in computer science, computational problem solving, and programming.

## Student Learning Outcomes

- Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
- Apply computer science theory and software development fundamentals to produce computing-based solutions.
- Implement a computing-based solution to meet a given set of computing requirements.

## Admission Requirements

GPA (to start or complete): 2.00

## Curriculum Requirements

### Required Courses

Core Courses: (12 credits)

- CMSC 1200 - Problem Solving and Programming Constructs **Credit Hours:** 3

- CMSC 1240 - Computer Programming I **Credit Hours:** 3
  **OR**
- CMAC 1240 - Computer Programming I **Credit Hours:** 3

- CMSC 2040 - Object-Oriented Programming **Credit Hours:** 3
- CMSC 3040 - Data Structures **Credit Hours:** 3

Programming Languages: (3 credits)

- CMSC 3320 - Technical Computing Using Java **Credit Hours:** 3
- CMSC 3340 - COBOL **Credit Hours:** 3
- CMSC 3360 - Fortran **Credit Hours:** 3
- CMSC 3380 - Python **Credit Hours:** 3

Advanced Elective: (6 credits)

- CMSC 3100 - Assembly **Credit Hours:** 3
- CMSC 3140 - Analysis of Algorithms **Credit Hours:** 3
- CMSC 3180 - Data Communication and Networking **Credit Hours:** 3
- CMSC 3240 - Computer Architecture **Credit Hours:** 3
- CMSC 3700 - 2D Game Programming **Credit Hours:** 3
- CMSC 3720 - 3D Game Programming **Credit Hours:** 3
- CMSC 3780 - Computer Graphics **Credit Hours:** 3
- CMSC 4000 - Operating Systems **Credit Hours:** 3
- CMSC 4120 - Parallel Processing **Credit Hours:** 3
- CMSC 4200 - Artificial Intelligence **Credit Hours:** 3

## Total Credits: 21

# Creative Writing, Minor

A minor in creative writing allows students to compile a portfolio of original writing in a variety of literary genres. By completing workshop courses at the introductory and advanced levels, students will practice the techniques common to all good writing, apply a variety of styles and approaches unique to individual genres, situate their creative texts in a larger literary tradition, and deepen their experience of writing as an artistic discipline.

## Student Learning Outcomes

- Make appropriate choices regarding form, diction, style, structure, and mechanics to produce compelling literature that ruptures, or aligns with, the conventions of a chosen literary genre.
- Critically read and analyze "mentor" texts in a variety of literary genres to acquire an understanding of successful creative writing technique.
- Develop a critical and theoretical vocabulary to assess creative texts.
- Develop an understanding that original literature emerges from a complex matrix of social, historical, and aesthetic contexts.
- Compile a revised portfolio of creative work that can help prepare alumni for the rigors of graduate study or professional employment in the fields of writing, editing, or publishing.

## Admission Requirements

Prerequisite: ENGL 1200

## Curriculum Requirements

### Required Courses

- ENGL 2400 - Introduction to Creative Writing **Credit Hours:** 3

### Intermediate Writing Courses

Choose three courses from (one genre can be repeated once):

- ENGL 3400 - Studies in Poetry Writing **Credit Hours:** 3
- ENGL 3410 - Studies in Fiction Writing **Credit Hours:** 3
- ENGL 3420 - Studies in Nonfiction Writing **Credit Hours:** 3
- ENGL 3430 - Studies in Screenwriting **Credit Hours:** 3
- ENGL 3440 - Studies in Drama Writing **Credit Hours:** 3
- ENGL 3450 - Studies in Graphic Novel Writing **Credit Hours:** 3

### Additional Writing Courses

Choose one course from:

- ENGL 2205 - Writing in the Genres **Credit Hours:** 3
- ENGL 2270 - Digital Storytelling **Credit Hours:** 3
- ENGL 4000 - Publishing Workshop **Credit Hours:** 3
- ENGL 4200 - Writing, Editing & Style **Credit Hours:** 3

- Additional 3400-level Creative Writing course

### Advanced Writing Course

- ENGL 4400 - Studies in Advanced Creative Writing **Credit Hours:** 3

## Total Credits: 18

# Criminal Justice, Minor

The General Criminal Justice minor program is designed to provide non-criminal justice majors with a foundational understanding of the criminal justice system and its functions.

There are two core courses, CRJ 1000, Introduction to Criminal Justice, and CRJ 3750, Substantive Criminal Law, and students will have the opportunity to take specialized courses in areas such as General Criminal Justice, Criminology, Forensic Investigation/ Cyber Forensics, Homeland International Security and Law and Justice, allowing students to choose courses that align with their interests.

This minor program prepares students for various criminal justice careers by providing foundational understanding and specialized skills in their chosen area.

## Student Learning Outcomes

- Explore the essential functions and processes of the criminal justice system.
- Develop an understanding of the principles of criminal law and its application in the justice system.
- Gain critical thinking and problem-solving skills related to criminal justice and apply these skills in real-world situations.
- Prepare for a range of careers in criminal justice or related fields, such as law enforcement, probation and parole, forensic investigation, cyber forensics, and homeland security, by acquiring knowledge and skills relevant to the area.

## Curriculum Requirements

### Core Courses

- CRJ 1000 - Intro to Criminal Justice **Credit Hours:** 3
- CRJ 3750 - Substantive Criminal Law **Credit Hours:** 3

### Free Electives

- The remaining 15 credits (five courses) are any CRJ course of the student's choosing as long as at least three of the remaining five courses are at the 3000-4000 level.

## Total Credits: 21

# Deaf Studies, Minor

The minor in Deaf Studies provides students with a detailed view of persons who have hearing loss. This cluster of courses examines the development of the sense of hearing through adulthood and the ramifications of hearing loss on development, language choice, academic achievement, identity, and adult life. The minor also emphasizes a cultural view of Deafness that includes Deaf literature, history, and American Sign Language. In addition, students will gain an awareness of the various settings and fields where people who are Deaf or hard of hearing would be encountered.

## Student Learning Outcomes

The student will:

- Describe speech and language development in hearing and deaf children
- Identify various methods of manual and oral communication
- Display understanding of types and severity of hearing loss
- Compare and contrast methods of amplification and aural rehabilitation techniques
- Describe the nature and structure of language through comparisons of ASL and English
- Use and comprehend American Sign Language texts in a variety of topics and settings
- Engage in social and academic conversations in American Sign Language, both expressively and receptively in a variety of settings
- Describe how knowledge of the Deaf World (visual learning, visual language, and Deaf art forms) can contribute to a better understanding of the human condition, science, and technology
- Identify the distinctive viewpoints that are illuminated by the unique modality of American Sign Language, Deaf art forms, and the distinct perspectives of the Deaf world

## Curriculum Requirements

### Required Courses

18 Credits Required (Up to 9 credits can be CSD for CSD majors, at least 6 credits must be advanced coursework) - Select From:

- CSD 1500 - Speech & Language Development **Credit Hours:** 3
- CSD 2100 - Introduction to Audiology **Credit Hours:** 3
- CSD 3400 - Aural Rehabilitation **Credit Hours:** 3
- CSD 3600 - Communication for Individuals with Hearing Loss **Credit Hours:** 3
- CSD 4800 - Hearing Science **Credit Hours:** 3
- EDHH 1000 - American Sign Language and Deaf Culture I **Credit Hours:** 3
- EDHH 1200 - Introduction to Deaf Education **Credit Hours:** 3
- EDHH 2000 - American Sign Language and Deaf Culture II **Credit Hours:** 3
- SPED 1050 - Foundations of Special Education **Credit Hours:** 3

## Total Credits: 18

# Digital Marketing, Minor

This minor provides students with an introduction to the digital marketing discipline. It covers a broad range of strategies and quantitative topics directly pertaining to digital marketing.

## Student Learning Outcomes

- Demonstrate knowledge and application of digital marketing and omnichannel concepts, tools, and practices by applying relevant marketing mix and interpretation of internal and external factors.
- Demonstrate critical thinking skills needed for researching customer needs, building relevant digital marketing strategies, and tracking metrics to measure customer engagement and the effectiveness of digital marketing strategies.
- Apply cultural competence for evaluating digital ethical issues in dynamic globalized digital markets.
- Effectively communicate digital components in oral, written, visual, and digital forms to an intended audience.

## Curriculum Requirements

### Required Courses from Business Core

- BSAD 1000 - Introduction to Business **Credit Hours:** 3
- MKTG 3000 - Principles of Marketing **Credit Hours:** 3
- ECON 1000 - Elements of Economics **Credit Hours:** 3

### Required Courses

- MKTG 3800 - Social Media Marketing **Credit Hours:** 3
- MKTG 4680 - Digital Retailing **Credit Hours:** 3
- MKTG 4910 - Digital Marketing and Analytics **Credit Hours:** 3

### Elective

- Select any course from the marketing menu of MKTG 3000 or higher - **Credit Hours:** 3

## Total Credits: 21

# Digital Media Technology, Minor

The Minor in Digital Media Technology provides key content in the basics of digital and print media applications. It includes skill development and experience using the major industry recognized Adobe software applications. It is applicable to many majors to improve software skills and provide more individual marketability.

## Student Learning Outcomes

- Students will be able to evaluate trends, techniques, and technologies in printing and digital industries.
- Students will be able to evaluate principles of design and layout.
- Students will be able to design multimedia elements for printing and digital media.

## Admission Requirements

Majors not permitted to get this minor

## Curriculum Requirements

### Required Courses

- DGMT 1000 - Foundations of Print Media **Credit Hours:** 3
- DGMT 1800 - Foundations of Digital Media **Credit Hours:** 3
- DGMT 2250 - Digital Page Layout **Credit Hours:** 3
- DGMT 2400 - Vector Based Graphics **Credit Hours:** 3
- DGMT 2500 - Digital Imaging **Credit Hours:** 3

### Electives

Any one of the following (maintaining prerequisite requirements)

- DGMT 2000 - Print Media Production Processes **Credit Hours:** 3
- DGMT 2200 - Digital Photography **Credit Hours:** 3
- DGMT 3120 - Spec Graphics Print Techniques **Credit Hours:** 3
- DGMT 3200 - Digital Video **Credit Hours:** 3
- DGMT 3300 - Package Printing Processes **Credit Hours:** 3
- DGMT 3310 - Web Publishing **Credit Hours:** 3
- DGMT 3400 - 3D Computer Animation **Credit Hours:** 3
- DGMT 3500 - Motion Graphics **Credit Hours:** 0 TO 3

## Total Credits: 18

# Earth and Space Science, Minor

The minor in Earth and Space Sciences is designed to introduce the student to the fundamental knowledge base, skill set and techniques related to

understanding Earth system history, processes and interactions. The minor includes broad exposure to the physical spheres of the Earth - land,

water, and air - as well as approaches used to understand, assess and solve basic Earth and Space Science problems.

## Student Learning Outcomes

Students are required to demonstrate:

- Knowledge, understanding and use of the principles of geology, oceanography, meteorology, climate science, and astronomy
- Ability to use reasoning and logic to define a problem in terms of principles of geology, oceanography, meteorology and climate science, and astronomy
- Ability to design and/or conduct experiments and/or observations using principles of geology, oceanography, meteorology and climate science, and astronomy
- Ability to properly analyze and interpret data and make meaningful comparisons to current earth science related issues

## Curriculum Requirements

### Required Courses

- ATMS 1100 - Introduction to Weather and Climate **Credit Hours:** 4
- GEOL 1250 - Stellar Astronomy **Credit Hours:** 3
- GEOL 1500 - Dynamic Earth **Credit Hours:** 4

### Electives

Selected from any Astronomy (PHYS 1200 or PHYS 1220), Geology (GEOL prefix) or Atmospheric Science (ATMS prefix) course. Six credits must be advanced with a course number of 3000 or higher.

## Total Credits: 18

# Economics, Minor

Economics is the social scientific study of choices. Students learn how to look at a complex world and make sense of the wide variety of behaviors they observe. In the Economics Minor students master the analytical skills used to understand how households, firms, and governments make economic decisions, comparing costs and benefits in an effort to maximize their own well-being or social objectives. Students from any major will find relevant applications of economics concepts and theories and improve their critical thinking and analytical reasoning abilities by completing the Economics Minor.

## Student Learning Outcomes

- Apply concepts and methods from micro- and macroeconomics to solve problems related to business, public policy, or international trade.
- Analyze individual, firm, and policy choices by applying the economic way of thinking.
- Find and interpret economic information and data.

## Curriculum Requirements

- MATH 1220 - College Algebra **Credit Hours:** 3
- ECON 2100 - Principles of Microeconomics **Credit Hours:** 3
- ECON 2200 - Principles of Macroeconomics **Credit Hours:** 3

- ECON 3100 - Intermediate Microeconomics **Credit Hours:** 3
  **OR**
- ECON 3200 - Intermediate Macroeconomics **Credit Hours:** 3

- ECON courses 3000+ - **Credit Hours**: 9 (no more than 3 credits in ECON 4950 Economics Internship)

## Total Credits: 21

# Event Planning and Management, Minor

Event planners are in demand to organize and implement successful gatherings of all sizes, from intimate weddings to stadium concerts.

PennWest interdisciplinary event planning and management minor provides the event-planning essentials to complement a variety of interdisciplinary degrees.

## Student Learning Outcomes

- Display leadership, professionalism, and career readiness skills through experiential learning.
- Effectively communicate to diverse audiences, purposes, and situations in a variety of events, settings, and contexts.
- Design creative event solutions within the interconnected tourism, hospitality, entertainment, education, sport, cultural, heritage, and recreation sectors.

## Curriculum Requirements

### Required Courses

- EVPM 2350 - Special Event Management in Recreation Settings **Credit Hours:** 3
- EVPM 3330 Meeting Events and Conventions - **Credit Hours:** 3
- EVPM 4120 - Recreation Program Planning and Evaluation **Credit Hours:** 3

### Electives

Choose 3 courses from:

- BSAD 1000 - Introduction to Business **Credit Hours:** 3
- HOSP 1001 - Hospitality Operations and Management **Credit Hours:** 3
- HOSP 2777 - Casinos and Gaming Entertainment **Credit Hours:** 3
- HOSP 3500 - Hotels Resorts Lodging **Credit Hours:** 3
- COMJ 2201 - Business & Professional COM **Credit Hours:** 3
- COMJ 3826 - Public Relations **Credit Hours:** 3
- COMJ 3846 - Promotional Events & Publicity **Credit Hours:** 3
- COMJ 3866 - Personal Selling **Credit Hours:** 3
- SPT 3150 - Facility and Event Management **Credit Hours:** 3
- THEA 1500 - Introduction to Theatrical Design **Credit Hours:** 3
- EVPM 4950 - Internship for the Department of Management and Marketing Programs **Credit Hours:** 1 TO 12
- Any 3000-4000 BSAD, EVPM, HOSP, HRMG, MKTG, MGMT, RECR, or TOUR (3 credits max)

## Total Credits: 18

# Finance, Minor

The Minor in Finance covers topics, including financial management, investments, and various additional elements of finance at a high cognitive level and prepares students, who elect to take SIE Exam Prep, to take the SIE® Exam. BSBA Finance & Personal Financial Planning Concentration students are not eligible to enroll in this minor.

# Student Learning Outcomes

- Integrate financial theories, methods, and concepts to achieve financial goals.
- Evaluate how to best maximize efficiency through effective risk management, capital allocation, and management of resources.
- Develop and communicate sound financial recommendations through an analysis of financial and market related information.

# Admission Requirements

All students, except for those enrolled in the BSBA Finance & Personal Financial Planning major, are eligible to enroll in this minor.

# Curriculum Requirements

## Required Courses

Required Math Course (3 Credit Hours) - Choose One of the Following Courses

- MATH 1220 - College Algebra **Credit Hours:** 3
(OR HIGHER MATH COURSE)
- QBA 1000 - QBA 1: Optimization **Credit Hours:** 3

Required Finance Courses (6 Credit Hours)

- FINA 3000 - Financial Management **Credit Hours:** 3
- FINA 4000 - Investments **Credit Hours:** 3

## Electives

Required Economics Elective (3 Credit Hours) - Choose One of the Following Courses

- ECON 1000 - Elements of Economics **Credit Hours:** 3
- ECON 2100 - Principles of Microeconomics **Credit Hours:** 3
- ECON 2200 - Principles of Macroeconomics **Credit Hours:** 3

Required Finance Electives (6 Credit Hours) - Choose Two of the Following Courses

- FINA 3200 - Financial Institutions & Markets **Credit Hours:** 3
- FINA 3500 - Risk Management **Credit Hours:** 3
- FINA 4200 - Securities Industry Essential Exam Preparation **Credit Hours:** 3

Required Accounting/Finance/Personal Financial Planning Elective (3 Credit Hours) - Choose One of the Following Courses

- ACC 3200 - Federal Income Tax I **Credit Hours:** 3
- PFPL 1010 - Wealth Building and Personal Financial Planning **Credit Hours:** 3

- PFPL 4300 - Retirement Planning **Credit Hours:** 3
- PFPL 4400 - Estate Planning **Credit Hours:** 3
  Or Any Course with a FINA Prefix Not Taken as a Required Course or Required Finance Elective

## Total Credits: 21

# Fisheries and Wildlife Biology, Minor

The Fisheries and Wildlife Science minor at PennWest provides a broad-based curriculum that introduces a student to the various techniques and philosophies of fisheries and wildlife conservation and management. Almost all courses include a laboratory portion where a student will study the practical application of scientific theories and learn how to apply the scientific method with inquiry-based investigations.

## Student Learning Outcomes

- Apply socio-cultural, economic, and ecological knowledge to develop, implement, and assess fisheries and wildlife conservation and management strategies.
- Apply the scientific method as a process of inquiry and use the method in the process of decision-making.
- Apply quantitative tools and field techniques to address fisheries and wildlife conservation and management strategies.

## Curriculum Requirements

### Required Courses

- BIOL 1700 - Introduction to Organismal Biology **Credit Hours:** 4
- BIOL 2248 - Principles of General Ecology **Credit Hours:** 4

4 credits from one of the following:

- FWSC 4423 - Wildlife Management Techniques **Credit Hours:** 0 TO 4
- FWSC 4424 - Fisheries Management **Credit Hours:** 4

3-4 credits from one of the following:

- BIOL 3337 - Ornithology **Credit Hours:** 0 TO 4
- BIOL 3820 - Vertebrate Zoology **Credit Hours:** 3
- BIOL 4435 - Ichthyology **Credit Hours:** 0 TO 4
- BIOL 4470 - Field Zoology and Systematics **Credit Hours:** 3
- BIOL 4473 - Freshwater Ecology **Credit Hours:** 4
- BIOL 4740 - Marine and Freshwater Invertebrates **Credit Hours:** 3
- BIOL 4745 - Entomology **Credit Hours:** 0 TO 4
- BIOL 4750 - Terrestrial Invertebrates **Credit Hours:** 3
- BIOL 4775 - Mammalogy **Credit Hours:** 0 TO 4
- BIOL 4810 - Herpetology **Credit Hours:** 3

3-4 credits from the following:

- BIOL 3707 - Plant Taxonomy **Credit Hours:** 0 TO 4
- BIOL 3835 - Plant Physiology **Credit Hours:** 0 TO 4
- BIOL 4414 - Plant Ecology **Credit Hours:** 4
- BIOL 4442 - Dendrology **Credit Hours:** 4
- BIOL 4475 - Wetlands Ecology **Credit Hours:** 4
- BIOL 4770 - Forest Ecology and Management **Credit Hours:** 4
- BIOL 4800 - Vegetation Sampling and Analysis **Credit Hours:** 4
- BIOL 4700 - Mycology **Credit Hours:** 0 TO 4
- GEOG 4130 - Forest Geography and Conservation **Credit Hours:** 3

## Total Credits: 18-20

# Forensic Accounting, Minor

In the forensic accounting minor, students will develop the skills to identify and respond to fraud risk within an organization. Furthermore, students will obtain the ability to design, conduct and interpret basic data driven tests in a fraud investigation and effectively communicate the results of those tests. Given the prevalence of fraud in the global environment, students of any major will benefit from this minor.

## Student Learning Outcomes

- Identify fraud risk factors and explain how those risk factors impact the risk of financial fraud.
- Evaluate the effectiveness of internal controls within an organization.
- Communicate findings in a professional, appropriate manner using various forms of media and technology.

## Curriculum Requirements

### Required Courses

- ACC 2000 - Financial Accounting **Credit Hours:** 3
- ACC 3100 - Intermediate Accounting I **Credit Hours:** 3
- ACC 4400 - Auditing **Credit Hours:** 3
- ACC 3500 - Intro to Accounting Fraud Investigation **Credit Hours:** 3
- ACC 4500 - Advanced Accounting Fraud Investigation **Credit Hours:** 3
- MGMT 4020 - Hackers, Snoops & Con Artists: Managing legal risks with regard to privacy and cybersecurity **Credit Hours:** 3
- ECON 4520 - Forensic Economics and Data Analysis **Credit Hours:** 3

## Total Credits: 21

# Forensic Investigation/ Cyber Forensics, Minor

The Forensic Investigation/ Cyber Forensics minor program offers a comprehensive study of physical evidence with a strong emphasis on applying forensic sciences. It gives students a thorough understanding of the use of technologies, laws, and procedures associated with identifying, collecting, analyzing, and presenting traditional and digital evidence.

This minor program provides advanced, hands-on training in forensic evidence methodologies, crime scene investigation techniques, cyber security, cybercrime investigation, and cutting-edge computer forensics tools. Through this minor program, students will gain a deep understanding of the forensic investigation process, including the collection, preservation, and analysis of evidence, as well as the application of scientific and legal principles to the investigation of crimes. This minor program will prepare students for careers in forensic science, crime scene investigation, law enforcement, cyber security, and related fields.

## Student Learning Outcomes

- Understand in depth how forensic sciences play a significant role in crime scene investigation and other scientific applications.
- Explore various disciplines and methodologies in the forensic sciences and identify the nature of crime scene evidence and the application of the technology associated with its forensic identification.
- Apply cyber forensics to practical investigations.
- Analyze the techniques for the collection and analysis of digital evidence.

## Curriculum Requirements

### Required Courses

- CRJ 1050 - Intro to Forensic Science **Credit Hours:** 3
- CRJ 3750 - Substantive Criminal Law **Credit Hours:** 3
- CRJ 3800 - Crime Scene Imaging **Credit Hours:** 3
- CRJ 4050 - Cyber Security **Credit Hours:** 3
- CRJ 4850 - Forensic Law **Credit Hours:** 3
- CRJ 4870 - Computer Forensics **Credit Hours:** 3
- CRJ 4880 - Cyber Crime investigations **Credit Hours:** 3

## Total Credits: 21

# General Business, Minor

The general business minor is intended for those in any non-business major who wish to have a broad, basic knowledge of foundational business disciplines. This minor is the ideal companion to those majoring in fields such as art, music, computer science, engineering, biology, or sport management where business fundamentals will be needed in professional life.

## Student Learning Outcomes

- Demonstrate foundational knowledge in core business areas.
- Display awareness of the business need for ethical, sustainable, inclusive, and collaborative leadership practices including a global perspective.
- Create and communicate business solutions.

## Curriculum Requirements

## Required Courses from Business Core

- BSAD 1000 - Introduction to Business **Credit Hours:** 3 (nonbusiness major)*

- ECON 1000 - Elements of Economics **Credit Hours:** 3
  **OR**
- ECON 2100 - Principles of Microeconomics **Credit Hours:** 3
  **OR**
- ECON 2200 - Principles of Macroeconomics **Credit Hours:** 3

- ACC 2000 - Financial Accounting **Credit Hours:** 3

## Required Courses

- MGMT 3000 - Principles of Management **Credit Hours:** 3

## Electives

- Choose three 3XXX- or 4XXX- Level Business (ACCT/BSIN/BSAD/BLAW/ECON/ENTR/FINA/HRMG/MGMT/MKTG) Electives - **Credit Hours**: 9

**No more than one course from each business discipline. These courses should not have been used to meet the requirements of major/concentration. No more than 3 credits can be business writing or internship courses.**

(Note: MGMT 4800: Sustainability Scholarship, MGMT 4100 Management Research, and MKTG 4610 Marketing Research can be used to fulfill the writing intensive requirement)

## Program Notes

*May be substituted with an Upper-Level Business (ACCT/BSAD/ECON/FINA/HRMG/MGMT/MKTG) Elective with Business Department advisor permission

## Total Credits: 21

# Geography, Minor

Geography is an interdisciplinary field of study that emphasizes a spatial approach to understanding human & physical systems and the natural world. In a nutshell, Geography is interested in "What is where, and why?" The study of nearly anything in the world can benefit from a geographic perspective, which is what makes Geography an excellent choice for a Minor program of study.

The Geography Minor will provide students with practical knowledge and practical skills that are useful in many other major and minor programs, including Business, Education, Environmental Sciences, History, International Studies, Natural Sciences, World Languages and Cultures, Sociology, Tourism, and more. Furthermore, it can help a student into entry level positions for careers that are not currently Major Programs at PennWest, for example Urban and Regional Planning or Sustainable Development. Students of Geography find careers in all sectors of the economy, from local-to-federal government, business, industry, and with local-to-international non-profit organizations.

All students completing the Geography Minor must take three required introductory geography courses and an additional nine credit hours of geography elective courses from prefixes GEOG or GGIS. It is permissible to substitute a Language and Culture course for three of the Geography Electives credits.

## Student Learning Outcomes

- Demonstrate core knowledge of human and physical systems and the natural world.
- Master spatial analytic processes and decision-making, including map interpretation and use.
- Demonstrate intellectual and practical skills including critical thinking, geographic analyses, synthesis and problem solving.
- Demonstrate core knowledge of current global, social and environmental issues from a geographic perspective

## Curriculum Requirements

### Required Courses

- GEOG 1050 - People and the Planet: Geography in a Changing World **Credit Hours:** 3
- GEOG 1110 - World Geography **Credit Hours:** 3
- GGIS 1210 - Mapping our Environment **Credit Hours:** 3
  **or**
- GGIS 2100 - Geographic Information Systems **Credit Hours:** 3

### Electives

At least 6 credits should be 3000-4000 level coursework.

Three additional courses with GEOG or GGIS prefix.

Optional:

Substitute up to 3 credits of any ARAB, CHIN, FREN, SPAN, or WRLC course for one of the Geography Electives

## Total Credits: 18

# Geology, Minor

The minor in Geology provides an option for students in a variety of disciplines to expand their credentials through content knowledge in the sub-disciplines of Geology, including mineral, energy, and water resources, land use and development, and Earth history. Foundational coursework places Earth history in context with human issues and impacts. Advanced coursework allows students to target those areas especially relevant to their interests that will add to their marketability as scientists, entrepreneurs, and community leaders.

## Student Learning Outcomes

- Correlate Earth materials to basic landscape development and appropriate land use

- Make use of basic tools including maps to evaluate areas of resource availability, geological hazards, and land use opportunities and limitations
- Create conceptual models of surface and subsurface systems based on incomplete or limited data
- Contextualize Earth history with respect to human distribution and impacts and resource needs to predict the sustainability and resilience of the built environment

## Curriculum Requirements

### Core Courses

- GEOL 1500 - Dynamic Earth **Credit Hours:** 4
- GEOL 2010 - Principles of Earth History **Credit Hours:** 4

### Fundamentals Courses

3-7 Credits Required - Select 1 or 2 From:

- GEOL 3030 - Hydrology **Credit Hours:** 3
- GEOL 3100 - Applied Soil Science **Credit Hours:** 3
- GEOL 3200 - Geomorphology **Credit Hours:** 3
- GEOL 3300 - Mineralogy **Credit Hours:** 4

### Application/Advanced Courses

3-8 Credits Required - Select 1 or 2 From:

- GEOL 3500 - Geochemistry **Credit Hours:** 3
- GEOL 3600 - Geophysics **Credit Hours:** 3
- GEOL 3700 - Advanced Environmental Geology **Credit Hours:** 3
- GEOL 4100 - Field Methods in Geology **Credit Hours:** 3
- GEOL 4200 - Sedimentology and Stratigraphy **Credit Hours:** 4
- GEOL 4300 - Structural Geology **Credit Hours:** 4
- GEOL 4500 - Invertebrate Paleontology **Credit Hours:** 4
- GEOL 4700 - Regional Geology Field Experience **Credit Hours:** 3
- Or any one other GEOL prefix course

## Total Credits: 18

# Global Business, Minor

The Global Business minor provides students in any major the skills and perspective needed to succeed in a globalized economy. Through this minor students explore the theory and practical application of the production and sale of goods and services between countries, global issues in human resources, and the nuances, politics, and dynamics of doing business in a global economy. Regardless of a student's planned career path, an understanding of different countries and cultures is beneficial for success in today's globalized economy.  The cultural awareness and international perspective of the courses in the Global Business minor can complement any major.

## Student Learning Outcomes

- Apply the concepts, terminology, and models pertinent to international business analysis.
- Analyze the history and impacts of different cultural, legal, political, economic, regulatory, and social systems and contexts in which international businesses operate
- Use critical, integrative and evaluative thinking to apply quantitative methods in evaluating economic policies relevant to international business theory and practice.

## Curriculum Requirements

- BSAD 1000 - Introduction to Business **Credit Hours:** 3 (or any business core course)
- ECON 2100 - Principles of Microeconomics **Credit Hours:** 3
- ECON 2200 - Principles of Macroeconomics **Credit Hours:** 3
- ECON 4600 - Global Economic Perspectives **Credit Hours:** 3

Choose 9 credits from:

- ACC 4700 - International Accounting **Credit Hours:** 3 *
- BLAW 4410 - International Business Law **Credit Hours:** 3 *
- BSAD 4930 - Field Studies in Business **Credit Hours:** 3
- ECON 3395 - International Diplomacy: Analysis and Practicum **Credit Hours:** 3
- ECON 3600 - International Economics **Credit Hours:** 3
- ECON 3610 - Globalization and Chinaâ€™s Economic and Business Development **Credit Hours:** 3
- ECON 3650 - International Development **Credit Hours:** 3
- FINA 3600 - International Finance **Credit Hours:** 3
- HRMG 4600 - Global Talent Management **Credit Hours:** 3
- MGMT 4600 - International Business Management **Credit Hours:** 3 *
- MKTG 4690 - International Marketing **Credit Hours:** 3

- POLI 3300 - International Relations **Credit Hours:** 3 *
  **OR**
- POLI 3350 - Politics of the World Economy **Credit Hours:** 3 *

- TOUR 2050 - Geography of Tourism **Credit Hours:** 3

- ARAB 2001 - Intermediate Arabic I **Credit Hours:** 3
  *
  **OR**
- CHIN 2001 - Chinese Three **Credit Hours:** 3 *
  **OR**
- FREN 2001 - French Three **Credit Hours:** 3 *
  **OR**
- SPAN 2001 - Spanish III **Credit Hours:** 3 *
  (only one language course can be applied to the minor)

*These courses have prerequisites that are not included in the required courses for the minor

## Total Credits: 21

# Health Science, Minor

The Health Science Minor is for undergraduate students interested in the field of health and seeking to support their current major. This minor is particularly desirable to students preparing to pursue a health-related career. Health Science covers a broad range of disciplines from traditional to complementary and alternative medicine fields. The minor is comprised of 7 courses, to equal 21 semester hours in total.

## Student Learning Outcomes

- Literacy in the language of health professions.
- A strong depth and breadth of knowledge in health science disciplines.
- Analyze how evidence-based practice is applied to healthcare professions.

## Curriculum Requirements

- HLSC 1010 - Foundations of Health Science **Credit Hours:** 3
- HLSC 2250 - Medical Terminology **Credit Hours:** 2
- HLSC 2100 - Culturally Competent Community Health **Credit Hours:** 3
- HLSC 3100 - Special Populations and Pathology of Disease **Credit Hours:** 3
- HLSC 3600 - Holistic Medicine and Healthcare **Credit Hours:** 3
- HLSC 4250 - Health Science Capstone **Credit Hours:** 4
- HLSC 3150 - First Aid and Personal Safety **Credit Hours:** 3

## Total Credits: 21

# History, Minor

## Student Learning Outcomes

- Students graduating with a minor in History will demonstrate critical thinking skills in the historical method including the importance of primary sources, historical context, and cause and effect in a chronological sense.
- Students graduating with a minor in History will demonstrate appropriate writing skills to develop a well-supported historical argument with proper use of citations.
- Students graduating with a minor in History will examine various theoretical perspectives within the discipline and utilize accepted methodological approaches in their own writing.

## Curriculum Requirements

### Required Courses

9 credits of courses from the 1000 level

9 credits of courses from the 2000+ level

## Total Credits: 18

# Human Resource Management, Minor

The Human Resources Management (HRM) Minor is designed to give students the knowledge, skills, abilities, and others (KSAOs) needed to assume entry and higher levels of professional HRM in organizations of all sizes and industries. Recruitment, selection, onboarding, performance appraisals, compensation, benefits, motivation, safety and health, separation, unions, HR technologies, DEIB, and related topics are studied in this highly marketable minor.

## Student Learning Outcomes

- Demonstrate entry-level knowledge: a) the content and scope of the main subfunctions within HRM (e.g., selection, recruitment, training, development, performance evaluation, compensation, benefits, etc.); b) techniques and processes used by professionals in these positions; and c) the foundations and recent developments of the profession.
- Evaluate, implement, and customize products and services that automate or otherwise facilitate HRM subfunctions in a given organization.
- Demonstrate entry level knowledge and coordination procedures about strategic management, administration, operations, and regulations affecting HRM.

## Curriculum Requirements

### Required Courses

- BSAD 1000 - Introduction to Business **Credit Hours:** 3
- PSYC 1000 - Introduction to Psychology **Credit Hours:** 3
- HRMG 3000 - Principles of Human Resource Management **Credit Hours:** 3
- HRMG 4900 - Human Resource Management Capstone **Credit Hours:** 3

### Optional Courses

**9 Credits; choose 3 additional 3000+ level HRMG courses**

- HRMG 3100 - Compensation Management **Credit Hours:** 3
- HRMG 3200 - Labor Relations **Credit Hours:** 3
- HRMG 3520 - Human Resource Information Systems **Credit Hours:** 3
- HRMG 4600 - Global Talent Management **Credit Hours:** 3
- HRMG 3400 - Occupational Safety Management **Credit Hours:** 3
- HRMG 3630 - Diversity, Equity, and Inclusion at Work **Credit Hours:** 3
- HRMG 4750 - Employment Regulations **Credit Hours:** 3
- HRMG 4990 - SHRM-CP/SHRM-SCP Certification Preparation **Credit Hours:** 3
- HRMG 4950 - Internship for the Department of Management and Marketing Programs **Credit Hours:** 1 TO 12
  **or 2 HRMG courses at the 3000+ level as well as BSAD 3200 Business Ethics credits 3**

## Total Credits 21

# Hydrology, Minor

The minor in Hydrology provides an added credential for students interested in careers in water resources and environmental protection. Students gain content knowledge of the physical, chemical, and biological conditions of water resources, as well as the role humans play in affecting them. The Hydrology minor prepares students for work in

environmental protection and remediation, mineral and energy resource management, public policy and infrastructure, and hazard mitigation. The workforce demands in areas of water resources, especially in western Pennsylvania, are high and the Hydrology minor is a unique and recognizable addition to a resumé.

## Student Learning Outcomes

- Identify and quantify the reservoirs and transfer mechanisms of the Hydrologic Cycle.
- Define water availability and identify regions of the US and the world in particular distress related to hydrologic challenges of hazards, drought, and political/geographic inequity.
- Delineate watersheds, groundwatersheds, and wetlands and identify local or regional threats to those resources.
- Develop conceptual models of surface and groundwater systems and measure basic physical, chemical, and biological aspects of water systems to determine health of a watershed system.

## Curriculum Requirements

### Core Courses

- GEOL 1500 - Dynamic Earth **Credit Hours:** 4
- BIOL 1400 - Introduction to Ecology and Evolution **Credit Hours:** 4
- GEOL 3030 - Hydrology **Credit Hours:** 3
- GEOL 4030 - Groundwater Hydrology **Credit Hours:** 3

### Application/Advanced Courses

6-7 Credits Required - Select 2 From (Max 1 per prefix):

- ATMS 1700 - Climate Change I **Credit Hours:** 3
- GEOL 3100 - Applied Soil Science **Credit Hours:** 3
- GEOL 3500 - Geochemistry **Credit Hours:** 3
- GEOL 4600 - Watershed Evaluation and Management **Credit Hours:** 3
- BIOL 4473 - Freshwater Ecology **Credit Hours:** 4
- BIOL 4475 - Wetlands Ecology **Credit Hours:** 4
- GEOG 4110 - Geography of Water Resources **Credit Hours:** 3
- CHEM 2450 - Environmental Chemistry **Credit Hours:** 4
- CHEM 2200 - Organic Chemistry I **Credit Hours:** 3

## Total Credits: 20 to 21

# Literature and Culture, Minor

A student completing a literature minor will encounter readings covering the breadth and depth of literary writing. The student will be introduced to the relationships among art, history, and culture while developing specific skills in writing, analysis, and critical thinking.

## Student Learning Outcomes

The student will:

- Demonstrate practical knowledge of a broad range of literatures and theoretical perspectives as well as an in-depth knowledge of a particular area of study
- Conduct ethical research and analysis that executes critical and theoretical responses to literary and cultural topics and that demonstrates a working knowledge of conventions of professional literary scholarship
- Critically assess through written and oral communication how social difference, cultural constructs, and discourses of power shape the production and interpretations of texts

## Curriculum Requirements

### Required Courses

- ENGL 1900 - Introduction to English Studies **Credit Hours:** 3
- ENGL 2310 - American Literature Survey I **Credit Hours:** 3
  **and**
- ENGL 2315 - American Literature Survey II **Credit Hours:** 3
  **or**
- ENGL 2320 - British Literature Survey I **Credit Hours:** 3
  **and**
- ENGL 2335 - World Literature Survey II **Credit Hours:** 3

  **Any additional 2000 level literature course Credit hours 3**
  **Any two 3000 or 4000 level literature course Credit hours 6**

## Total Credits 18

# Management Information Systems, Minor

The minor in Management Information Systems (MIS) is designed for students in any field of study who are interested in leveraging technology to solve complex business challenges. While this minor does not focus on computer programming, it allows students to strategically apply emerging technology trends to enhance the way organizations innovate their products and services and embrace the way people work. Students who compliment their academic program with a minor in MIS are aligned to successfully interact as a liaison between core business functional areas and technical organizational units. The MIS Minor is a great option for non-business students who wish to add a business perspective to their program of study to bridge the gap between technical knowledge and core business functions.

## Student Learning Outcomes

- Identify current and emerging technologies and incorporate them into a business setting.
- Discuss the role and importance of Management Information Systems within a business and how they can assist an organization in reaching its strategic goals and success.

- Analyze an organization's management information systems and design solutions that align with the organization's goals.

Assessment: BSIN 4000 - Business Driven Mis:  Final written paper.

## Curriculum Requirements

### Required Courses

- BSIN 2000 - Management Information Systems **Credit Hours:** 3
- MGMT 3000 - Principles of Management **Credit Hours:** 3
- BSIN 3750 - Information Technology Ethics **Credit Hours:** 3
- BSIN 3850 - Healthcare Information Systems **Credit Hours:** 3
- BSIN 4000 - Business Driven Management Information Systems **Credit Hours:** 3
- MGMT 4500 - Supply Chain Management **Credit Hours:** 3

### Electives

3 Credits Required-Select From:

- BSIN 3210 - Accounting Information Systems **Credit Hours:** 3
- BSIN 4210 - Strategic Issues in Management Information Systems **Credit Hours:** 3
- HRMG 3520 - Human Resource Information Systems **Credit Hours:** 3

## Total Credits 21

# Managment, Minor

The management minor is intended for those in any business or non-business major who wish to have a deeper understanding of managing people and organizations. This minor is the ideal choice for those wishing to pursue an MBA with a focus on managing people.

## Student Learning Outcomes

- Demonstrate foundational knowledge in management (BULO1)
- Display awareness of managing ethical, sustainable, and inclusive organizations with an emphasis on and collaborative leadership practices (BULO3)
- Create and communicate management solutions (BULO4)

## Curriculum Requirements

### Required Courses

- BSAD 1000 - Introduction to Business **Credit Hours:** 3
  **or**
- MKTG 3000 - Principles of Marketing **Credit Hours:** 3

- ECON 1000 - Elements of Economics **Credit Hours:** 3
  **or**
- ECON 2100 - Principles of Microeconomics **Credit Hours:** 3
  **or**
- ECON 2200 - Principles of Macroeconomics **Credit Hours:** 3
- MGMT 3110 - Organizational Behavior **Credit Hours:** 3
- MGMT 3330 - Teamwork and Leadership **Credit Hours:** 3

## Electives

Upper-level MGMT/BSAD3200 Business Ethics -3 credits

Upper-level MGMT/HRMG -3 credits

Choose two 3XXX or 4XXX courses: Both in Managment or one in Human Resources management Electives - 6 credits

**These courses should not have been used to meet the requirements of major/concentration. No more than 3 credits can be business writing or internship courses**

(Note: MGMT 4800: Sustainability Scholarship and MGMT 4100 Management Research can be used to fulfill the writing intensive requirement)

(Note: Advanced-standing students taking MBA coursework through the accelerated program as part of their undergraduate degrees must coordinate course substitutions with both the MBA program director and with the management advisor)

## Total Credits: 21

# Marketing, Minor

This minor provides students an opportunity to receive a formal introduction to the marketing discipline. The curriculum will emphasize the breadth of the discipline and its' interdisciplinary impact on the other core business disciplines.

## Student Learning Outcomes

- Demonstrate proficiency in foundational concepts of functional business areas.
- Exhibit critical thinking skills for the collection, analysis and application of data and concepts.
- Display cultural competence for ethical, sustainable, and inclusive practices including a global perspective.
- Effectively communicates in oral, written, visual, and digital forms.

## Curriculum Requirements

## Required Courses from Business Core

- BSAD 1000 - Introduction to Business **Credit Hours:** 3 (Non-BSBA Students)
  **OR**
- MGMT 3000 - Principles of Management **Credit Hours:** 3

- MKTG 3000 - Principles of Marketing **Credit Hours:** 3

- ECON 1000 - Elements of Economics **Credit Hours:** 3
  **OR**
- ECON 2100 - Principles of Microeconomics **Credit Hours:** 3

## Required Courses

- MKTG 3510 - Advertising Management **Credit Hours:** 3
- MKTG 4010 - Marketing Management **Credit Hours:** 3
- MKTG 4210 - Consumer Behavior **Credit Hours:** 3

## Elective

Select any course from the marketing menu of MKTG 3000 or higher - **Credit Hours:** 3

## Total Credits: 21

# Mathematics, Minor

The Minor in Mathematics provides students a foundation in quantitative reasoning skills that would be useful in a variety of other majors and career choices. It includes a traditional overview of calculus, an introduction to higher level mathematical reasoning, and, finally, the flexibility to complete elective upper-level coursework that aligns to the student's interest in theoretical mathematics, applied mathematics, or statistics.

## Student Learning Outcomes

- Demonstrate proficiency in mathematics content and skills.
- Effectively formulate and communicate proofs in mathematics.
- Interpret and solve mathematical problems.
- Read and evaluate the validity of a mathematical argument.

## Curriculum Requirements

## Required Courses

- MATH 2410 - Analytical Geometry and Calculus I **Credit Hours:** 4
- MATH 2420 - Analytical Geometry and Calculus II **Credit Hours:** 4
- MATH 3000 - Foundations of Mathematics **Credit Hours:** 3

**or**

- MATH 1510 - Discrete Structures **Credit Hours:** 3
  7 additional hours in MATH courses numbered 3000 or above or any STAT 3010 or above.

## Total Credits: 18

# Nutrition and Fitness, Minor

The nutrition and fitness minor promotes physical activity and a healthy lifestyle while providing the students with an opportunity to pursue both their professional and personal interests.

## Student Learning Outcomes

Upon completion of the nutrition and fitness minor, successful students will:

- Describe and apply the principles and best practices related to nutrition and fitness.
- Develop programs and systems that promote personal growth and a healthy lifestyle.
- Be prepared for a professional certification within the field of nutrition and fitness
- Illustrate professional dispositions associated with entry-level nutrition and fitness professionals.

## Curriculum Requirements

### Required Courses

- EXSC 1100 - Introduction to Fitness **Credit Hours:** 3
- EXSC 2260 - Sports Nutrition **Credit Hours:** 3
- EXSC 3233 - Fitness for Wellness **Credit Hours:** 3

### Electives

Choose 3 from the following:

- EXSC 2286 - Cardiovascular and Resistance Training Techniques **Credit Hours:** 3
- EXSC 3234 - Food, Fitness, Weight Management **Credit Hours:** 3
- EXSC 3240 - Nutrition Education **Credit Hours:** 3
- EXSC 3350 - Exercise Physiology **Credit Hours:** 3
- EXSC 3314 - Kinesiology **Credit Hours:** 3
- EXSC 3105 - Motivation in Wellness & Fitness **Credit Hours:** 3
- EXSC 4210 - Nutrition II **Credit Hours:** 3
- EXSC 4225 - Nutrition Assessment and Counseling **Credit Hours:** 3
- EXSC 4231 - Fitness Assessment and Prescription **Credit Hours:** 3
- SPT 4235 - Risk Management for Sports Professions **Credit Hours:** 3
- CHEM 2680 - Nutritional Science **Credit Hours:** 3

## Total Credits: 18

# Parks and Recreation Management, Minor

The Parks and Recreation Management Minor places equal emphasis on both general and professional education. Coursework in general education, which includes broad exposure to the humanities, the natural sciences, and the social sciences, is designed to give students greater self-awareness and the enhancement of critical thinking abilities. Courses in the minor are designed to provide students with the background and skills necessary to assume the leadership responsibilities of a parks and recreation management professional.

## Student Learning Outcomes

- Students shall demonstrate the following entry-level knowledge: a) the nature and scope of the relevant park, recreation, tourism or related professions and their associated industries; b) techniques and processes used by professionals and workers in these industries; and c) the foundation of the profession in history, science, and philosophy
- Students shall be able to demonstrate the ability to design, implement, and evaluate services that facilitate targeted human experiences and that embrace personal and cultural dimensions of diversity
- Students shall be able to demonstrate entry-level knowledge about operations and strategic management/administration in parks and recreation agencies.

## Curriculum Requirements

### Required Courses

- RECR 1650 - Introduction to Recreation and Leisure **Credit Hours:** 3
- EVPM 4120 - Recreation Program Planning and Evaluation **Credit Hours:** 3

### 3000-Level RECR Courses

6 Credits Required - Select 2 From:

- RECR 3610 - Parks & Recreation for Diverse Populations **Credit Hours:** 3
- RECR 3620 - Recreation Site Design and Management **Credit Hours:** 3
- RECR 3650 - Recreation Resource Management **Credit Hours:** 3
- RECR 3740 - Commercial Recreation Management **Credit Hours:** 3
- RECR 3780 - Recreation Management and Leadership **Credit Hours:** 3

### 4000-Level RECR/EVPM Courses

3 Credits Required - Select 1 From:

- RECR 4150 - Challenges and Trends in Parks and Recreation **Credit Hours:** 3
- RECR 4780 - Professional Development in Recreation **Credit Hours:** 3

### Other RECR/EVPM Courses

3 Credits Required - Select 1 From Previous Two Groups or Below:

- RECR 1650 - Introduction to Recreation and Leisure **Credit Hours:** 3
- RECR 2200 - Youth Competitive Recreational Activities **Credit Hours:** 3

- RECR 2250 - Recreation and Youth Development **Credit Hours:** 3
- RECR 2300 - Camp Counseling and Administration **Credit Hours:** 3
- EVPM 2350 - Special Event Management in Recreation Settings **Credit Hours:** 3
- RECR 2400 - Sustainable Communities and Ecosystems **Credit Hours:** 3
- RECR 2460 - Scenic Areas of the U.S. **Credit Hours:** 3
- RECR 2500 - Non-Profit and Community Recreation **Credit Hours:** 3
- RECR 2700 - Introduction to Interpretative Services **Credit Hours:** 3
- RECR 2750 - Sustainable Recreation & Green Parks **Credit Hours:** 3
- RECR 2800 - Adventure and Outdoor Recreation Outfitting **Credit Hours:** 3
- RECR 2850 - Water-Based Recreation **Credit Hours:** 3
- RECR 4950 - Parks and Recreation Management Internship **Credit Hours:** 1 TO 12

Total Credits: 18

# Personal Financial Planning, Minor

The Minor in Personal Financial Planning covers topics, including risk management and insurance, federal individual income taxation, investments, retirement planning, and estate planning at a high cognitive level and makes students eligible to take the CFP® Exam. BSBA Finance & Personal Financial Planning Concentration students are not eligible to enroll in this minor.

## Student Learning Outcomes

- Integrate financial theories, methods, and concepts to achieve personal financial goals.
- Evaluate how to best maximize efficiency through effective risk management, capital allocation, and management of resources.
- Develop and communicate sound personal financial planning recommendations through an analysis of financial and market related information.

## Admissions Requirements

- All students, except for those enrolled in the BSBA Finance & Personal Financial Planning major, are eligible to enroll in this minor.

## Curriculum Requirements

### Required Courses

- ACC 3200 - Federal Income Tax I **Credit Hours:** 3
- FINA 4000 - Investments **Credit Hours:** 3
- PFPL 1010 - Wealth Building and Personal Financial Planning **Credit Hours:** 3
- PFPL 4300 - Retirement Planning **Credit Hours:** 3
- PFPL 4400 - Estate Planning **Credit Hours:** 3
- PFPL 4750 - Financial Plan Development **Credit Hours:** 3

## Total Credits: 18

# Political Science, Minor

Students who minor in political science receive a thorough introduction to the major principles and dynamics of politics, such as the gathering and use of power by individuals, groups, and governments within and across societies. In addition, political science minors have the freedom to take specialized upper-level courses in an area of particular interest. A minor in political science is a useful and marketable addition to the education of students in any major.

## Student Learning Outcomes

- Students who complete the minor will be able to evaluate the quality of sources of political information.
- Students who complete the minor will be able to apply knowledge of American politics and, depending on upper-level course selection, be able to apply knowledge of comparative and/or international politics, law and/or political theory to analyze and evaluate political conditions and issues.
- Students who complete the minor will be able to discuss political and policy problems and propose possible solutions.

## Curriculum Requirements

### Required Courses

- POLI 1000 - Introduction to Politics **Credit Hours:** 3
- POLI 1100 - Introduction to American Politics **Credit Hours:** 3
- Any four additional upper-level Political Science courses

## Total Credits: 18

# Pre-Law, Minor

The Pre-Law Minor at PennWest provides students a broad and timely introduction to law, legal systems, and the impact of modern society through coursework grounded in the liberal arts. The Pre-Law Minor benefits students of any degree program interested in pursuing a law degree or law-related career.

## Student Learning Outcomes

A student completing the Pre-Law Minor will be able to:

- Demonstrate foundational knowledge of the principles and features of major areas of American law.
- Analyze and evaluate the dynamics of the American legal system.
- Apply methods of legal reasoning to analyze contemporary legal issues.

## Curriculum Requirements

### Required Courses

- POLI 1100 - Introduction to American Politics **Credit Hours:** 3
- CRJ 3740 - Court Systems **Credit Hours:** 3
- POLI 3510 - Constitutional Law **Credit Hours:** 3
- POLI 3520 - Civil Liberties **Credit Hours:** 3
- HIST 1010 - US History to 1877 **Credit Hours:** 3
- HIST 1015 - US History since 1877 **Credit Hours:** 3
- PHIL 1000 - Critical Thinking **Credit Hours:** 3
  **or**
- PHIL 2100 - Introduction to Ethics **Credit Hours:** 3

## Total Credits: 21

# Professional Writing, Minor

The minor in Professional Writing helps majors from across the University build a broad and deep skill set necessary for effective writing in a variety of contexts, and it teaches them how to design and tailor their writing to meet the needs of their intended readers. The minor's flexible, practical curriculum will help students stand out amongst peers in their disciplines, provide them with marketable skills and opportunities in increasingly competitive arenas where thoughtful, articulate writing is in-demand.

## Student Learning Outcomes

- Critically read, analyze, and critique "mentor" texts in various genres and fields in order to understand what makes them rhetorically successful.
- Make appropriate choices regarding style, structure, and mechanics in order to produce compelling, rhetorically successful prose in a variety of genre(s) that responds appropriately to audience, purpose, and context.
- Prepare for future personal and professional writing contexts by producing revised, polished documents that can be used in a portfolio.

## Curriculum Requirements

### Required Courses

### 2000-Level Courses, 9 Credits Required - Select Three From:

- ENGL 2200 - Reading and Writing **Credit Hours:** 3
- ENGL 2205 - Writing in the Genres **Credit Hours:** 3
- ENGL 2210 - Writing in the Health and Human Services Professions **Credit Hours:** 3
- ENGL 2220 - Writing for the Community **Credit Hours:** 3
- ENGL 2230 - Writing and the Natural Sciences **Credit Hours:** 3
- ENGL 2240 - Writing and the Social Sciences **Credit Hours:** 3
- ENGL 2250 - Visual Rhetoric, Writing, and Design **Credit Hours:** 3
- ENGL 2260 - Writing Argument and Persuasion **Credit Hours:** 3
- ENGL 2270 - Digital Storytelling **Credit Hours:** 3
- ENGL 2280 - Writing for Business **Credit Hours:** 3

- ENGL 2610 - Traditional Grammar **Credit Hours:** 3

### 3000-Level Courses, 9 Credits Required - Select Three From:

- ENGL 3200 - Advanced Topics in Writing Studies **Credit Hours:** 3
- ENGL 3210 - Studies in Professional Writing **Credit Hours:** 3
- ENGL 3220 - Grant and Proposal Writing **Credit Hours:** 3
- ENGL 3230 - Technical Writing **Credit Hours:** 3
- ENGL 3240 - Workplace Writing **Credit Hours:** 3
- ENGL 3250 - Research Writing **Credit Hours:** 3

## Total Credits: 18

# Psychology, Minor

Given the many ways Psychology relates to other disciplines, the minor in Psychology is very flexible and one of the most popular at PennWest. Students can choose the Psychology courses that best match their personal and career interests.

## Student Learning Outcomes

- Use basic psychological concepts to describe or explain behavior.
- Describe psychology's major subfields.
- Describe historically important perspectives (e.g., theoretical orientations) in psychological science.
- Describe examples of relevant and practical applications of psychological principles to everyday life.

## Curriculum Requirements

### Required Courses

- PSYC 1000 - Introduction to Psychology **Credit Hours:** 3
- Select five additional 3-credit PSYC courses with at least two being 3000-level or higher

## Total Credits: 18

# Robotics Engineering Technology, Minor

This minor provides an introduction to the fundamental principles of robotic systems, including mechanical elements, electronics, and basic robot control architecture including sensing, localization, navigation, and collaboration. Durable skill outcomes include problem-solving, teamwork, communication, and professional development. Technical skills outcomes include use of Computer-Aided Drafting software, 3D printing, mechanical assembly, reading and interpreting mechanical and electrical schematics, selecting and reading sensors, selecting and controlling actuators, designing and building logic circuits, and reading and writing code to control simulated and hardware systems.

## Student Learning Outcomes

- Understand the components needed in a robotic system and explain their role in the control system.
- Apply control system principles to write functional code to control a robot system.
- Develop and build a robotic system project from a concept to a functional prototype.
- Function effectively on a team as both a leader and a collaborator.
- Communicate technical and non-technical information effectively, using written, oral, and graphical communication techniques.
- Understand and describe the importance of professional development and lifelong learning.

## Curriculum Requirements

### Required Courses

- ROBO 1100 - Agile Robotics I **Credit Hours:** 3
- ROBO 1200 - Agile Robotics II **Credit Hours:** 3
- ROBO 2100 - Robotic Teaming **Credit Hours:** 3
- ROBO 2900 - Robotics System Project **Credit Hours:** 3

- CMSC 1240 - Computer Programming I **Credit Hours:** 3
  **OR**
- CMSC 1380 - Introduction to Programming with Python **Credit Hours:** 3

- MECH 2400 - Engineering Graphics and Computer Aided Design **Credit Hours:** 3
- ECET 2535 - Digital Electronics Design **Credit Hours:** 4

## Total Credits: 22

# Social Media, Minor

With a minor in Social Media, you will focus on skills related to the creation, management and maintenance of professional social media accounts. Adding value to any major, students will explore key areas including writing for digital media, aesthetics, audience analysis, production planning and message design for social media. Elective courses in photography, mass communication, strategic messaging, and video production allow students to choose their own focus to best augment their major.

## Student Learning Outcomes

- Use communication to inform, direct, persuade, and inspire others
- Apply research and analysis skills to write in forms and styles for communication professions, audiences, and purposes they serve
- Integrate and apply practical communication skills and knowledge in critical thinking and creative problem-solving
- Practice effective and ethical communication in a diverse global society

## Curriculum Requirements

### Required Courses

3 Credits Required - Select From:

- COMJ 1106 - Exploring Strategic Communication **Credit Hours:** 3
- COMJ 1107 - Exploring Mass Media **Credit Hours:** 3
- Any COMJ 1102-1108 Exploring Communication topics

- COMJ 4803 - Current Practices in Social Media **Credit Hours:** 3

6 Credits Required- Select From:

- COMJ 3609 - Video Production **Credit Hours:** 3
- COMJ 3619 - Audio Production **Credit Hours:** 3
- COMJ 3639 - Photojournalism **Credit Hours:** 3
- COMJ 3649 - Studio Production **Credit Hours:** 3
- COMJ 3659 - Postproduction **Credit Hours:** 3
- COMJ 3679 - On Air Performance **Credit Hours:** 3
- COMJ 4609 - Advanced Video **Credit Hours:** 3
- COMJ 4629 - Sports Production **Credit Hours:** 3

6 Credits Required - Select From:

- COMJ 3806 - Organizational Communication **Credit Hours:** 3
- COMJ 3816 - Crisis Management **Credit Hours:** 3
- COMJ 3826 - Public Relations **Credit Hours:** 3
- COMJ 3846 - Promotional Events & Publicity **Credit Hours:** 3
- COMJ 3856 - Communication Strategies for Advertising **Credit Hours:** 3
- COMJ 3866 - Personal Selling **Credit Hours:** 3
- COMJ 4826 - Advanced Topics in PR & Strategic Communication **Credit Hours:** 3
- COMJ 4846 - Writing for Public Relations & Strategic Communication **Credit Hours:** 3
- COMJ 4866 - Strategic Communication Campaigns **Credit Hours:** 3

## Total Credits: 18

# Social Work, Minor

The Social Work minor provides students with a fundamental knowledge of social work processes and theories of human behavior in the social environment. It facilitates an understanding of social work as an allied profession or further study in the field.

## Student Learning Outcomes

- Provide the student with generalist knowledge, skills, and core social work values for entry into beginning social work practice in a variety of agencies and human service settings.
- Provide the student with knowledge and skills to address social welfare needs and issues relevant to complex global societies.
- Develop leaders prepared to enhance the development of social welfare and the delivery of social services.
- Enhance social welfare, the provision of social services and the social work profession through service, research and continuing education, including work on advanced degrees.

## Curriculum Requirements

## Required Courses

- SOWK 1000 - Introduction to Social Work **Credit Hours:** 3
- SOWK 1500 - Interviewing and Engaging: Skills for Professionals **Credit Hours:** 3
- SOWK 2000 - Diversity in a Changing World **Credit Hours:** 3
- SOWK 2500 - Human Behavior in the Social Environment: Life Course **Credit Hours:** 3
- SOWK 3000 - Human Behavior and the Social Environment II **Credit Hours:** 3

3 Credits Required - Select 1 From:

- SOWK 3300 - Let's Talk About Sex **Credit Hours:** 3
- Any Social Work Elective or Special Topics course

## Total Credits: 18

# Sociology, Minor

The Sociology Minor enhances the value of any major at PennWest, offering students the opportunity to explore current topics and issues in society. This minor has considerable flexibility that enables students to tailor their coursework to align with their majors and interests. Students will develop marketable analytical and research skills and gain knowledge about the groups, cultures, organizations, social institutions, and processes that exist in our society.

## Student Learning Outcomes

- Demonstrate an understanding of the sociological imagination and the interconnections between society and the individual.
- Identify social, cultural, historical, and institutional patterns of inequality.
- Apply sociological perspectives to the study of social life.
- Describe the methods commonly employed by Sociologists and other social scientists.

## Curriculum Requirements

## Required Courses

- SOCI 1000 - Introduction to Sociology **Credit Hours:** 3

Any 2 sociology courses (upper level)
Any 3 sociology courses (any level)

## Total Credits: 18

# Spanish, Minor

A minor in Spanish provides students with a broad understanding of the Spanish language and cultures, as well as Spanish language skills to conduct daily life and to perform some work-related tasks in their professional fields.

## Student Learning Outcomes

- Students demonstrate listening, speaking, reading, and writing skills at the intermediate level of Spanish, consistent with the National Standards for Foreign Language Education.
- Students identify and analyze literary, historical and cultural products of the Spanish-speaking world within a broad historical framework.
- Students demonstrate critical thinking skills in comparing cultural products and practices of the Spanish-speaking world with their own cultures.

## Curriculum Requirements

### Required Courses

- SPAN 1001 - Elementary Spanish I **Credit Hours:** 3
- SPAN 1002 - Spanish Two **Credit Hours:** 3
- SPAN 2001 - Spanish III **Credit Hours:** 3

### Electives

9 credits from the following:

- SPAN 3001 - Spanish IV **Credit Hours:** 3
- SPAN 3004 - Spanish for Law Enforcement **Credit Hours:** 3
- SPAN 3005 - Spanish for Business **Credit Hours:** 3
- SPAN 3006 - Medical Spanish **Credit Hours:** 3
- SPAN 3007 - Spanish for Social Services **Credit Hours:** 3
- SPAN 3008 - Spanish for Educators **Credit Hours:** 3
- SPAN 3009 - Spanish for the Professions **Credit Hours:** 3
- SPAN 3100 - Spanish Conversation, Composition, and Phonetics **Credit Hours:** 3
- SPAN 3200 - Hispanic Short Stories **Credit Hours:** 3
- SPAN 3300 - Introduction to Spanish Phonetics and Pronunciation **Credit Hours:** 3
- SPAN 3400 - Hispanic Film **Credit Hours:** 3
- SPAN 3440 - Translation **Credit Hours:** 3
- SPAN 3500 - Studies in Hispanic Language and Culture **Credit Hours:** 3
- SPAN 3600 - Immersion in Hispanic Language and Culture **Credit Hours:** 3

## Total Credits: 18

# Special Education, Minor

The minor in Special Education is designed for non-Special Education certification students to have more than introductory knowledge of students with disabilities and their instruction.

## Student Learning Outcomes

- Students will analyze the various needs of individuals with disabilities.
- Students will develop an understanding of evidence-based practices for individuals with disabilities.
- Students will extend their understanding of diverse populations they serve and explore issues of accommodation, inclusion, and accessibility.

## Curriculum Requirements

### Core Courses

- SPED 1050 - Foundations of Special Education **Credit Hours:** 3
- SPED 2000 - Assessment and Positive Behavior Interventions **Credit Hours:** 3
- SPED 2100 - Teaching Students with Disabilities **Credit Hours:** 3
- SPED 3000 - Introduction to Applied Behavior Analysis **Credit Hours:** 3

### Electives

6 Credits Required - Select From:

- SPED 3010 - Special Learning Disabilities and Emotional Behavior DisordersÂ  **Credit Hours:** 3
- SPED 3020 - Intellectual and Physical Disabilities **Credit Hours:** 3
- SPED 3050 - Early Intervention in Special Education **Credit Hours:** 3
- SPED 3060 - Special Reading and Writing Instruction **Credit Hours:** 3
- SPED 3070 - Special Mathematics Instruction **Credit Hours:** 3
- SPED 3995 - Nature of Autism Spectrum Disorder **Credit Hours:** 3
- SPED 4040 - Transition Planning and Instruction **Credit Hours:** 3

## Total Credits: 18

# Supply Chain Management, Minor

This minor provides students with a solid foundation in the concepts and practices of supply chain management. This program focuses on the coordination of all activities involved in the planning, sourcing, production, and delivery of goods and services to customers. Students will learn about the key principles of supply chain management, including inventory management, transportation and logistics, procurement, and supply chain strategy.

## Student Learning Outcomes

- Apply supply chain strategies to optimize operations, reduce costs, and improve efficiency, while maintaining quality and meeting customer expectations.
- Use data analysis tools and techniques to analyze and interpret supply chain data, such as inventory levels, supplier performance, and demand forecasts.
- Develop strategies and identify the tools for ethical and sustainable supply chain management such as ethical sourcing, sustainable supply chain, social responsibility, transparency, and traceability in the supply chain operations.
- Effectively communicates in oral, written, visual, and digital formats.

## Admission Requirements

- Available to all majors
- Note: BSBA students will already take the required business core courses; therefore, BSBA students will take 15 unique credits to complete this minor.

## Curriculum Requirements

### Required Courses

Required Courses from Business Core (6 credits)

- QBA 3000 - QBA 3: Analytics and Applications **Credit Hours:** 3
- MGMT 3000 - Principles of Management **Credit Hours:** 3

Required Courses (9 credits)

- MGMT 3700 - Operations Management **Credit Hours:** 3
- MGMT 4500 - Supply Chain Management **Credit Hours:** 3
- BSIN 4000 - Business Driven Management Information Systems **Credit Hours:** 3

Elective (6 credits)

- MGMT 4250 - Quality Management **Credit Hours:** 3
- MGMT 4700 - Project Management **Credit Hours:** 3
- IENT 3000 - ERP Business Process Integration **Credit Hours:** 3
- IENT 3150 - Enterprise Systems Business Analytics **Credit Hours:** 3
- ECON 4810 - Applied Econometrics **Credit Hours:** 3
- ECON 4820 - Economic Forecasting **Credit Hours:** 3
- MGMT 3400 - Introduction to Sustainable Business **Credit Hours:** 3

## Total Credits: 21

# Tourism and Hospitality Management, Minor

PennWest's Tourism and Hospitality Management minor offers students value-added skills for working in the services management super sector of tourism and hospitality. Students will study elements of the industry, including attractions, airlines and airports, casinos, convention centers, country clubs, cruise ships, entertainment venues, cultural sites, hotels and resorts, museums, state, and national parks, sports stadiums, and theme parks.

## Student Learning Outcomes

The THM minor's assessment plan will fall under the CoAPRT accreditation.

- THM 1 - Describe the interrelationships of the tourism and hospitality sectors
    - Objective exam TOUR 1001
- THM 3- Apply the hospitality spirit to problem-solving in-service settings
    - Objective exam HOSP 1001
- THM 3- Recognize the challenges and opportunities of intangible, perishable, variable, and inseparability of tourism and hospitality products
    - Impacts assessments project TOUR 4000

## Curriculum Requirements

## Required Courses

- TOUR 1001 - Introduction to Tourism Studies **Credit Hours:** 3
- HOSP 1001 - Hospitality Operations and Management **Credit Hours:** 3
- RECR 3740 - Commercial Recreation Management **Credit Hours:** 3
- TOUR 4000 - Impacts & Sustainability of Tourism **Credit Hours:** 3

## Electives

6 credits choose from the following:

- BSAD 1000 - Introduction to Business **Credit Hours:** 3
- TOUR 2050 - Geography of Tourism **Credit Hours:** 3
- TOUR 3850 - Dark Tourism **Credit Hours:** 3
- HOSP 2777 - Casinos and Gaming Entertainment **Credit Hours:** 3
- HOSP 3500 - Hotels Resorts Lodging **Credit Hours:** 3
- BSAD 4950 - Internship for Department of Management and Marketing Programs **Credit Hours:** 1 TO 12
  Any 3000-4000 BSAD, EVPM, HOSP, HRMG, MKTG, MGMT, RECR, or TOUR (3 credits max)

## Total Credits:

# Web Programming, Minor

This undergraduate minor provides foundational skills in application programming and web development, starting with simple sites, moving through dynamic client-side and server-side functionality, and culminating in web-based systems that create and access various information services. The primary objective of the program is to offer an option to non-CIS majors to develop an initial expertise in the programming of web-based applications.

## Student Learning Outcomes

- Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
- Design and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
- Implement and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.

## Admission Requirements

GPA : no restrictions or grade requirement to start the program

A maximum of 9 credits will be allowed to be shared between a major and minor.

## Curriculum Requirements

### Required Courses

Required Courses (18 credits)

- CMIS 1150 - Introduction to Website Development **Credit Hours:** 3
- CMIS 1200 - Application Programming I **Credit Hours:** 3
- CMIS 2200 - Application Programming II **Credit Hours:** 3
- CMIS 3500 - Web Programming I **Credit Hours:** 3
- CMIS 4500 - Web Programming II **Credit Hours:** 3
- CMIS 3200 - Database Application Programming **Credit Hours:** 3

Elective (3/4 credits) - any one of the following

- CMIS 3125 - Systems Analysis & Design **Credit Hours:** 3
- CMIS 3150 - Database Design & Modeling **Credit Hours:** 3
- CMIS 3250 - CISCO CCNA I **Credit Hours:** 0 TO 4
- CMIS 3600 - Systems Project Management **Credit Hours:** 3
- CMIS 4250 - Applications of Machine Learning and Deep Learning **Credit Hours:** 3
- CMIS 4950 - CIS Internship **Credit Hours:** 0 TO 15

## Total Credits: 21

## Post Baccalaureate Certificate Programs

# Speech-Language Pathology, Certificate

The post-baccalaureate (post-bac) program in Speech-Language Pathology is designed for students who want to pursue graduate studies in Speech-Language Pathology but who earned an undergraduate degree outside the speech, language, and hearing discipline. The post-bac program is 8-courses (24 credits), which can be completed in two semesters. Following successful completion of the post-bac courses, students will be eligible for the Master of Science in Speech-Language Pathology program at PennWest University.

## Student Learning Outcomes

- Explain and apply knowledge of the developmental norms for speech/language acquisition.
- Explain and apply knowledge of speech, language and hearing disorders.
- Explain how individual, cultural and linguistic differences influence communication.
- Demonstrate knowledge of the basic clinical process for the evaluation and remediation of communication disorders and differences.
- Apply critical thinking, problem solving and logical reasoning skills to topics in CSD.
- Demonstrate effective written communication skills to explain and describe content and research knowledge, and critical thinking skills as they apply to topics in CSD.

## Admission Requirements

GPA (3.0)

Grade requirements, "C" or better

## Curriculum Requirements

## Required Courses

- CSD 1500 - Speech & Language Development **Credit Hours:** 3
- CSD 2100 - Introduction to Audiology **Credit Hours:** 3
- CSD 2700 - Phonetics **Credit Hours:** 3
- CSD 3000 - Anatomy and Physiology of Speech and Hearing **Credit Hours:** 3
- CSD 3100 - Speech Science **Credit Hours:** 3
- CSD 3400 - Aural Rehabilitation **Credit Hours:** 3
- CSD 4100 - Neuroanatomy for the SLP **Credit Hours:** 3
- CSD 4200 - Clinical Observation / Experience **Credit Hours:** 3

For certification purposes, students also have to take 4 non-major courses including human biology, statistics, physics or chemistry, and a social science. Most post-bacs already completed most or all of those requirements in their undergraduate program. If not, those courses would be incorporated into their plan of study using existing PennWest undergraduate course offerings.

## Total Credits: 24

## Other Programs

# Honors Program

Focusing on three key values, community, creation, and professionalism, the Honors Program provides ambitious, success-centered PennWest students with a high-quality, accessible, and challenging array of academic, social, and professional opportunities. Students from all majors enjoy small class sizes, interdisciplinary and experiential learning, living-learning residences, scholarships, travel and research support, extracurricular opportunities, and a supportive community of like-minded peers and faculty. The Honors Program prepares PennWest's highest-achieving undergraduates to be campus and community leaders and enables them to succeed in a wide range of careers, graduate, and professional schools.

Advisement Sheet

## Student Learning Outcomes

- Critical thinking, communication, and problem solving Students will demonstrate effective written and spoken communication and creative problem-solving through completing honors courses that provide opportunities for experiential learning, primary and secondary research, and creative scholarship.
- Creating and maintaining an individual campus identity. Each campus will develop and / or maintain curricular and extra curricular activities, experiences, and opportunities that are unique to their location, history, and culture.
- Career Preparation (experiential learning, research and creative scholarship) Students will demonstrate preparation for graduate and / or professional school or for careers in industry.
- Community Awareness (service learning and leadership, learning communities) Students will demonstrate a sense of community awareness, engagement, and knowledge of issues related to social justice through practical experience, curricular and extra-curricular experiences, and service learning opportunities.
- Research and Creative Literacy (research and creative scholarship) Students will demonstrate critical writing, reading, and speaking skills in a variety of disciplines.

## Curriculum Requirements

- COMJ 1010 - Public Speaking **Credit Hours:** 3 (honors)
- ENGL 1200 - College Composition **Credit Hours:** 3 (honors)
- HONR 3100 - Honors Discoveries in Natural Science and Technology **Credit Hours:** 3
- HONR 3200 - Honors Discoveries in the Social Sciences **Credit Hours:** 3
- HONR 3300 - Honors Discoveries in Arts and Humanities **Credit Hours:** 3
- HONR 4990 - Honors Thesis Project **Credit Hours:** 3

## Total Credits: 18

# Courses

### AAAS 2023 - Introduction to African American / Africana Studies

**Credit Hours:** 3

An introduction to the socio-cultural experience of people of African descent. An interdisciplinary approach will be used to examine key concepts, historical developments, and processes that have shaped the "Black" experience.

### ACC 2000 - Financial Accounting

**Credit Hours:** 3

This course introduces the student to financial accounting and reporting concepts. Special emphasis is placed on measuring and reporting transactions and evaluating the operational performance of business entities.

### ACC 2100 - Accounting II

**Credit Hours:** 3

A continuation of basic accounting principles with an emphasis on partnership and corporate accounting.

**Prerequisite:** ACC 2000

### ACC 3000 - Managerial Accounting

**Credit Hours:** 3

This course provides business majors with knowledge of the accounting discipline and develops analytical thinking skills. Emphasis will be placed on interpretation and use of accounting information for managerial decision-making, application of cost concepts to common business problems, and integration of current business events.

### ACC 3050 - Cost Accounting

**Credit Hours:** 3

This course more rigorously examines and extends introductory topics from managerial accounting. Topics include:

cost-benefit analysis; product-costing systems; cost allocation and estimation; financial and CVP models; decision making; pricing and profitability analysis; variance analysis; budgets; organizational design; responsibility accounting.

**Prerequisite:** ACC 3000

## ACC 3100 - Intermediate Accounting I

**Credit Hours:** 3

This class examines accounting theory and practice. Topics included are accounting for current assets, investments, plant and equipment, intangibles. A special emphasis will be placed upon developing the student's technical and problem-solving ability.

**Prerequisite:** ACC 2000

## ACC 3150 - Intermediate Accounting II

**Credit Hours:** 3

This class examines accounting theory and practice. Topics included are accounting for current liabilities, long-term liabilities, equity, investments, revenue recognition. A special emphasis will be placed upon developing the student's technical and problem-solving ability.

**Prerequisite:** ACC 3100

## ACC 3200 - Federal Income Tax I

**Credit Hours:** 3

This course explores the law of Federal income taxation as is applies to individuals and offers theoretical understanding of the underpinnings of the United States major tax law, as well as a practical understanding of the administration of that law. The focus is on compliance with tax law and planning to maximize after-tax cash flow.

## ACC 3250 - Federal Income Tax II

**Credit Hours:** 3

This course covers federal income taxation of for-profit business entities with an emphasis on corporations and partnerships. Tax compliance, research, and planning are emphasized.

**Prerequisite:** ACC 3200

## ACC 3300 - Non-Profit Accounting

**Credit Hours:** 3

The student will explore the foundation of governmental and non-profit accounting theory. Students will analyze and apply the generally accepted accounting principles established for governmental and non-profit organizations. Additionally, students will learn the unique accounting and reporting requirements for non-profit entities. Topics examined include those related to financial position, operating results, cash flow, and financial strength. Students will be shown how various accounting alternatives for recording transactions impact the usefulness of the information

provided for decision making.

**Prerequisite:** ACC 3100

## ACC 3500 - Intro to Accounting Fraud Investigation

**Credit Hours:** 3

This class provides an introduction into fraud investigation for the accounting professional. Coverage includes defining fraud, various fraudulent accounting schemes, high profile fraud cases, quantitative and qualitative investigative techniques, understanding and testing internal controls over financial reporting and ethical considerations.

**Prerequisite:** ACC 3100

## ACC 3990 - Volunteer Income Tax Assistance

**Credit Hours:** 3

The focus of this class is service learning. Students will be afforded the opportunity to receive IRS certification while making a difference in their community. Students will prepare annual income tax returns for low income tax payers who qualify for the volunteer income tax assistance program (VITA). Before doing so, students must pass certification exams on tax law, as well as software usage. All returns prepared as part of this class will be subject to a quality review prior to being filed with the appropriate government agency.

**Prerequisite:** ACC 3200

## ACC 4100 - Advanced Financial Accounting

**Credit Hours:** 3

This course explores accounting for business combinations. Special emphasis will be placed on the equity method of accounting for investments and consolidations. In addition, this course will address the components of comprehensive income.

**Prerequisite:** ACC 3100

## ACC 4400 - Auditing

**Credit Hours:** 3

The focus of this course is on the independent, external financial statement audit process. Special emphasis will be placed on risk assessment and internal controls. Students will be exposed to analytical testing as well as substantive testing and audit documentation.

**Prerequisite:** ACC 3100

## ACC 4450 - Auditing II

**Credit Hours:** 3

This course covers auditing of sales and collections cycle, acquisitions, payroll and personnel, Inventory and

warehousing, capital acquisitions and repayments, and cash and financial instruments. In addition, completing the audit and other assurance services (Including SSARA). Internal and operational audits are also introduced.

**Prerequisite:** ACC 4400

## ACC 4500 - Advanced Accounting Fraud Investigation

**Credit Hours:** 3

This class provides an advanced review of the strategies relevant to fraud investigation. Furthermore, students will have the opportunity to apply these skills within the context of actual forensic investigations and valuation through the use of various case studies.

**Prerequisite:** ACC 3500

## ACC 4600 - Accounting Information Systems

**Credit Hours:** 3

This capstone course emphasizes core concepts of accounting information systems to develop an understanding of accounting information flow and controls within business entities, including business source documents, information processing, system documentation, and IT controls. This course integrates and bridges concepts from other courses.

**Prerequisite:** ACC 3200 and ACC 4100

## ACC 4650 - Internal Audit

**Credit Hours:** 3

The course will cover internal audit from a broad perspective that includes information technology, business processes, and accounting systems.Topics include internal auditing standards, risk assessment, governance, ethics, audit techniques, and emerging issues. The course covers the design of business processes and the implementation of key control concepts and uses a case study approach that addresses tactical, strategic, systems, and operational areas. Business improvements in the effectiveness and efficiency of business processes and controls will be covered in the areas of operations, finance and technology.

**Prerequisite:** ACC 4400

## ACC 4700 - International Accounting

**Credit Hours:** 3

This class studies the influence of cultural values on the practice and theory of accounting and developing sensitivity to the differences and similarities of different accounting systems worldwide. In particular, it includes such topics as worldwide accounting diversity, international convergence of financial reporting and IFRSs.

**Prerequisite:** ACC 3100

## ACC 4950 - Accounting Internship

**Credit Hours:** 1 TO 12

The student is placed with a business firm, bank, government agency or nonprofit organization performing finance-related tasks. The internship experience offers a practical training ground for students that supplements academic training by permitting them to apply the theories, concepts and techniques learned through coursework.

**General Education Attribute**

- Competency-Keystone Experience

## AERO 1200 - Intro to UAVs

**Credit Hours:** 3

An introduction to unmanned aerial vehicles (UAVs), commonly known as drones, as well as the FAA regulations, operations, weather, safety and airspace knowledge required to obtain the FAA part 107 license necessary to operate a UAV for commercial use. This course is only available to students in the Applied Technology Associate of Applied Science program pursuing the Aeronautical Science concentration. This course is only available off-campus through a participating Flight School Partner.

## AERO 2200 - Private Pilot Ground

**Credit Hours:** 3

This course prepares the student for the FAA Private Pilot Airplane written examination for the private pilot license. This course will introduce pilot training, aviation opportunities, human factors in aviation, aircraft systems, aerodynamic principles, and the flight environment, aeronautical decision making, and FARs (Federal Aviation Regulations) applicable to private pilot flying. This course is only available to students in the Applied Technology Associate of Applied Science program pursuing the Aeronautical Science concentration. This course is only available off-campus through a participating Flight School Partner.

## AERO 2400 - Instrument Pilot Ground

**Credit Hours:** 3

This course prepares the student for the FAA Instrument Pilot Airplane written examination for the instrument pilot rating. This course will educate the student about the principles of instrument flight. This will include the operation, use, and limitations of flight instruments and instrument navigation systems. The air traffic control system functions and the use of instrument flight charts for IFR planning and flight will also be covered. Emphasis will be placed on advanced human factors and physiological factors directly related to instrument flight. In addition, the student will become familiar with the Federal Aviation Regulations (FARs) applicable to instrument flight operations. This course is only available to students in the Applied Technology Associate of Applied Science program pursuing the Aeronautical Science concentration. This course is only available off-campus through a participating Flight School Partner.

## AERO 2600 - Commercial Pilot Ground

**Credit Hours:** 3

This course prepares the student for the FAA Commercial Pilot Airplane written examination for the commercial pilot license. This course will review airports, airspace, flight information, and meteorology, as well as airplane performance, VFR cross-country planning, and navigation. In addition, the student will gain a greater understanding of aviation physiology, aeronautical decision making, and the FARs applicable to commercial pilot operations. Operation

of complex aircraft systems, how to predict aircraft performance and advanced aerodynamics will also be covered. This course is only available to students in the Applied Technology Associate of Applied Science program pursuing the Aeronautical Science concentration. This course is only available off-campus through a participating Flight School Partner.

## AERO 2800 - Cert. Flight Instr. Ground

**Credit Hours:** 3

This course prepares the student for the FAA fundamentals of instruction and flight instructor, airplane airmen knowledge examinations. This course will provide the student with instructional knowledge, skill, and the aeronautical knowledge necessary to meet the requirements of a certified flight instructor certificate with an Airplane Single-Engine Class rating. The student will demonstrate through knowledge assessments and appropriate records that he/she meets the instructional knowledge necessary to obtain a certified flight instructor certificate with an airplane-single-engine class rating. This course is only available to students in the Applied Technology Associate of Applied Science program pursuing the Aeronautical Science concentration. This course is only available off-campus through a participating Flight School Partner.

## AERO 3200 - Private Pilot Flight

**Credit Hours:** 3

This course prepares the student for the FAA Private Pilot Airplane practical examination for the private pilot license. This course will provide the student with the knowledge, skill, and aeronautical experience necessary to meet the requirements for a private pilot airplane license. The student will demonstrate through knowledge tests, flight tests, and appropriate records that he/she meets the knowledge, skill, and experience requirements necessary to obtain a private pilot license. This course is only available to students in the Applied Technology Associate of Applied Science program pursuing the Aeronautical Science concentration. This course is only available off-campus through a participating Flight School Partner.

## AERO 3400 - Instrument Pilot Flight

**Credit Hours:** 2

This course will provide the student with the knowledge, skill, and aeronautical experience necessary to meet the requirements for an instrument rating. The student will demonstrate through knowledge tests, flight tests, and appropriate records that he/she meets the knowledge, skill, and experience requirements necessary to obtain an instrument rating. This course is only available to students in the Applied Technology Associate of Applied Science program pursuing the Aeronautical Science concentration. This course is only available off-campus through a participating Flight School Partner.

## AERO 3600 - Commercial Pilot Flight

**Credit Hours:** 4

This course will provide the student with the knowledge, skill, and aeronautical experience necessary to meet the requirements for a commercial airplane pilot license. The student will demonstrate through knowledge tests, flight tests, and appropriate records that he/she meets the knowledge, skill, and experience requirements necessary to obtain a commercial pilot license. This course is only available to students in the Applied Technology Associate of Applied Science program pursuing the Aeronautical Science concentration. This course is only available off-campus through a participating Flight School Partner.

## AERO 3800 - Cert. Flight Instr. Flight

**Credit Hours:** 3

This course prepares the student for the FAA fundamentals of instruction and flight instructor, airplane airmen knowledge and practical examinations. This course will provide the student with instructional knowledge, skill, and the aeronautical experience necessary to meet the requirements of a certified flight instructor certificate with an airplane single-engine class rating. The student will demonstrate through knowledge tests, flight tests, and appropriate records that he/she meets the instructional knowledge, skill, and experience necessary to obtain a certified flight instructor certificate with an airplane--single-engine class rating. This course is only available to students in the Applied Technology Associate of Applied Science program pursuing the Aeronautical Science concentration. This course is only available off-campus through a participating Flight School Partner.

## ALHL 1201 - Introduction to the Healthcare Environment

**Credit Hours:** 2

This course will familiarize students with health care organizations, the health care system, and the clinical environment in relationship to the student's role as a future health care practitioner. Topics will include the structure, organization, and function of hospital systems and staff; documentation and medical records; professional development and professionalism; the role and function of professional societies and membership; safety and emergency response; body mechanics; HIPAA; infection control; communication in the health care environment in relationship to continuum of care; ethical and legal responsibilities of health care practitioners; current trends in health care; and employment opportunities for health care professionals.

## ALHL 2101 - Medical Terminology

**Credit Hours:** 3

Teaches principles of medical word building for understanding & effective use of medical language as a future healthcare practitioner/patient/caregiver. Presents medical terms, abbreviations, pathology, diagnostic exams, clinical & lab procedures related to body systems. Supports health literacy through the lifespan.

## ALHL 2290 - Allied Health Clinical I

**Credit Hours:** 1 TO 15

Within the Associate of Science in Allied Health degree program, ALHL 2290 will facilitate transference of a block of 1 to 15 credits for completion of a formal, accredited clinical educational program in a health profession that is recognized by the American Medical Association. The clinical program of study must entail a minimum of 450 contact hours.

## ALHL 2299 - Allied Health Clinical II

**Credit Hours:** 1 TO 15

Within the Associate of Science in Allied Health degree program, ALHL 2299 will facilitate transference of a block of 1 to 15 credits for completion of a formal, accredited clinical educational program in a health profession that is recognized by the American Medical Association. The clinical program of study must entail a minimum of 450 contact hours.

## ALHL 3300 - Allied Health Clinical III

**Credit Hours:** 1 TO 15

Within the Associate of Science in Allied Health degree program, ALHL 3300 will facilitate transference of a block of 1 to 15 credits for completion of a formal, accredited clinical educational program in a health profession that is recognized by the American Medical Association. The clinical program of study must entail a minimum of 450 contact hours.

## ALHL 3301 - Research Methods for Health Sciences

**Credit Hours:** 3

Teaches practical concepts of research methods necessary to acquire and create new health & medical sciences knowledge. Teaches a systematic and principled way of locating, retrieving, and evaluating scientific publications and empirical evidence in support of effective and accurate clinical practice and professional decision making.

**Prerequisite:** ENGL 1200
and

**Prerequisite or Corequisite:** STAT 2020 or STAT 2010
**General Education Attribute**

- Competency-Information Literacy

## ALHL 3310 - Allied Health Clinical IV

**Credit Hours:** 1 TO 15

Within the Associate of Science in Allied Health degree program, ALHL 3310 will facilitate transference of a block of 1 to 15 credits for completion of a formal, accredited clinical educational program in a health profession that is recognized by the American Medical Association. The clinical program of study must entail a minimum of 450 contact hours.

## ALHL 4400 - Allied Health Clinical V

**Credit Hours:** 1 TO 15

Within the Department of Allied Health, ALHL 4400 will facilitate transference of a block of 1 to 15 credits for completion of a formal, accredited clinical educational program in a health profession that is recognized by the American Medical Association. The clinical program of study must entail a minimum of 450 contact hours.

## ALHL 4410 - Allied Health Clinical VI

**Credit Hours:** 1 TO 15

Within the Department of Allied Health, ALHL 4410 will facilitate transference of a block of 1 to 15 credits for completion of a formal, accredited clinical educational program in a health profession that is recognized by the American Medical Association. The clinical program of study must entail a minimum of 450 contact hours.

## ALHL 4420 - Allied Health Clinical VII

**Credit Hours:** 1 TO 15

Within the Department of Allied Health, ALHL 4420 will facilitate transference of a block of 1 to 15 credits for completion of a formal, accredited clinical educational program in a health profession that is recognized by the American Medical Association.  The clinical program of study must entail a minimum of 450 contact hours.

## ALHL 4900 - Allied Health Leadership Capstone

**Credit Hours:** 3

Fosters exploration of healthcare leadership concepts and practices in clinical environments. Students synthesize leadership concepts with "real world" clinical scenarios they have observed to enrich their understanding of themselves and others as leaders and to enhance their effectiveness as future entry-level leaders in healthcare organizations .

**General Education Attribute**

- Competency-Intensive Writing
- Competency-Keystone Experience

## ANTH 1000 - Introduction to Anthropology

**Credit Hours:** 3

An introduction to the nature of Anthropology and its subject matter, with specific focus on its four sub fields: biological anthropology, archaeology, linguistics, and cultural anthropology.

**General Education Attribute**

- Discoveries-Social Sciences
- Competency-Information Literacy

## ANTH 2000 - Introduction to Biological Anthropology

**Credit Hours:** 3

Students are introduced to the field of biological anthropology, including evolutionary theory, modern human populations, the behavior and ecology of nonhuman primates, and the primate (human and non-human) fossil record. Special emphasis is placed on human form and behavior because of the complex interplay of biology and culture in our species.

## ANTH 2010 - Introduction to Cultural Anthropology

**Credit Hours:** 3

An introduction to the study of human cultural life and its meaning across societies, course will explore topics from anthropological perspectives, such gender, kinship, social structure, politics, religion, race, and economics. Its aim is to provide a foundation for better understanding & appreciation for cultural diversity and inclusion.

**General Education Attribute**

- Competency-Intercultural Fluency

## ANTH 2020 - Introduction to Archaeology

**Credit Hours:** 3

Course explores goals of archaeology, how archaeologists do their work and why. Course focuses on methods employed by archaeologists to locate, recover and study cultures and peoples of the past, piecing together their ways of life by the evidence recovered through excavation and in museum collections.

## ANTH 2030 - Anthropological Research Methods

**Credit Hours:** 3

This course provides an overview of research methods used in the four sub fields of anthropology (biological anthropology, archaeology, cultural anthropology and linguistic anthropology). In this course, students will learn the fundamentals of designing, conducting, and sharing anthropological research.

**Prerequisite:** ANTH 1000
**General Education Attribute**

- Competency-Applied Methodologies
- Competency-Intensive Writing

## ANTH 2040 - Museum Ethics

**Credit Hours:** 3

Course will introduce current ethical concerns relevant to museums and various audiences they serve. Museums need to understand how good decisions are made and the repercussions of poorly made decisions. Ethical standards for museums will be explored across a wide range of topics (administration, curation, exhibition and conservation).

**General Education Attribute**

- Competency-Ethical Reasoning

## ANTH 2050 - Archaeo Mysteries

**Credit Hours:** 3

In this course, students will use evidence-based reasoning and varied sources of information to assess the validity of scientific and pseudoscientific claims regarding past civilizations and peoples in the archaeological record.

**General Education Attribute**

- Competency-Information Literacy

## ANTH 2060 - Medical Anthropology

**Credit Hours:** 3

This introductory course emphasizes the contributions from biological anthropology, archaeology, and cultural anthropology to the study of human sickness, health and healing.

## ANTH 2070 - Aztec, Inca & Maya

**Credit Hours:** 3

Course focuses on preconquest Latin America with special emphasis on the archaeology and culture history of Mesoamerica and Andean culture areas. It emphasizes cultural developments, rise of states, agriculture & development of arts & crafts, including architecture and ceremonial art.

**General Education Attribute**

- Competency-Intercultural Fluency

## ANTH 3000 - Anthropological Ethics

**Credit Hours:** 3

This course will explore ethical principles and ethical dilemmas in anthropological research. Among topics explored will be professional codes of ethics, informed consent, ethical research review, data confidentiality, use of living subjects, stewardship, and ethics of archaeological, forensic, and bioarchaeological research.

**Prerequisite:** ANTH 1000 and ANTH 2000 and ANTH 2010

## ANTH 3030 - Primate Behavior and Conservation

**Credit Hours:** 3

This course will help students to gain a clear understanding of the importance of non-human primates through four main areas of study: a) evolution and adaptation, b) diet and social behavior, c) community ecology, and d) human-non-human primate interactions and conservation.

**Prerequisite:** ANTH 2000 or BIOL 1700 or BIOL 2840

## ANTH 3110 - Living with the Dead: Mortuary Analysis

**Credit Hours:** 3

Course explores cultural responses to death, with particular focus on the corpse and mortuary treatment, which is linked to how the living view the dead, powers the dead hold over the living, and roles the dead may continue to fulfill for the living. Mortuary treatment over time & across cultures will be addressed, as well as influencing factors.

**General Education Attribute**

- Competency-Intercultural Fluency

## ANTH 3900 - Anthropology Independent Research

**Credit Hours:** 1 TO 4

Course is intended for advanced undergraduate students wishing to develop an independent research project within anthropology. Research may be literature-based or empirical. Each research project is unique, and data collected should ultimately be presented and/or published as appropriate.

**Prerequisite:** ANTH 2020 and ANTH 2030 and ANTH 3000

## ANTH 3990 - Special Problems in Anthropology

**Credit Hours:** 3

This course is a topics course. Areas not covered by the existing curriculum can be explored in a focused study on a topics identified by a faculty member,

## ANTH 4000 - Anthropological Theory

**Credit Hours:** 3

This course focuses on historical and contemporary anthropological theories that anthropologists use to study and interpret human behavior. Students will explore how the theories influence the types of questions anthropologists ask and help them to determine what is significant in their research.

**Prerequisite:** ANTH 1000 and ANTH 2000 and ANTH 2010 and ANTH 2020

## ANTH 4010 - Anthropology of Death and Dying

**Credit Hours:** 3

This seminar course explores death and dying from multiple cultural perspectives, utilizing both scientific and humanistic approaches in anthropology and related fields. This course investigates varied cultural views on the causes, meanings, and impacts of death and dying on humans, from the earliest archaeological evidence to modern times.

## ANTH 4260 - Cell Physiology

**Credit Hours:** 4

Study of the regulatory processes that occur within the eukaryotic cell that cover homeostasis and allow for adaptive change. The course will focus on membrane biochemistry, transport, protein sorting, cell signaling, cytoskeletal nanomotors, and cell specialization. The laboratory portion of the course incorporates experiential learning of basic procedures that allow experientialists to uncover the workings of the eukaryotic cell. Three lecture hours and three laboratory hours weekly.

## ANTH 4900 - Senior Seminar in Anthropology

**Credit Hours:** 3

This course investigates issues relevant to the future, practice and applications of Anthropology. Topics to be addressed may include interdisciplinary research, professional ethics, publication, and careers. Students will explore career options, assess job skills, and produce a career portfolio.

**Prerequisite:** ANTH 2030 and ANTH 4000

## ANTH 4950 - Anthropology Internship

**Credit Hours:** 3 TO 6

Students are placed with an organization which most nearly matches their goals for employment within discipline. The intent is to provide students with practical work experience within the field. Advisor or department chair approval is required before enrollment.

**Prerequisite:** ANTH 2020 and ANTH 2030 and ANTH 3000

## ARAB 1001 - Elementary Arabic I

**Credit Hours:** 3

This is the beginner level in Arabic. This course covers and emphasizes the development of the basic skills of the Arabic language and includes instruction in basic pronunciation, comprehension, communication, and grammar. Students will also become acquainted with the culture of the Arab world and establish a solid foundation for more advanced courses in Arabic.

## ARAB 1002 - Elementary Arabic II

**Credit Hours:** 3

This course continues to introduce students to the people and culture of the Arabic-speaking world. Students will become familiar with Arabic grammar and language structure. They will have maximum opportunity to use the different language skills: listening, speaking, reading and writing, in Modern Standard Arabic (MSA).

**Prerequisite:** ARAB 1001

## ARAB 2001 - Intermediate Arabic I

**Credit Hours:** 3

Students will acquire additional vocabulary and a greater understanding of more complex grammatical structures. There will be an increased use of Arabic language and culture in instructions and communication. This course will provide the students with a strong foundation at the intermediate level in reading, writing, speaking, & listening.

**Prerequisite:** ARAB 1002

## ARAB 2002 - Intermediate Arabic II

**Credit Hours:** 3

Intermediate Arabic II is the continuation of Intermediate Arabic I. This course provides additional practice to help students attain a higher level of skill development (e.g.,listening, speaking, reading, writing and culture) and linguistic accuracy.

**Prerequisite:** ARAB 2001

## ARAB 3001 - Advanced Arabic I

**Credit Hours:** 3

Advanced Arabic I is the continuation of Intermediate Arabic II. In this course, students will acquire a genuine command of the Arabic language by listening, speaking, reading, writing, and the ability to understand the culture . There is intense practice in conversation, composition, phonetics, and culture.

**Prerequisite:** ARAB 2002

## ARAB 3002 - Advanced Arabic II

**Credit Hours:** 3

This course is a continuation of Advanced Arabic I. It is intended to further develop students' proficiencies in speaking, writing, listening, reading, and culture so that they can be at a level necessary to communicate with flexibility, knowledge and ease in the language. Emphasis will mainly be placed on culture, composition and oral discussion.

**Prerequisite:** ARAB 3001

## ARAB 3110 - Arabic Conversation

**Credit Hours:** 3

Arabic conversation is designed for students who want to acquire a speaking knowledge of the language with a focus on communication, comprehension, and cultural information about Arabic customs. In this course, students will engage in "real-time" discussions, debate, presentations, and cultural reporting activities.

**Prerequisite:** ARAB 1001

## ARAB 3410 - Contemporary Arabic Culture

**Credit Hours:** 3

This course will engage students in the study of a variety of artistic and socio-cultural aspects of the Arab world. There will be an emphasis on representative cultural artifacts (from literature and other arts) that have come to define the region, as well as on culturally specific constructions of gender, ethnicity, and race (taught in English).

**General Education Attribute**

- Discoveries-Art/Humanities

## ARAB 3420 - The Culture of Islam

**Credit Hours:** 3

This course will engage students in the study of the culture of Islam. There will be an emphasis on identifying preconceived notions relating to Islam. This course will compare and contrast the history, essential tenets, and central practices of Islam to Judaism and Christianity. The context in which Islam began and the role of Muhammad (PBUH) on Islam will also be discussed. The Five Pillars of the Islamic faith and the split in Islam into the two major sects, Sunni, and Shi'a, will be explained. Due to the current events in the Middle East and the great number of social media users, this course will help students to understand a culture where secularism, capitalism, and materialism have no value.

## ARAB 3430 - Images of Islam: From Spain to Iran

**Credit Hours:** 3

This course discusses the influence of Islam on art and architecture from select countries from Spain to Iran. It provides an accessible and appealing examination of the significant artistic, architectural, and cultural dimensions of the Islamic World and their influences on the West.

## ARAB 3990 - Selected Topics in Arabic

**Credit Hours:** 3 TO 12

This course provides students the opportunity to explore and research Arabic language and culture-related topics of interest that are not available as regular course offerings of the University.

## ARAB 4001 - Introduction to Arabic Linguistics

**Credit Hours:** 3

This course will focus on the study of Arabic as a language system in terms of modern linguistic analysis. Students will study the language's sound system (phonology), word structure (morphology, particularly roots and patterns), phrase and sentence structure (syntax), and meaning at the word and sentential level (semantics). The history of Arabic and the issue of diglossia in Arabic-speaking countries will be discussed. The linguistic features of both Standard Arabic and the modern Arabic dialects of today will also be covered.

## ARAB 4002 - Arabic Translation

**Credit Hours:** 3

This course introduces basic techniques of Arabic-English translation. Students will work on stylistic, syntactic, technical, and cultural problems encountered in the translation process. It focuses on the process and quality of translation with emphasis on cultural differences.

**Prerequisite:** ARAB 3001

## ARAB 4210 - Arabic Literature in Translation

**Credit Hours:** 3

This course is a survey of Arabic literature in translation with a focus on continuity and change, influence, and major trends, themes, and genres. It will provide students with a foundation in Arabic literature. Students will be introduced to short stories, novels, essays, poetry, and plays.

## ARAB 4951 - Modern Languages & Cultural Internship

**Credit Hours:** 0 TO 12

This course is intended to provide the Spanish/French/Arabic/Chinese student with an opportunity to work in a professional setting to learn about areas that are not available or not practical in an academic environment. The internship will enable the student to apply Spanish/French/Arabic/Chinese language skills in the real work place and will provide an invaluable experience which should make the student more marketable upon graduation.

**Prerequisite:** Students should have completed 12 credits of the language and have junior standing.

## ARED 2830 - Digital Culture in Arts

**Credit Hours:** 3

An investigation into visual culture and emerging technologies in the arts. Topics include cultural critique,

communication technology, digital production, electronic media, and portfolio development. Participation involves study of and artistic production with digital media through social networking, contemporary theory, critical analysis, and creative expression.

## ARED 3140 - Arts Theory & Practice

**Credit Hours:** 3

An introduction to contemporary theories and practices in arts education. Topics include contemporary issues in the arts, history of educational practices in the arts, and theories in the arts. Philosophy of teaching, therapy, cultural diversity, curriculum, assessment, advocacy, and emerging research will be addressed.

## ARED 3150 - Art Curriculum PK-12

**Credit Hours:** 3

An assembly of elements necessary for curriculum and programs in the arts. Topics include program and curriculum development, planning, implementation, instruction, and assessment. In preparation for working with people of all ages, attention will be given to artistic development theories, psychological developmental theories, special needs accommodation and adaptation, motivation, assessment techniques for individuals and programs in the arts, as well as arts infusion and integration.

**Prerequisite:** ARTH 1301 and ARTH 1302

## ARED 3160 - Arts Professional Standards

**Credit Hours:** 3

An orientation for professional practices in the arts. Topics include licensing, ethics, best practices, work place skills, professional development, and leadership for schools, clinics, and community settings. In preparation for work in the field, attention will be given to personal management, collaboration, and reflection on professional participation.

## ARED 4250 - Art & Inclusion PK-12

**Credit Hours:** 3

An overview of working in the arts with special education students. Topics include human growth and development in the arts, artistic process and product, adaptations and accommodations, as well as identification and assessment of students with disabling conditions. Attention will be given to needs of persons with exceptionalities, to compliance with legal requirements, and to access resources and support.

**Prerequisite:** SPED 1050

## ARED 4750 - Arts in Community

**Credit Hours:** 3

This course prepares students for teaching and internships in the arts. Field experience includes observation and practice working in mentored situations in the arts with opportunities for professional growth and development. Topics include applied presentation and leadership skills, environmental factors, planning and preparation, and professional practices.

## ARED 4960 - Community Arts Internship

**Credit Hours:** 12

This course is a culminating experience for art education majors who are not seeking teacher certification. It is an alternative to student teaching for students interested in career experience in fields such as arts administration, art therapy, and museum education. Students must apply for a placement in the field.

## ART 1100 - 2D Design

**Credit Hours:** 3

A study of two-dimensional design concepts and their applications. Emphasizes the principles and elements of design. Required of all art majors.

## ART 1106 - Drawing I

**Credit Hours:** 3

This introductory studio course focuses on the development of perceptual, organizational, and visual problem-solving skills, as well as the tools, materials, and techniques of drawing. Still life, landscape, and the human figure are observed in order to develop a broader understanding of composition and illusionistic space.

## ART 1200 - 3 Dimensional Design

**Credit Hours:** 3

This course introduces the concepts and basic principles of designing in space, and develops an awareness of spatial problems and sensitivity to designing with materials.

**General Education Attribute**

- Discoveries-Art/Humanities

## ART 1206 - Drawing II

**Credit Hours:** 3

This course provides a continued introduction to basic drawing problems and principles with a broader exploration of media, process, and subject matter. Increased study of both historical and contemporary artists and images provide for further discussion of fundamental drawing issues. The creative uses of various media and tools, both traditional and digital, will be explored.

**Prerequisite:** ART 1106

## ART 1300 - Digital Art Foundations

**Credit Hours:** 3

This course introduces students to computer software and hardware related to the creation, documentation, and presentation of art. The course looks at digital media as an investigative and creative tool in art and design, and as a method of communication. Programs covered include, but are not limited to, Photoshop, Illustrator, and InDesign.

**General Education Attribute**

- Foundations-Tech Literacy

## ART 2001 - 3D Animation Principles

**Credit Hours:** 3

This course introduces students to the many areas and aspects of computer animation. Students model, surface, paint bump maps and displacement maps, light a CG environment, and learn to animate CG models, lights and cameras. Students are introduced to the group production environment. This course emphasizes the wide range of talents and disciplines within the CG animation field.

## ART 2004 - Ceramics I

**Credit Hours:** 3

This course description introduces ceramic hand-building and wheel-throwing techniques. Both creativity and craftsmanship will be addressed in each assignment. High-fire and low temperature glazing processes will be employed as students learn to load gas and electric kilns. Students study examples of historical and contemporary ceramic art as they learn to express aesthetic ideas in their own creative work.

## ART 2005 - Introduction to Photography

**Credit Hours:** 3

Instruction familiarizes students with manual camera operation. Professional standards govern the exposure, editing, and printing of photographic images. Project-based instruction balances historical context, aesthetics, and technique. Course requires student access to a DSLR camera.

## ART 2008 - Typography

**Credit Hours:** 3

Typography is language made visible. This course develops the ability to see, understand, and affect the visual language of type beyond the reading of text. Students explore typographic strategies using a range of historical and contemporary methods that emphasize uniting aesthetics and purposeful communication.

## ART 2009 - Art of Natural Science

**Credit Hours:** 3

Working with plant and animal subjects, students will investigate the natural world through artmaking. The course will introduce students to masterworks of natural science in the fine and applied arts, landscape painting, and contemporary art involving animals, nature, and the environment.

## ART 2010 - Introduction to Jewelry and Metals

**Credit Hours:** 3

An introductory course in designing and fabricating both functional and sculptural jewelry and metal objects. Students develop personal and creative work while exploring fundamental metalworking techniques. Critical analysis of art works will be learned through formal critiques and the study of historical and contemporary objects.

## ART 2011 - Painting I

**Credit Hours:** 3

A beginning course in the fundamental concepts and competencies of painting. Primary emphasis is on composition and the creation of form. Work with figure and natural objects, etc.

**Prerequisite:** ART 1106 and ART 1206 and ART 1100

## ART 2012 - Printmaking I

**Credit Hours:** 3

This course is designed to give students a basic understanding of the history, processes, and materials used in printmaking (Relief, Intaglio, Monotype, Lithography and Screen printing). Students will learn through technical demos and individual and group critiques. Students will understand the visual and expressive possibilities of each method.

**Prerequisite:** ART 1106 and ART 1100

## ART 2013 - Sculpture I

**Credit Hours:** 3

This course introduces the student to sculpture as three-dimensional expression.An emphasis on ideas, composition and technique will provide the student with a basis for the execution of individual sculptural expressions.

## ART 2014 - Wood Furniture I

**Credit Hours:** 3

Introduces wood as a material to develop personal creativity & 3D design sensibility in regard to furniture. Methods of woodworking are investigated, including the use of hand tools, power tools, machinery, and modes of finishing. Consideration is given to the role of furniture and wooden objects, historically, functionally, and conceptually.

## ART 2101 - 2D Animation Principles

**Credit Hours:** 3

This introductory production course in basic animation techniques includes a historical overview related to current animation trends in education, industry, entertainment, and independent/experimental production. It allows practical aesthetic and technical experiences in the fundamental principles and physics of motion. This class provides an analysis of action and basic physical laws through the study of movement and time. It serves as a foundation for all subsequent animation courses.

## ART 2104 - Ceramics II

**Credit Hours:** 3

Broadens students' understanding of the basic principles of ceramic practice and develops individual expertise in clay. Students learn to formulate and mix their own clay bodies and glazes, and fire various types of gas and electric kilns. Historical and contemporary ceramics are examined to demonstrate aesthetic concepts and to provide a basis for criticism.

**Prerequisite:** ART 2004

## ART 2105 - Introduction to Digital Filmmaking

**Credit Hours:** 3

Demonstrative lectures, studio exercises, and collaborative tasks, expose students to rudimentary principles and practices governing formal elements of the moving image. Project-based instruction balances historical context, aesthetics, technique, and safety. Equipment provided.

## ART 2108 - Visual Literacy

**Credit Hours:** 3

This course builds on the principles of graphic design and provides an overview of design history, theory, elements and principles, concept development, research, and continued exploration in professional software. Assignments will stimulate the application of creative thinking to solve problems in graphic design.

## ART 2110 - Introduction to Jewelry Casting

**Credit Hours:** 3

This course is designed to give the student a thorough introduction to the materials and processes used in the jewelry/metals medium with a specific emphasis on the casting process. Design issues as well as technical processes will be addressed through a variety of studio exercises and problems.

## ART 2112 - Surface Design

**Credit Hours:** 3

Exploring printmaking techniques, materials, and processes from around the world, students will apply their own unique and patterned designs to a variety of surfaces. Students will investigate the origins and history of design motifs of diverse cultures while comparing decorative arts to forms and patterns found in nature.

## ART 3001 - 3D Modeling and Rigging

**Credit Hours:** 3

This course builds on the principles and knowledge gained in 3D Animation Principles. Students learn organic modeling techniques, basic rigging skills and intermediate compositing techniques. Students will continue to develop interpersonal communication and leadership skills while working in a group environment. Students will work on a short group film project and several individual modeling and animation project.

**Prerequisite:** ART 2001

## ART 3004 - Intermediate Ceramics

**Credit Hours:** 3 TO 6

This course builds upon the established interests and expertise of the intermediate level student. Incoming students are expected to have a technical understanding of the basic principles of ceramic practice as they are encouraged to develop personal artistic direction. Formal analysis of their work occurs in group and individual critiques.

**Prerequisite:** ART 2004 and ART 2104

## ART 3006 - Intermediate Drawing

**Credit Hours:** 3 TO 6

Students pursue solutions to class problems and develop personal goals in conjunction with the continuing development of fundamentals.

**Prerequisite:** ART 1106 and ART 1206

## ART 3008 - Advanced Typography

**Credit Hours:** 3

Building on knowledge from Typography, this course explores typographic expression, experimental processes, and the relationship between form, content, and meaning. Students are asked to test the boundaries of typography and to use typography in specialized contexts.

**Prerequisite:** ART 2008

## ART 3009 - Illustration I

**Credit Hours:** 3

This course develops students' skills in visual conceptualization. Projects emphasize the development of creative attitudes and solutions to illustration problems through practical studio procedures and offers students the opportunity to experience diverse areas of illustration.

**Prerequisite:** ART 1100 and ART 1106 and ART 1206 and ART 1300

## ART 3010 - Jewelry and Metals: Metal Forming

**Credit Hours:** 3

Metal forming and forging skills enable students to further understand the characteristics and physical manipulation of metal. Contemporary ideas about the context, meaning and value of met objects will be examined. Students are encouraged to develop a personal artistic direction and critical dialogue in their work.

**Prerequisite:** ART 2010

## ART 3011 - Contemporary Abstraction

**Credit Hours:** 3

Students taking this course will explore a range of motivations and strategies for producing abstract art. They will investigate issues that concern today's abstractionists and learn strategies to help them develop more personal and relevant abstract images.

**Prerequisite:** ART 1100 and ART 1206

## ART 3012 - Intermediate Printmaking

**Credit Hours:** 3 TO 6

This course is a continuation of the technical issues and aesthetic development that is begun in Printmaking I. The focus of this course is to develop in the student further control over the formal and conceptual components of image making in print. The student works with the instructor to develop a plan of study and works toward more developed and refined imagery and individual expression in print mediums.The printmaking mediums covered may include: lithography, photo lithography, screen print, intaglio, relief, letterpress, book arts or other forms

**Prerequisite:** ART 2012

## ART 3013 - Socially Engaged Art

**Credit Hours:** 3

This course introduces students to art making focused on the aesthetics and functionality of human engagement. Unlike the tradition of creating physical or digital products, Socially Engaged Art (SEA) places its highest value on process. SEA practitioners often invoke a goal of social and/or political change via interventions within existing systems, especially through collaboration with community members, stakeholders, organizations or institutions.

## ART 3014 - Intermediate Wood/Furniture

**Credit Hours:** 3 TO 6

This course is intended as a continuation of and expansion upon the skills and techniques covered in Wood Furniture I and II. Students are encouraged to further develop their personal creativity and design sensibility, while broadening their technical knowledge. Specifically, this course focuses on the methods of designing and constructing furniture used for seating, including bending wood, the ergonomics of chair design, and basic upholstery.

## ART 3101 - 3D Dynamics and Simulations

**Credit Hours:** 3

This course expands work in 3D computer modeling and animation. It introduces the use of bones and builds on previous rigging knowledge to include Sliders and other motion effectors and modifiers. Advanced surfacing and special effects work through group computer animation projects, and a detailed modeling project.

**Prerequisite:** ART 2001

## ART 3104 - Ceramics II

**Credit Hours:** 3

This course broadens students' understanding of the basic principles of ceramic practice and develops individual expertise in clay. Students learn to formulate and mix their own clay bodies and glazes, and fire various types of gas and electric kilns. Historical and contemporary ceramics are examined to demonstrate aesthetic concepts and to provide a basis for criticism in ceramics.

**Prerequisite:** ART 2004

## ART 3105 - Lights and Lens

**Credit Hours:** 3

Analytical viewing of historical exemplars informs studio and location-based experimentation in lighting techniques for the still and moving image.  Additionally, student projects will explore spatial rendition through lens selection.

**Prerequisite:** ART 2005 or ART 2105

## ART 3108 - Visual Communication

**Credit Hours:** 3

This course will expose students to contemporary theoretical models and strategies in graphic design and provide students with a greater ability to visually and verbally communicate concepts and ideas with regard to their work in context. Projects will analyze the building blocks of visual communication and application across various media.

**Prerequisite:** ART 2108

## ART 3109 - Scientific Illustration

**Credit Hours:** 3 TO 6

This course will serve as a broad functional introduction to the complex field of scientific illustration. Students will be provided with a thorough survey of its history and major practitioners, the wide range of its subject and common techniques, and the research skills necessary for success in this field. Students will leave this class having had in-depth exposure to four chosen subjects, and four commonly used techniques.

**Prerequisite:** ART 1206

## ART 3110 - Jewelry and Metals: Metal Fabrication

**Credit Hours:** 3

Traditional jewelry and metal fabrication techniques, along with ideas about movement, containment, and protection, are explored in depth. Advanced hollow construction processes are investigated in works that reflect students' individual interests and aesthetic.

**Prerequisite:** ART 2010

## ART 3111 - Painting II

**Credit Hours:** 3

A continuation of ART 2011. Emphasis will be on creating and controlling pictorial space and form and their relationship to composition. Exercises and concepts determined by the instructor.

**Prerequisite:** ART 2011

## ART 3112 - Screen Printing I

**Credit Hours:** 3

Screen printing will be the sole concern of this course with emphasis on developing the skill and concept to be able to produce a more individual image.

**Prerequisite:** ART 2012

## ART 3113 - Sculpture Figure Modeling

**Credit Hours:** 3

This course provides a comprehensive visual study of the three-dimensional human form. Students will work in wax, oil, or water-based clay to create representational, figurative sculptures from direct observation of live models in the studio. The focus of this class will be on building observational and hand modeling skills rather than producing finished works.

**Prerequisite:** ART 1206

## ART 3114 - Wood Furniture II

**Credit Hours:** 3

This course builds upon the skills and techniques covered in Wood Furniture I. Students are encouraged to further develop their personal creativity and design sensibility, while broadening their technical knowledge. Specifically, this course focuses on the use and maintenance of hand tools, as well as types of joinery used in box and cabinet construction.

**Prerequisite:** ART 2014

## ART 3115 - Professional Practices for Studio Arts

**Credit Hours:** 3

This studio course will provide professional planning and preparation, image documentation, and portfolio management skills specific to the needs of studio artists. Career paths available to studio artists, strategies to achieve goals, and website maintenance will be covered.

**Prerequisite:** ART 1300

## ART 3201 - Animated Performance

**Credit Hours:** 3

This course is a continuation of 2D Animation Principles. It refines and develops the fundamental principles and physics of motion and applies them in context. Students will identify and resolve problems that arise in time-based media as a study of emotional expression. This will provide a foundational knowledge of the fundamentals of acting and performance in animation.

**Prerequisite:** ART 2101

## ART 3205 - Non-Fiction Filmmaking

**Credit Hours:** 3

Analytical viewings and collaborative, project-based learning highlight the moving image as a medium for creative non-fiction.

**Prerequisite:** ART 2105

## ART 3208 - Designing for the Web

**Credit Hours:** 3

This course is an introduction to the front-end design and development of websites. Students will design, develop, and launch web pages using the current web languages of HTML5 and CSS3, and industry-standard applications. Content includes UX/UI, usability, layout/positioning methods, image optimization, web typography, and responsive design.

**Prerequisite:** ART 2008

## ART 3209 - Illustration II

**Credit Hours:** 3

This course stimulates innovative visual solutions and expands students' ability to master advanced illustration techniques. Projects help develop creative attitudes and professional work habits while solving assignments in book, editorial, technical and advertisement illustration.

**Prerequisite:** ART 3009

## ART 3210 - Jewelry and Metals: Production Processes

**Credit Hours:** 3

Students continue to develop their individual expertise through the creation of jewelry and metal object production lines. This course introduces techniques to create multiples and design strategies for craft related businesses. Historic and current trends in metalwork are examined as a basis for aesthetic ideas and criticism.

**Prerequisite:** ART 2010

## ART 3211 - Intermediate Painting

**Credit Hours:** 3 TO 6

This course provides for an examination by the student of concepts of space, light and shade, color and composition through the student's direct observation of subject matter and through lectures by the instructor.

## ART 3212 - Lithography I

**Credit Hours:** 3

Lithography will be the basic study and sole concern of this course with emphasis on skill to develop and produce a more individual image.

**Prerequisite:** ART 2012

## ART 3213 - Sculpture Metal Casting

**Credit Hours:** 3

Students will utilize traditional and contemporary mold-making casting processes to create sculptures of aluminum and bronze.

**Prerequisite:** ART 2004 or ART 2010 or ART 2013 or ART 2014

## ART 3301 - Animation Pipleline

**Credit Hours:** 3

This course is a continuation of Animation I and II. It seeks to advance students' knowledge in cinematic design and execution to better understand animation as applied to performance, emotion, and believability. Students will be encouraged to think of themselves as filmmakers through the understanding and appreciation of cinematic language and technique. The fundamentals of acting and performance in animation will be expanded upon and provided with an emotional context.

**Prerequisite:** ART 2101

## ART 3308 - Branding Design

**Credit Hours:** 3

The visual interpretation and translation of brands to an audience is a fundamental element of branding. It is the emotional cornerstone for both the organization and the product being sold. Design connects the audience to the brand. Branding is about understanding the brand values and positioning, and developing an expression across various media.

**Prerequisite:** ART 3108

## ART 3309 - Graphic Novel Art and Design

**Credit Hours:** 3

This course defines the process of designing the graphic novel for sequential artists. This class is primarily about tools of the trade and the structuring of the graphics, focusing on observational and interpretive drawing skills as they apply

to visual storytelling.

**Prerequisite:** ART 1100 and ART 1206

## ART 3310 - Jewelry and Metals: Contemporary Jewelry Concepts

**Credit Hours:** 3

Students explore jewelry's relationship to the body and its conceptual impact, using mixed media in combination with metal. Material experimentation and ideas about value and permanence are investigated, along with techniques specific to jewelry making. The origin of jewelry and how it functions across cultures is closely examined.

**Prerequisite:** ART 2010

## ART 3311 - Interpreting Landscape

**Credit Hours:** 3

Students will be working largely outdoors and on-site to create paintings and drawings of the landscape. Emphasis will be on the plein air experience. Additional coursework will involve developing images in the studio working from sketches and photographs made on-site. Students are strongly encouraged to have access to dependable transportation.

**Prerequisite:** ART 2011

## ART 3312 - Intaglio I

**Credit Hours:** 3

Intaglio will be the basic study and sole concern of this course with emphasis on skill to develop and produce a more individual image.

**Prerequisite:** ART 2012

## ART 3313 - Steel Fabrication

**Credit Hours:** 3

This course explores traditional and contemporary steel fabrication techniques to create sculptural objects. Instruction will focus on electric arc and gas welding as well as cutting, forming, and finishing. Other steel fabrication methods will be surveyed.

**Prerequisite:** ART 2004 or ART 2010 or ART 2013 or ART 2014

## ART 3401 - Storyboard and Character Design

**Credit Hours:** 3

This upper-level elective course is designed to equip students with the knowledge, skills necessary to tell a compelling story. The course emphasis will be on aesthetic visualization, staging, composition, cinematic continuity, rhythm, timing and pacing. Character archetypes will be extensively studied through the internal analysis and biographical history that will convey the final design for Animation/Cinema production. Character design will be a main component

within the narrative contents of various film genres.

**Prerequisite:** ART 2101

## ART 3410 - Jewelry and Metals: Color and Surface

**Credit Hours:** 3

Students discover how color and surface techniques can vitalize and enhance the jewelry and metal objects they create. Incorporating alternative materials is encouraged. A broad examination of historic and contemporary metalwork serves as the foundation for conceptual research and development.

**Prerequisite:** ART 2010

## ART 3411 - Color for Painters

**Credit Hours:** 3

This course will examine the theoretical and practical roles of color in painting. It will review pigments, their historical treatment and current development, and will examine the evolution of color models created to govern their usage. Through lab exercises students will examine how pigments are used to make paint and the methods used in its application. The color theory presented in lectures will be practically applied through a series of directed studio projects. The course will employ lectures, slide and powerpoint presentations, assigned readings, and hands-on projects and studio assignments to build color literacy for painters.

**Prerequisite:** ART 2011

## ART 3412 - Relief I

**Credit Hours:** 3

This course will address the ideas, methods, and techniques of relief printmaking. Students will develop their own imagery while practicing skills in a variety of print processes. The history and aesthetics of relief printmaking as an art form will be discussed throughout the course.

**Prerequisite:** ART 2012

## ART 3413 - Intermediate Sculpture

**Credit Hours:** 3

Studio concentration in developing, intensifying and enhancing expressional processes as they relate to sculpture. Emphasis on individual initiative in both the development and execution of sculptural problems. The scope of materials and techniques will be extensive, ranging from some of the conventional sculptural media to the most recent materials and techniques. Out of class research is required.

**Prerequisite:** ART 2013

## ART 3501 - Stop Motion and Exp Animation

**Credit Hours:** 3

This upper level elective will impart advanced-level knowledge of and experience with specialized and unique processes of stop-motion and experimental animation. Students will come to understand and appreciate the value and aesthetic appeal of this very tactile process in today's world of computer-generated graphics. The history of these art forms will be guided through every step of their chosen technique, from idea to storyboard to lighting and camera considerations into animation and completion of their projects.

**Prerequisite:** ART 2101

## ART 3510 - Metals II

**Credit Hours:** 3

This course builds upon the skills and concepts introduced in Metals I. Students continue to develop their individual expertise and expression through the creation of jewelry and metal objects, both functional and sculptural. This course will cover metals techniques such as mold making, wax working, centrifugal and gravity casting, stone setting, chain making, surface embellishments and the use of alternative materials. Historic and current trends in metal work are examined to give a basic for aesthetic ideas and criticism.

## ART 3511 - Digital Drawing and Painting

**Credit Hours:** 3

This course is an introduction to digital drawing and painting hardware, software, techniques, and applications in fine art and applied art/illustrations settings. Students will learn digital drawing techniques and paint applications, transparencies, platforms, layers, and execute drawing and painting in the same way they would in a traditional media class.In addition to undergraduate requirements, graduate students will be expected to integrate course content into their ongoing studio production.

**Prerequisite:** ART 1206

## ART 3512 - Photo-Lithography

**Credit Hours:** 3

This course will explore through lecture and demonstration the history, processes, techniques and materials of Photo-Lithography. The ability of photo-lithography to incorporate and combine hand drawn, digital and photographic image making methods in the development of fine art prints will be explored. This course is structured as a studio fine art course that is an extension of the aesthetics and concerns developed in Printmaking I.

**Prerequisite:** ART 2012

## ART 3513 - Sculpture Topic Moldmaking

**Credit Hours:** 3

Students will utilize traditional and contemporary mold-making casting processes to create sculptures of aluminum and bronze.

**Prerequisite:** ART 2004 or ART 2010 or ART 2013 or ART 2014

## ART 3601 - 2D Digital Animation

**Credit Hours:** 3

This course introduces the fundamentals of Adobe Flash for character animation. It analyzes the 2D computer animation workflow and discusses the animation tools and techniques used specifically for Flash animation. It combines the concepts of traditional principles with modern 2D computer animating software to create production quality animation and vector-based graphics.

**Prerequisite:** ART 2101

## ART 3610 - Intermediate Metals

**Credit Hours:** 3 TO 6

This course builds upon the skills and aesthetic development established in Metals 1 and 11. Metalsmithing skills such as raising, die-forming, chasing, repousee, and forging will enable the student to further understand the physical manipulation and characteristics of metal. Students are encouraged to develop both a personal artistic direction in their work and a critical dialogue about the medium.

## ART 3611 - Space and Perspective

**Credit Hours:** 3

Students will engage in a creative investigation of pictorial space in this intermediate-level studio elective. A re-consideration of compositional, atmospheric and linear perspective spatial cues will set the stage for immersion in a variety of spatial systems using both observed and invented environments. Students may elect to work with drawing and/or painting media.

**Prerequisite:** ART 1206

## ART 3701 - Action Analysis Animation

**Credit Hours:** 3

This advanced course will equip the animation student with the knowledge of capturing the human figure in motion. It will train the student to observe the visual kinesthetic analysis of weight distribution, line of action, balance, flexion and extension through space. It will emphasize the use of gesture, expression and vitality within a pose to describe a story. The figure will be sketched from a variety of angles and perspectives within a specified frame of time.

**Prerequisite:** ART 2101

## ART 3711 - Interpreting the Figure

**Credit Hours:** 3.00

This course focuses on using the figure as the primary source for formulating content in each student's work. Students will explore ways in which the figure can be used to express ideas and emotion.

**Prerequisite:** ART 1206

## ART 3909 - Jewelry and Metals: Special Topics

**Credit Hours:** 3

Students further develop their personal aesthetic by exploring various topics and trends in contemporary jewelry and metals. A series of experiences in advanced metalworking will allow the student to selectively study a variety of techniques and concepts. Topics will rotate allowing students to repeat the course.

## ART 3915 - 2D Animation Special Topics

**Credit Hours:** 3

Intensive investigation of select technique, content, genre, or artistic movement (designated by course subtitle) informs production of advanced work in 2D animation production. May be repeated for credit as content varies.

## ART 3916 - 3D Animation Special Topics

**Credit Hours:** 3

Intensive investigation of select technique, content, genre, or artistic movement (designated by course subtitle) informs production of advanced work in 3D animation production. May be repeated for credit as content varies.

## ART 4001 - Animation Portfolio Prep

**Credit Hours:** 3 TO 6

This course expands work in 3D computer modeling and animation. It continues working with sound, advanced nodal surfacing and special effects work through lectures and practical demonstrations. Students work on a group computer animation project, a detailed modeling project, complete a digital portfolio and give a software demonstration.

**Prerequisite:** ART 2001 and ART 2101
**General Education Attribute**

- Competency-Keystone Experience

## ART 4004 - Kiln Construction

**Credit Hours:** 3

This course is an introduction to methods of building kilns. Students will learn about various types of kiln, firing methods, refractories, insulation, fuels, burners, and calculating BTU requirements. Students will construct one or more kilns and learn to repair existing gas and electric kilns as needed.

## ART 4005 - Digital Audio-Moving Image

**Credit Hours:** 3

Collaborative, project-based learning emphasizes the aesthetic and rhetorical contribution of sound to the moving image. Students record, edit, and enhance, location and replacement dialogue; multi-track music; foley, effects, and atmospheres.

**Prerequisite:** ART 2105

## ART 4006 - Human Head Drawing and Painting

**Credit Hours:** 3

This course is designed to provide the art student with an in-depth knowledge of the form and structure of the human head. The class will examine the skeletal and muscular structures in relation to the surface form of the head and neck, as well as the surface forms which determine an accurate likeness. Students will work in a variety of mediums during the drawing segment of the course and in oil in the second half of the term. The class will work primarily from live models.

**Prerequisite:** ART 1206

## ART 4008 - Motion Design

**Credit Hours:** 3

This course introduces the fundamental concepts for motion graphics, focusing on the choreography of typography and imagery within time-based media. The course explores the development of motion graphics utilizing motion-based computer graphic applications, sequences, and techniques in the creation of creative concepts to convey meaning.

**Prerequisite:** ART 2008

## ART 4009 - Advanced Illustration I

**Credit Hours:** 3

Through lectures and assignments, students will build a professional repertoire of illustration skills. Students will gain practical experience and develop authentic personal styles and techniques. The course will also address the business of illustration, portfolio development and self-marketing.

**Prerequisite:** ART 3209

## ART 4011 - Advanced Painting

**Credit Hours:** 3 TO 12

In this course, the student is encouraged to draw upon the instructor and other artists and their art in formulating personal goals and in developing the requisite knowledge and skill necessary for the successful realization of those goals.

**Prerequisite:** ART 2010 or ART 2110

## ART 4012 - Advanced Printmaking

**Credit Hours:** 3 TO 12

The course outlines for ART 2012 areas are to be used for this course. It is a continuation and intensification of those issues covered in ART 3012.

**Prerequisite:** ART 3012

## ART 4013 - Advanced Sculpture

**Credit Hours:** 3 TO 12

Extension of ART 3413.

**Prerequisite:** ART 2013

## ART 4014 - Advanced Wood Furniture

**Credit Hours:** 3 TO 12

The objective of this course is for the advanced student to further define and develop their personal design aesthetic, producing a cohesive body of work reflecting their interests as a furniture artist. The fous will be on designing and building several furniture pieces refleting a common theme; they could be perhaps for a specific purpose or location, or a design well suited for production. Students will be encouraged to investigate alternatives methods and materials appropriate for use in their self-defined projects.

**Prerequisite:** ART 3014

## ART 4101 - Animation Production

**Credit Hours:** 3 TO 6

This course is a continuation of Animation I, II and III, and represents a culmination of our animation curricula. Students will be equipped with the skills and preparation to begin their professional careers in animation as well as the ability to produce thoughtful independent films. This course will challenge students to seek opportunities to explore a more philosophical and nonrepresentational approach, and encourage diverse career endeavors.

**Prerequisite:** ART 2001 and ART 2101

## ART 4104 - Mold-Making in Ceramics

**Credit Hours:** 3

This course provides students in-depth study of mold-making and slip-casting. Students will create functional pottery or ceramic sculpture. Topics include practical demonstration of: pattern and model making, various molds, clay modeling, mold alteration, casting, joining and altering of cast parts, glazing and firing. Design concepts, function, and the history of mold making and its use in the creation of contemporary art will be covered.

**Prerequisite:** ART 2004

## ART 4105 - Color and Image Enhancement

**Credit Hours:** 3

Informed by the aesthetic and techniques of color grading and image enhancement, students generate and composite images. Exercises develop professional sensitivity to rhetorical meaning and impact.

**Prerequisite:** ART 2005

## ART 4106 - Human Anatomy Drawing

**Credit Hours:** 3

A course intended to provide the art student with a thorough visual knowledge of the anatomical structure of the human body through drawing. The course will combine lecture and lab (studio) experiences supplemented by a text book. The students will execute detailed drawings from skeletons, anatomy texts and charts, and from live models. The drawings will range from small studies to near lifesize interpretations. The lectures will deal with clarification of visual human anatomy and will supplement the text book.

**Prerequisite:** ART 1206

## ART 4108 - Graphic Design Systems

**Credit Hours:** 3

Advanced theory and practice of graphic design where students encounter the complexities and interplay between content, context, and the public. Students engage in design research, investigate real-world design problems, consider audience/public, and develop solutions across multiple modes of production.

**Prerequisite:** ART 3308

## ART 4109 - Advanced Illustration II

**Credit Hours:** 3

Students will continue to strengthen illustration approaches and deepen their understanding of visual storytelling in preparation for prof. practice. Authentic styles and techniques are further developed along with more advanced concepts. Special attention is given to the business of illustration, portfolio development, and self-marketing.

**Prerequisite:** ART 3209

## ART 4110 - Advanced Metals

**Credit Hours:** 3 TO 12

Advanced students will further define and develop and their personal aesthetic while continuing to build their technical expertise. A series of experiences in advanced metalworking will allow the student to selectively study a variety of techniques such as: etching, inlay, tool making, raising, forming, enameling, granulation, mold making for multiples, advanced fabrication, etc. Formal analysis of work occurs in group and individual critiques.

## ART 4201 - Digital Visual Effects

**Credit Hours:** 3

This course builds on the foundational skills students have already mastered and explores more complex compositing and visual FX techniques. Masks, pre-compositing, motion tracking, 3D FX and particles will be covered. Students will design and produce final images based on 'real world' situations. Students will produce five minor and two major production-quality level projects to be included on their demo-reels.

**Prerequisite:** ART 2101

## ART 4204 - The Figure in Ceramics

**Credit Hours:** 3

The purpose of this course is to provide students an opportunity for in-depth study of the human figure through the medium of fired ceramics. This class will explore the human form as a vehicle for making art. A variety of approaches to the representation of the figure will be employed. The history of the figure in clay and its place in contemporary art will be covered through lectures and readings.

**Prerequisite:** ART 2004

## ART 4205 - Internship Digital Film and Photography

**Credit Hours:** 3

Students will study the major movements in photography, with an emphasis on contemporary issues and photography of the 20th century. Students will research master photographers and emulate the photographers' techniques and styles in photographs presented for critiques.

**Prerequisite:** ART 2005 or ART 2105

## ART 4206 - Advanced Drawing

**Credit Hours:** 3 TO 12

This course explores the history of the field of Art Therapy is through studying its founding members, related disciplines and traditional populations. The history of Art Therapy is taught in a reflective manner to help students relate the history of Art Therapy to current practices in Art Therapy.

**Prerequisite:** ART 3006

## ART 4208 - Contextual Design

**Credit Hours:** 3

Students gain experience with professional design problems in a design studio environment. Comprehensive projects include: project briefs, assessment and planning, project budget and specifications, working with printers and web domains, and client management.

**Prerequisite:** ART 3008 or ART 2005 or ART 2012 or ART 2011

## ART 4304 - Ceramic Material and Glaze Calculations

**Credit Hours:** 3

This course is designed for the advanced student of ceramics and will examine the raw materials used in the ceramics field. Students will calculate, formulate, and fire clays, slips, and glazes at a variety of temperatures.

**Prerequisite:** ART 2004

## ART 4305 - Photography Thesis Portfolio

**Credit Hours:** 3

A survey of fine and professional artists helps students contextualize their own career aspirations. Personalized instruction and class critique prepare students to articulate a unified personal aesthetic of style and content through a cohesive portfolio of both digital and physical materials. May be repeated once for credit.

**Prerequisite:** ART 2005
**General Education Attribute**

- Competency-Keystone Experience

## ART 4306 - Human Anatomy II

**Credit Hours:** 3

This is a continuation of the Human Anatomy Drawing course for students interested in advanced study of the human form. Greater understanding of the anatomical substructures and deeper investigation of how they affect surface form will be promoted along with greater conceptual and abstract thinking and more effective translation in pictorial terms.

## ART 4308 - Senior Design Portfolio

**Credit Hours:** 3

The capstone course of the Graphic Design program. The semester prepares the students and their portfolios for the professional field or graduate study. The onus is on the student to work and update new or existent projects required of a graduating student. The framework includes professional development lectures, portfolio reviews, and projects.

**Prerequisite:** ART 4208
**General Education Attribute**

- Competency-Keystone Experience

## ART 4404 - Advanced Ceramics

**Credit Hours:** 3 TO 12

This course is designed to allow the advanced ceramic students an opportunity to work with an instructor in formulating and pursuing problems relating directly to their personal development as an artist/potter. Incoming students are expected to build upon the technical and aesthetic understandingof thier chosen artisitic direction. Formal analysis of their work occurs ing roup and individual critiques.

**Prerequisite:** ART 2004

## ART 4405 - Narrative Filmmaking

**Credit Hours:** 3

Intensive study of exemplars informs a capstone media production project. Students employ cumulative proficiencies of knowledge and skill to produce a short film and distribute it competitively. May be repeated once for credit.

**Prerequisite:** ART 2105
**General Education Attribute**

- Competency-Keystone Experience

## ART 4408 - Packaging Design

**Credit Hours:** 3

This course focuses on conceptually based three-dimensional package design and product graphics within the realm of identity and branding systems. Projects employ alternative materials and formats. It stresses consumer and client research, marketing techniques, and environmental concerns

## ART 4504 - Special Ceramic Workshop

**Credit Hours:** 3

This course is designed for the advanced student of ceramics. The course is a special offering that will focus on a specific area such as vapor glazing, Raku, primitive firing, photo emulsion or other current developments in the ceramics field.

## ART 4505 - Topics in Digital Film and Photography

**Credit Hours:** 3

Intensive investigation of select technique, content, genre, or artistic movement (designated by course subtitle) informs production of advanced work in photography and/or film. May be repeated for credit as content varies.

**Prerequisite:** ART 2105

## ART 4508 - Book Arts

**Credit Hours:** 3 TO 9

This course introduces book arts as a medium of creative expression. Lectures, demonstrations, and studio work will explore various approaches to book design. Studio exploration will focus on each student's area of experience. Diverse approaches to book design will be supported, including, graphic design, typography, photography, digital-imaging, painting, drawing, and printmaking.

**Prerequisite:** ART 3008 or ART 2005 or ART 2012 or ART 2011

## ART 4604 - Ceramic Mat & Glaze Calc

**Credit Hours:** 3

This course is designed for the advanced student of ceramics. The course will include the study of ceramic raw materials, the nature and properties of clay and non-clay materials used in pottery production and the calculation, formulation and firing of clay bodies, slips, engobes, and glazes.

## ART 4715 - Gallery Management

**Credit Hours:** 3

This course is designed to acquaint the students with the operation of large and small institutional galleries. Gallery management entails the acquiring of exhibitions or designing of original exhibitions, installation of exhibitions and the processes of funding including packing, mailing contracts for shipping and dialogues with the artists or with the gallery

involved in exhibiting. The course requires that students do some work and observation in each of the areas of operation.

## ART 4900 - Senior Capstone in Studio Arts

**Credit Hours:** 3

This course supports research, proposal development, studio exploration and preparation for the senior capstone presentation. Multidisciplinary group discussions and critiques will analyze the concepts and context that define student's individual studio practice. Focus will be placed on building a comprehensive portfolio and supporting materials.

**Prerequisite:** ART 3115
**General Education Attribute**

- Competency-Keystone Experience

## ART 4901 - Animation Production Capstone

**Credit Hours:** 3

Students will be equipped with the skills and preparation to begin their professional careers in animation as well as the ability to produce thoughtful independent films. This course will challenge students to seek opportunities to explore a more philosophical and non-representational approach, and encourage diverse career endeavors.

**Prerequisite:** ART 3301
**General Education Attribute**

- Competency-Keystone Experience

## ART 4905 - Narrative Filmmaking

**Credit Hours:** 3

Intensive study and production of a short capstone film for competitive distribution marshals cumulative proficiencies of knowledge and skill. May be repeated once for credit.

**Prerequisite:** ART 2105

## ART 4909 - Advanced Illustration II

**Credit Hours:** 3

Students will continue to strengthen illustration approaches an deepen their understanding of visual storytelling in preparation for professional practice. Authentic personal styles and techniques are further developed along with more advanced concepts. Special attention is given to the business of illustration, portfolio development, and self-marketing.

**Prerequisite:** ART 4009

## ART 4915 - Senior Seminar in Studio Arts

**Credit Hours:** 3

This course involves preparation, research, proposal development, and studio exploration for the senior B.F.A. exhibition requirement or B.A. capstone project. Students will have the opportunity to present their research and artwork for discussion and critique in a group environment. Focus will be placed on the preparation of a comprehensive portfolio,and forming a statement that incorporates the understanding one's work in relation to current works by mature artists.

**Prerequisite:** ART 3115

## ART 4950 - Internship BFA

**Credit Hours:** 3 TO 15

Designed for students who have shown sound visual or tactile concepts and technical proficiency within their major area and intend to function in a professional capacity within that discipline. Students electing this option will receive different aspects of practical training pertaining to advanced techniques and processes in a specific medium in an assigned professional situation subject to the student's needs and availability of a suitable opening. The learning experiences are jointly supervised and evaluated by a professional staff member of the faculty and a faculty advisor within the student's major discipline.

## ARTH 1110 - Art Appreciation

**Credit Hours:** 3

This course introduces students to the visual arts. Through analysis and creation, students learn about the form, content and context of art, as well as the creative and design processes involved. It will enrich the student's awareness and understanding of visual art forms from around the world and the cultures that create them.

**General Education Attribute**

- Discoveries-Art/Humanities
- Competency-Intercultural Fluency

## ARTH 1200 - Landmarks of World Art

**Credit Hours:** 3

This course is an introduction to the defining moments of world art and architecture from prehistory to the present.

**General Education Attribute**

- Discoveries-Art/Humanities
- Competency-Intercultural Fluency

## ARTH 1301 - Global Art History I

**Credit Hours:** 3

This course is an introduction to and a general survey of major works of art and architecture in a global context from prehistory to the fourteenth century.

**General Education Attribute**

- Competency-Intercultural Fluency

## ARTH 1302 - Global Art History II

**Credit Hours:** 3

This course is an introduction to and a general survey of major works of art and architecture in a global context from 1300 to the present.

**General Education Attribute**

- Discoveries-Art/Humanities
- Competency-Intercultural Fluency

## ARTH 2100 - Introduction to Asian Art

**Credit Hours:** 3

This course is an introduction to the major artistic traditions of East Asia from prehistory to the present. Works of art and architecture from India, China, and Japan are considered in relationship to their social-historical contexts.

**General Education Attribute**

- Competency-Intercultural Fluency

## ARTH 2220 - Introduction to African Art

**Credit Hours:** 3

This course is an introduction to the major artistic traditions of Africa from prehistory to the present. Regional works of art and architecture from Africa are considered in relationship to their social-historical contexts. The course material includes prehistoric archaeological sites, historical art-producing cultures, and modern works.

## ARTH 2300 - Introduction to European Art

**Credit Hours:** 3

This course will survey the artistic achievements of European artists and cultures from prehistory until the late 18th century, focusing on the creative impulses that identified European societies. Students will explore examples of art, architecture, painting, sculpture and crafts to reach an understanding of the cross-cultural and social contexts.

**General Education Attribute**

- Competency-Intercultural Fluency

## ARTH 2400 - Introduction to Art of the Americas

**Credit Hours:** 3

This course is an introduction to the art of North, South, and Central America and the Caribbean by artists from various cultures and nations. It spans history from the ancient civilizations of Mesoamerica to the modern art capitals of Mexico City and New York.

**General Education Attribute**

- Competency-Intercultural Fluency

## ARTH 2500 - Art History Today

**Credit Hours:** 3

This course is an introduction to the study of art history that emphasizes the global context in which art historians understand and study art history today. The relevance of art history beyond the classroom will be emphasized.

**General Education Attribute**

- Competency-Intercultural Fluency

## ARTH 3000 - Art of Ancient Egypt

**Credit Hours:** 3

This course is designed to familiarize the student with the development of the art in ancient Egypt, beginning with prehistoric Egypt, and concluding with Egypt under the Romans. Sculpture, architecture, painting, jewelry and other crafts will be studied. The modern rediscovery of Egypt by the West, and the growth of Egyptology will be discussed.

**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Intensive Writing

## ARTH 3100 - Classical Art

**Credit Hours:** 3

A historical survey of the art and architecture of the ancient civilizations of Greece and Rome. This course will familiarize the student with how, developing from earlier cultures, the Greeks and Romans created an artistic and engineering vocabulary of such a refinement and practicality that is still in use today.

**General Education Attribute**

- Competency-Intercultural Fluency

## ARTH 3200 - Medieval Art

**Credit Hours:** 3

A survey of the art and architecture produced during the Medieval era focusing on the Early Christian, Byzantine, Romanesque and Gothic styles. Stylistic changes will be explored against the backdrop of cultural transformations. Attention will be directed at the cross-cultural fertilization between European and non-European cultures.

**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Intensive Writing

## ARTH 3400 - Art of the Renaissance

**Credit Hours:** 3

This course will survey the artistic achievements of Italian and Northern European artists working between 1400 and 1550 during the period known as the Renaissance. Students will explore the major examples of art and architecture and

develop an understanding of the complex cross-cultural and social-historical contexts.

**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Intensive Writing

## ARTH 3540 - Cinema History

**Credit Hours:** 3

Analytical viewing of exemplar works contextualizes major genres, artistic movements, theories, and national cinemas, in a broader history of the moving image. Highlighting the work of significant creative contributors fosters appreciation for the medium as an art form.

## ARTH 3600 - American Art

**Credit Hours:** 3

This course explores the historical development of American art starting with pre-contact Native North American art and ending with Abstraction. The course provides a complex narrative of the art and artists in North America, including fine art, folk art, popular art, and mass culture and the built environments in which these works circulate.

**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Intensive Writing

## ARTH 3610 - African American Art and Artists

**Credit Hours:** 3

This course will investigate artworks created by African American visual artists and consider how Black artists are situated in the framework of American art as a whole. Students will be introduced to African American art and artists, from art and design in the Colonial era to African American art in the new millennium.

**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Intensive Writing

## ARTH 3700 - History of Photography as Art

**Credit Hours:** 3

This course introduces students to photographers, photographs, readings, theory, and criticism from the history of photography. The course also covers the development of photography as a process and as art, and looks at related artists, movements, various cultural perspectives, and styles of photography.

**Prerequisite:** ARTH 1110 or ARTH 2500
**General Education Attribute**

- Competency-Intercultural Fluency

## ARTH 3800 - Modern Art

**Credit Hours:** 3

This course explores the development of Modern Art, especially the painting, sculpture, photography, design, and architecture associated with modernism. The course tracks the global expansion of modernism by analyzing ways that visual artists conceptualized the period.

**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Intensive Writing

## ARTH 3810 - Contemporary Art

**Credit Hours:** 3

This course examines the history of art in a global context from the 1950s to the present with an emphasis on understanding examples of global contemporary art within their specific socio-historical contexts. The course explores the ways in which the period is marked by dramatic changes in art and society.

**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Intensive Writing

## ARTH 3900 - Art and Society

**Credit Hours:** 3

The course is designed to encourage students to understand the interaction between art and society. Among topics to be discussed are the social meaning of art, institutionalization of art, art market politics, social position of the artist, social structure and style changes, and art as a purveyor of social change.

**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Intensive Writing

## ARTH 3910 - Women in Art

**Credit Hours:** 3

This course focuses on women as the subject and creators of art as well as their role as patrons, curators, and collectors, with a particular emphasis on the 19th and 20th centuries. The course also explores the development of debates within feminist approaches to art history.

## ARTH 3920 - Museum and Gallery Studies

**Credit Hours:** 3

This course introduces students to the art world, national and international museums and galleries, and contemporary art. Students learn about the history of the museum, different types of museums and galleries, how museums operate, and the role of the curator.

## ARTH 3930 - Museum and Gallery Field Trips

**Credit Hours:** 3

This course introduces students to the art, museum, and gallery community in Western Pennsylvania. This course includes lectures on local museums, galleries, and arts organizations, and is supplemented with field trips to museums, galleries, artists' studios, non-profit arts organizations, and/or other arts-related institutions in the region.

## ARTH 4100 - Special Topics: American Art

**Credit Hours:** 3

An advanced level discussion-based seminar course on a faculty-selected topic in the history of art and architecture of the Americas. Topics and class format will vary depending on faculty interest.

**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## ARTH 4600 - Special Topics: European Art

**Credit Hours:** 3

An advanced level discussion-based seminar course on a faculty-selected topic in the history of art and architecture of Europe. Topics and class format will vary depending on faculty interest.

**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## ARTH 4700 - Special Topics: Modern Art

**Credit Hours:** 3

An advanced level discussion-based seminar course on a faculty-selected topic in the history of Modern art and architecture. Topics and class format will vary depending on faculty interest.

**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## ARTH 4800 - Special Topics: Contemporary Art

**Credit Hours:** 3

An advanced level discussion-based seminar course on a faculty-selected topic in the history of Contemporary art and architecture. Topics and class format will vary depending on faculty interest.

**General Education Attribute**

- Competency-Information Literacy

- Competency-Intensive Writing

## ARTH 4900 - The Art World After Modernism

**Credit Hours:** 3

This course is a seminar-style course in which students explore the theoretical concerns that inform and shape artistic production and dialogue in the late 20th and early 21st centuries. Students will learn how to apply contemporary theory to contemporary art.

**General Education Attribute**

- Competency-Applied Methodologies
- Competency-Intensive Writing

## ATFT 2999 - Applied Technology Field Training

**Credit Hours:** 1 TO 18

Performance-oriented field training in technical fields such as industrial machinery operation, maintenance, and troubleshooting; electrical utilities technician training; and computer and information technology technician. Emphasis is on student competency with equipment operation and troubleshooting. Course is only available to students in the Applied Technology Associate of Applied Science program, not pursuing the Aeronautical Science concentration. This course is only available off-campus through a participating Training Partner.

## ATFT 3999 - Applied Technology Advanced Field Training

**Credit Hours:** 1 TO 18

Advanced standing performance-oriented field training in technical fields such as industrial machinery operation, maintenance, and troubleshooting; electrical utilities technician training; and computer and information technology technician. Emphasis is on advanced analysis and troubleshooting in specific industrial technology concentration areas, safety, handling techniques, advanced process and procedure, quality management, advanced manufacturing, and leadership-level analytical implementation. Course is only available to students in the Applied Technology Associate of Applied Science program, not pursuing the Aeronautical Science concentration. This course is only available off-campus through a participating Training Partner.

**Prerequisite:** Junior level and above.

## ATMS 1010 - Fundamentals of Earth Science

**Credit Hours:** 3

The four major branches of Earth science are astronomy, geology, meteorology and oceanography. This course will introduce learners to each of the four branches through lectures and hands-on exploratory and inquiry based learning in a lab environment.

**General Education Attribute**

- Competency-Applied Methodologies

## ATMS 1078 - Current Questions in Science

**Credit Hours:** 3

The course will explore current and sometimes controversial topics in science. Topics will vary, and will be related to the natural science discipline prefix including concepts in chemistry, physics, geology, meteorology and climate science, geography, and mathematics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## ATMS 1100 - Introduction to Weather and Climate

**Credit Hours:** 4

This is an introductory lecture/lab course on properties of atmosphere and weather phenomena. The effects of the physical controls as they alter the weather elements are emphasized. The construction and analysis of weather maps and weather forecasting is an integral part of the laboratory component of the course.

**General Education Attribute**

- Discoveries-Natural Science & Technology
- Competency-Quantitative Application
- Competency-Applied Methodologies

## ATMS 1178 - Discovering Physical Sciences

**Credit Hours:** 3

The course will explore the basic principles of physical science which describe the world we live in and the universe that surrounds us. Topics will vary related to the physical science discipline prefix including concepts in chemistry, physics, geology, meteorology and climate science, geography, and mathematics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## ATMS 1200 - Hazardous Planet: Natural Disasters and Extreme Weather

**Credit Hours:** 3

This course examines the interaction between extreme geologic and atmospheric phenomena and humans. It focuses on aspects of the near-surface Earth system that are hazardous, processes, factors and effects that make them hazardous, occurrences, mitigation, and applications of concepts and techniques to understand these phenomena.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## ATMS 1278 - Discovering Environmental Sciences

**Credit Hours:** 3

The course will explore and apply scientific principles that describe and explain interesting current topics in the environmental sciences. Topics will be related to the environmental science discipline prefix including concepts in biology, meteorology and climate science, geology, geography, chemistry and physics.

## ATMS 1500 - Environmental Atmospheric Science

**Credit Hours:** 3

This is an introductory course that focuses on environmental issues relevant to Earth's atmosphere such as the climate of the Earth, atmospheric energy and the structure of the atmosphere, ozone depletion, air quality and air pollution, cloud formation, and particulate matter in the atmosphere.

**General Education Attribute**

- Competency-Quantitative Application
- Competency-Information Literacy

## ATMS 1700 - Climate Change I

**Credit Hours:** 3

This course is designed to introduce students to the fundamentals of anthropogenic climate change. Climate involves interactions between the atmosphere, hydrosphere, cryosphere, and solid earth. Students will examine the principles of climate change, evidence for change, and its current context with historical trends.

## ATMS 2000 - Climatology

**Credit Hours:** 3

This course examines the major components of climate and climate change. Emphasis is on physical aspects of the atmosphere, energy and water balance, atmospheric motion, circulation, regionalization of climate, aspects of climate regions, and the causes of long-term climate change and variability.

## ATMS 2700 - Climate Change II

**Credit Hours:** 3

This course discusses the issue of climate change which has become the defining environmental issue for our global society. Its effects, however, are unequal in different regions of the world. These disparities are due to processes in climate but also due to societal inequities caused in part due to historical inertia or geographic challenges.

**Prerequisite:** ATMS 1700 or ATMS 2000
**General Education Attribute**

- Competency-Ethical Reasoning

## ATMS 3200 - Environmental Instrumentation and Measurement

**Credit Hours:** 3

This upper division course will give students experience setting up instrumentation, and programming dataloggers. Students will also be expected to design an experiment for the collection of data to solve a meteorological problem. Students will also learn about instrumentation errors and ensuring data quality. Suitable for all geoscience majors.

**Prerequisite:** ATMS 1100 or ATMS 1500
**General Education Attribute**

- Competency-Intensive Writing

## ATMS 3300 - Weather Forecasting

**Credit Hours:** 3

This course is a hands-on practicum focused on weather forecasting skill development. Course is a blend of theoretical approach to forecasting and weekly forecasting assignments, that include an in-class weather forecasting competition.

**Prerequisite:** ATMS 1100 or ATMS 1200 or ATMS 1500
**General Education Attribute**

- Competency-Quantitative Application

## ATMS 3420 - Dynamic Meteorology I

**Credit Hours:** 3

This course is an introduction to description and theory of atmospheric motion; analysis of forces, accelerated reference frames, conservation equations of mass, momentum and energy; scale analysis; pressure coordinates; geostrophic and gradient flow; thermal wind; kinematic description of the wind, trajectories; circulation and vorticity. The last part of the course will introduce quasi-geostrophic theory.

**Prerequisite:** ATMS 4100 and MATH 2410

## ATMS 3460 - Tropical Weather & Climate

**Credit Hours:** 3

An advanced atmospheric sciences course focused on weather & climate of tropical locations. Emphasis is placed on the structure/dynamics of tropical systems. Special attention is given to monsoons & land-sea interactions in a changing climate. Large scale ocean-atmosphere interactions, including ENSO, MJO & Global Hydrology are presented.

**Prerequisite:** ATMS 1100 or ATMS 1200 or ATMS 1500

## ATMS 3650 - Radar and Satellite Meteorology

**Credit Hours:** 3

This course emphasizes the characteristics and scientific role of radar and satellite interpretation, as well as computer-assisted processing of spectral data acquired by satellites, as they relate to atmospheric analysis.

**Prerequisite:** ATMS 1100 or ATMS 1200 or ATMS 1500

## ATMS 3690 - Climate Dynamics

**Credit Hours:** 3

The main goal for this course is to present the working of the climate system as a whole and its critical components (the atmosphere, ocean, sea ice, glaciers, land surface, etc), their complex interactions and feedbacks, and the mechanisms governing natural climate variability (e.g., ENSO) and the climate response to external perturbations (e.g., the increase in greenhouse-gas concentrations). Several important periods in Earth's climate history are explained in terms of natural and anthropogenic forcings and climate system responses. Various scenarios of future climate changes are also discussed.

**Prerequisite:** ATMS 2000 and MATH 2410

## ATMS 3750 - Field Trip in Atmospheric Sciences

**Credit Hours:** 3

This field trip focuses on development of weather forecasting skills, observations of convective weather phenomena, such as tornadoes, derecheos, squall lines, hail storms, microbursts and simiral hazardous weather.

**General Education Attribute**

- Competency-Intensive Writing
- Competency-Keystone Experience

## ATMS 3990 - Special Topics in Atmospheric Science

**Credit Hours:** 3

Topics of special interest in various areas of earth science. The professor selects and designs the format most suitable to the study. Enrollment by consent of the instructor.

**General Education Attribute**

- Competency-Applied Methodologies
- Competency-Intensive Writing

## ATMS 3995 - Seminar in Atmospheric Sciences

**Credit Hours:** 3

A scientific writing and speaking course. The course is meant to act as a capstone course for majors who have a climate science and/or meteorology focus. Subject material for the course varies from year to year depending on the instructor.

**General Education Attribute**

- Competency-Intensive Writing

## ATMS 4100 - Synoptic Meteo & Climatology

**Credit Hours:** 4

Introduction to the application of basic atmospheric concepts on real-time weather data. This course aims synthesize observational and numerical weather analyses in order to understand weather phenomena on synoptic scale. Topics include: analysis of forces, accelerated reference frames, conservation equations of mass, momentum and energy; scale analysis; pressure coordinates; geostrophic and gradient flow; thermal wind; kinematic description of the wind, trajectories; circulation, vorticity and potential vorticity. The last part of the course will introduce quasi-geostrophic theory applications in synoptic meteorology and introduce concepts of frontogenesis and atmospheric jets.

**Prerequisite:** ATMS 1100 or ATMS 1200 or ATMS 1500
**General Education Attribute**

- Competency-Quantitative Application
- Competency-Intensive Writing

## ATMS 4200 - Air Pollution

**Credit Hours:** 3

This course emphasizes outdoor air pollution focusing on emission sources, both gaseous and particulate. Relatable topics include the interaction of air pollution with humans and the environment. Methods of measuring, quantifying, analyzing, and controlling air pollution are presented. Governmental regulations are also a focal topic.

**Prerequisite:** ATMS 1500
**General Education Attribute**

- Competency-Applied Methodologies

## ATMS 4300 - Paleoclimatology

**Credit Hours:** 3

This course, at its core, is a history of climate on Earth. In presenting that history, an overview of methods used to reconstruct that history on our planet is undertaken. Various proxy records are described in detail so as to define the scope and variability of climate change. Major events in climate history are investigated.

**General Education Attribute**

- Competency-Applied Methodologies

## ATMS 4310 - Digital Media for Weather & Climate Applications

**Credit Hours:** 3

The course is an introduction to television weather broadcasts and web-based narrow casts with emphasis on creating accurate weather forecasts, climate outlooks and on the techniques of communicating weather information to various publics. The course consists of weekly lecture/lab meetings and one-on-one critiquing/coaching to develop and improve descriptive science language as well as the graphics that accompany the verbal discourse. Special emphasis is placed upon accurate weather forecasting from skills initiated in previous coursework. Extemporaneous speaking styles will be stressed with timed delivery of weather information. Analysis of a weather graphics presentation will be undertaken, and ultimately students will be expected to arrange their own weather show for presentation and evaluation by classmates. A history of meteorology in the media will also be examined in the context of changing technologies and public perceptions.

**Prerequisite:** ATMS 1100

## ATMS 4400 - Climate Risk Assessment

**Credit Hours:** 3

This course introduces student to climate risk assessment and management from an atmospheric science perspective. Advantages and disadvantages of various responses to climate change risk are explored, and ethical considerations are raised to provide a contextual awareness of climate change risk.

**Prerequisite:** ATMS 1100 or ATMS 1200 or ATMS 1500
**General Education Attribute**

- Competency-Ethical Reasoning
- Competency-Applied Methodologies

## ATMS 4419 - Applied Climatology

**Credit Hours:** 3

The purpose of this course is to acquaint the student with "real world" examples of the use of atmospheric principles, data, and impacts to various sectors of the economy. Before taking this course students should already have an understanding of basic atmospheric processes.

**Prerequisite:** ATMS 1100 or ATMS 1500 or ATMS 1700 or ATMS 2000

## ATMS 4420 - Dynamic Meteorology II

**Credit Hours:** 3

This course introduces advanced topics in dynamics of atmospheric motions. This course is a continuation of Dynamic Meteorology I (ATMS 3420). Topics include: atmospheric oscillations and waves, synoptic scale instabilities, mesoscale instabilities and isentropic potential vorticity thinking. The last part of the course will introduce the dynamics of numerical modeling and prediction.

**Prerequisite:** ATMS 3420

## ATMS 4520 - Atmospheric Thermodynamics and Radiation

**Credit Hours:** 3

This course examines the role of thermodynamics and radiation in the atmosphere. Topics covered in the course include the First and Second Law of Thermodynamics, adiabatic and diabatic processes, thermodynamic diagrams, and stability. These concepts will prepare the student for understanding exactly how the earth is heated by solar radiation. Specifically, those principles in atmospheric radiation will be investigated, including solar and terrestrial radiation, blackbodies, absorption and emission, and scattering.

**Prerequisite:** ATMS 4100 and MATH 2410 and PHYS 1500

## ATMS 4530 - Cloud Physics

**Credit Hours:** 3

This course is a continuation of ATMS 4520. The physics relevant to the formation of droplets and precipitation, mixing and parcel theory, adiabatic lifting, nucleation, warm rain processes, cold rain processes, and the growth of hail are investigated. Finally, radiation concepts from ATMS 4520 are used to look at the impact of clouds on solar and terrestrial radiation.

**Prerequisite:** ATMS 4100 and MATH 2410 and PHYS 1500

## ATMS 4700 - Special Topics in Atmos Sci

**Credit Hours:** 3

Topics of special interest in various areas of earth science. The professor selects and designs the format most suitable to the study. Enrollment by consent of the instructor.

**Prerequisite:** ATMS 1500

## BIOL 1005 - Freshman Seminar

**Credit Hours:** 1

This seminar is intended for new freshmen planning to major in any area of Biology. This course will enable students to (1) explore and understand various majors, minors, curricula, and career options in Biology; (2) become familiar with Biology Department faculty, research interests and opportunities; (3) identify and /or utilize department, campus and community resources that will enhance their academic program; and (4) develop and apply strategies to facilitate the learning process. Restricted to Biology majors.

## BIOL 1078 - Current Questions in Science

**Credit Hours:** 3

The course will explore current and sometimes controversial topics in science. Topics will vary, and will be related to the natural science discipline prefix including concepts in chemistry, physics, geology, meteorology and climate science, geography, and mathematics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## BIOL 1101 - Fundamentals of Biology

**Credit Hours:** 3

Introduces the fundamental principles of biology including cellular chemistry and energy conversions, cell structure, cell replication, genetics, evolution and organismal diversity, population dynamics and ecology, and environmental issues.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## BIOL 1102 - Introduction to Environmental Biology

**Credit Hours:** 3

The characteristics and ecological relationships of the major groups of living organisms are considered. Emphasis is placed on organisms as members of communities and populations in relation to their environment and on the effects of human impacts on the environment.

## BIOL 1103 - Biology of Sexually Transmitted Infections

**Credit Hours:** 3

The course examines immunology, microbiology, and epidemiology through the lens of sexually transmitted diseases. Students will learn the biology behind human infections and explore the sexually transmitted diseases that affect us. They will also learn about the stigma attached to these infections.

## BIOL 1104 - Introduction to Human Genetics

**Credit Hours:** 3

This course introduces classical human heredity, population genetics concepts, molecular genetics, genetic counseling and recent research findings related to human diseases such as cystic fibrosis, Huntington's disease and cancer. It provides a strong background for better understanding of ethical issues associated with genetic manipulation.

## BIOL 1126 - Introduction to Microbiology Online

**Credit Hours:** 0 TO 4

This course provides a completely online lecture and laboratory introducing the study of the prokaryotic and eukaryotic world of microorganisms. The medically important concepts of microbiology including microbial control, principles of infectious disease, disease prevention and control will be presented.

## BIOL 1178 - Discovering Physical Sciences

**Credit Hours:** 3

The course will explore the basic principles of physical science which describe the world we live in and the universe that surrounds us. Topics will vary related to the physical science discipline prefix including concepts in chemistry, physics, geology, meteorology and climate science, geography, and mathematics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## BIOL 1278 - Discovering Environmental Sciences

**Credit Hours:** 3

The course will explore and apply scientific principles that describe and explain interesting current topics in the environmental sciences. Topics will be related to the environmental science discipline prefix including concepts in biology, meteorology and climate science, geology, geography, chemistry and physics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## BIOL 1400 - Introduction to Ecology and Evolution

**Credit Hours:** 4

This course covers the evolutionary and ecological processes that drive biotic diversity and emphasizes fundamental concepts and their relevance to modern societies and environmental issues. This course builds a foundation for understanding the scientific process, critical thinking, and scientific communication.

## BIOL 1420 - Cannabis Agriculture Science

**Credit Hours:** 3

This course provides an overview of Cannabis Agricultural and Horticultural Practices. Different cultivation and

processing techniques relative to specific cannabis forms and end-product will be explored. Students will build a scientific knowledge base of the biological and chemical processes relevant to growing and processing cannabis. Moreover, students will learn the vital aspects of grow operations, understand the cannabis plant life cycle, techniques for harvesting, processing and testing, and how to account for environmental conditions.

## BIOL 1700 - Introduction to Organismal Biology

**Credit Hours:** 4

Foundational course on the biology of organisms. Emphasis on fundamental concepts and their relevance to the structure and function of prokaryotes, plants, fungi, protists, and animals. Course provides a foundation for understanding organsims between cellular- and kingdom-levels of organization.

## BIOL 1710 - Human Biology

**Credit Hours:** 3

This course focuses on the biology of the human organism with recent scientific and medical advances as they relate to the development of public policy. Topics include examining the major body systems and their interrelationships.

## BIOL 1750 - General Botany

**Credit Hours:** 0 TO 4

This course is a survey of form and function of the major plant groups as well as the bacteria, algae, water molds, slime molds and fungi within the overall framework of a modern phylogenetic system of classification.

## BIOL 1900 - Introduction to Cellular and Molecular Biology

**Credit Hours:** 4

This course is designed to introduce the basic concepts of cell chemistry and biology as well as introduce the concept and skills of cellular and molecular biology. It examines structures and functions common to all organisms; cell structure and function, the central dogma, and biochemistry.

**Prerequisite:** BIOL 1400 or BIOL 1700 or BIOL 1750 or BIOL 2840

## BIOL 2010 - Introduction to Bioethics

**Credit Hours:** 3

This course introduces students to the theoretical foundations of bioethics, including the most influential schools of moral philosophy and their practical implications in life sciences. It discusses professional ethics, such as the ethical issues that arise from conflicting professional responsibilities and topics such as abortion and euthanasia.

**General Education Attribute**

- Discoveries-Art/Humanities
- Competency-Ethical Reasoning

## BIOL 2020 - Introduction to Sustainability

**Credit Hours:** 3

This course introduces students to the tenets of Sustainability: economic viability, environmental protection and social equity and how these tenets work together to not only help the current populations, but future generations as well.

## BIOL 2100 - Survey of Biotechnology

**Credit Hours:** 3

A survey of biotechnology, its impacts on individuals, society, and the environment, and surrounding ethical, social, and economic issues. The course examines how biological processes, organisms, genes, proteins, and cells are used to develop technologies, and their applications in medicine, research, industry, agriculture, and forensics.

## BIOL 2190 - Biomedical Terms and Usage

**Credit Hours:** 3

Biomedical Terminology and Usage is a course designed to provide students in the pre-health sciences and interested in a career in biomedical sciences with an opportunity to learn relevant terminology in the areas of medicine, microbiology, immunology, genetics, and cell/molecular biology. The course will examine the most common terms used in these fields of study and allow the students an opportunity to use the terms to successfully communicate complex scientific and medical concepts.

## BIOL 2202 - Genetics

**Credit Hours:** 4

Genetics plays an important role in all aspects of biology, acting on molecules, cells, organisms and populations. Genetic analysis also provides a powerful approach to address biological questions, and its methodologies are employed in fields as diverse as biotechnology, forensics, medicine and conservation. This course introduces students to the principles of classical and molecular genetics. Emphasis is placed on understanding the basic concepts of genetics and on using genetic analysis to study biological problems, developing analytical and problem-solving skills. BIO 218 will provide students with a strong background in genetics, which will be useful for those interested in pursuing a career in the life sciences, conservation and population biology, health sciences, biotechnology or medical professions.

**Prerequisite:** BIOL 1900

## BIOL 2221 - Survey of Biotechnology

**Credit Hours:** 3

A survey of the scientific principles, research methods, commercial applications, societal impacts, and business environment that impact and define the operation of biotechnology and pharmaceutical companies. Students will learn how genes, proteins and cells work, how biotechnologists study and manipulate living organisms, and how those methods are used to solve problems and create products in medicine, agriculture, industry, criminal justice and the environment. Students will examine ethical, social and economic issues affecting the use of biotechnologies, and the business and regulatory environment in which biotechnology companies operate. The course gives a detailed industry overview relevant to science, engineering, computer science, information management, and business majors considering technical or business careers in biotechnology and pharmaceutical companies or any student interesting in biotechnology's impact on the human condition.

## BIOL 2226 - Basic Microbiology

**Credit Hours:** 3

This course provides a survey of the prokaryotic and eukaryotic world of microorganisms. The medically important concepts of microbiology including microbial control, acquisition of disease, disease prevention and control will be presented.

## BIOL 2248 - Principles of General Ecology

**Credit Hours:** 4

Ecology is the study of the interaction of organisms with the physical environment. The lecture portion of this course will provide students with an overview in population ecology, community ecology, and ecosystem ecology. The lab will allow students an opportunity to examine ecology through hands-on and/or simulation exercises.

## BIOL 2266 - Cell and Tissue Culture

**Credit Hours:** 3

The course allows students to control the conditions required for the survival and proliferation of mammalian cells. Students will perform cell culture maintenance techniques, such as enzymatic tissue dissociation, hemocytometer cell counts and viability studies. They will also learn techniques for the detection and treatment of contamination, and for the cryopreservation of cultures cells.

## BIOL 2411 - Environmental Science and Sustainability

**Credit Hours:** 3

Humans are changing the global environment in profound ways but the consequences are not widely understood. This course will examine current environmental issues from a scientific perspective and explore how science can be best used to shape sound environmental law and regulation, public lands, types and sources of air and water pollution, and other environmental issues of current interest. Environmental issues of local and regional importance will be emphasized. Three lecture hours weekly. Credit not to be applied toward a biology major.

## BIOL 2710 - Anatomy and Physiology of Domestic Animals I

**Credit Hours:** 4

This course begins to cover the fundamentals of comparative anatomy and physiology of domestic animals. An emphasis is placed on understanding anatomical terms of position and direction, histology, the integumentary system, the nervous system, the skeletal system, and the cardiovascular system. Registration for both lecture and laboratory is required.

## BIOL 2720 - Anatomy and Physiology of Domestic Animals II

**Credit Hours:** 4

This course covers the fundamentals of comparative anatomy and physiology of domestic animals. An emphasis is placed on understanding the following systems: circulatory, lymphatic, respiratory, nervous, endocrine, digestive, urinary, and reproductive.

**Prerequisite:** BIOL 2710

## BIOL 2810 - Human Anatomy and Physiology I Lecture

**Credit Hours:** 3

This course is a study of normal human structure and function. Topics include: background organization, and skeletal, muscular, nervous, sensory, endocrine, and reproductive systems and their interrelationships. Open to health science majors or by consent of the instructor. Must be taken concurrently with BIOL 2811 unless it is being repeated.

**CoRequisite:** BIOL 2811

**General Education Attribute**

- Discoveries-Natural Science & Technology

## BIOL 2811 - Human Anatomy and Physiology I Laboratory

**Credit Hours:** 1

This laboratory course reinforces the material presented in BIOL 2810 with emphasis on anatomy and select physiology activities. Students will explore the interrelationship between the skeletal, muscular, nervous, sensory, endocrine, and reproductive systems. Must be taken concurrently with BIOL 2810 unless it is being repeated.

**CoRequisite:** BIOL 2810

**General Education Attribute**

- Competency-Applied Methodologies

## BIOL 2840 - General Zoology

**Credit Hours:** 4

In phylogenetic sequence, and at the various levels of organization, representatives of each major group of animals are studied as to their anatomy, physiology, origins, life histories, and habitats. Major emphasis is devoted to the invertebrate phyla, but coverage of the phylum Chordata is included. Lecture and laboratory.

## BIOL 3020 - Histology

**Credit Hours:** 3

A survey of the microscopic structure of Mammalian tissues and organs. Lectures will discuss the structure, function, and some pathology of the tissues and organs. In the laboratory, prepared microscopic slides will be studied in detail. In addition, the students will receive training in basic animal histological techniques.

**Prerequisite:** BIOL 2840

## BIOL 3300 - Fermentation Microbiology

**Credit Hours:** 3

This course covers the basics of the microbiology of common commercially important fermented foods and beverages. The student builds on the basic knowledge of microbiology and learn about the various microbes and their products that are associated with foods and beverages.

## BIOL 3304 - Biology of Aging

**Credit Hours:** 3

This course introduces students to biological aspects of aging in humans and other animals. The aging process is studied at the cellular and organismic levels in both healthy and disease states. Non-laboratory.

## BIOL 3326 - General Microbiology

**Credit Hours:** 4

This course is designed to introduce the student to the fascinating world of microbes. In this course you will learn general microbiological concepts and principles across a broad spectrum of areas including microbial physiology, genetics, biotechnology, pathogenesis, virology, immunology, and environmental microbiology.

**Prerequisite:** CHEM 1108 and CHEM 1128 and BIOL 1900
**General Education Attribute**

- Competency-Intensive Writing

## BIOL 3327 - Parasitology

**Credit Hours:** 0 TO 4

A comprehensive review of the biology of parasites and their interactions with their hosts and vectors. The course will cover principles of disease and epidemiology, the biology and ecology of the eukaryotic parasites causing disease in animals, the host response to infection, treatments, and preventive measures.

## BIOL 3328 - Ecology of the Prokaryotes

**Credit Hours:** 3

This course explores the way in which prokaryotes - the Eubacteria and Archaea - shape their environment and, in turn, how a changing environment shapes prokaryotic communities. This course is taught primarily from the literature and focuses on advanced topics as a conversation among researchers.

**Prerequisite:** BIOL 1900

## BIOL 3330 - Cell Biology

**Credit Hours:** 4

The course covers the biology of the cell, with emphasis on the relationship of structure and function. It is a study of cell structure, cell signaling, organelles, growth, division, membranes, synthesis and regulation.

**Prerequisite:** BIOL 1900 and CHEM 1108 and CHEM 1128
**General Education Attribute**

- Competency-Intensive Writing

## BIOL 3335 - Sustainable Agriculture

**Credit Hours:** 3

In this course students will examine all aspects of alternative, sustainable, agriculture including permaculture, organic, and biointensive. Students will explore how to grow food in a sustainable way that helps protect the environment and support economic progress and social equity .

## BIOL 3337 - Ornithology

**Credit Hours:** 0 TO 4

The study of bird life, this course covers classification, anatomy, ecology, behavior and recognition of birds, with emphasis on local species and their relationships to people and the ecological balance with other organisms. Please note: This course requires an earlier start time for 5 outdoor LAB trips which may begin as early as 5:30 AM.

**Prerequisite:** BIOL 2840 or BIOL 2248

## BIOL 3399 - Conservation Biology

**Credit Hours:** 3

This course will broadly cover the multidisciplinary field of conservation biology. The course will focus on the historical context of this emerging field and the deviation from traditional natural resource management. The course will explore the impact of humans on biodiversity, both in the destruction of it and in the maintenance of what is left. The role of government, non-government organizations, and citizens will be studied.

**Prerequisite:** BIOL 2840 or BIOL 1750 or BIOL 2248

## BIOL 3500 - Comparative Vertebrate Anatomy

**Credit Hours:** 0 TO 4

A comparative study of the vertebrate organs and organ systems of animals in the phylum chordata, this course places emphasis on evolutionary changes.

**Prerequisite:** BIOL 1700 or BIOL 2840

## BIOL 3607 - Plant Anatomy

**Credit Hours:** 0 TO 4

A detailed study of the form and function of the various cell and tissue types found in higher plants, this course also surveys how scientific knowledge of plant anatomy is applied within a diverse range of fields, including ecology, forensic science, archeology, climatology, the arts and engineering.

**Prerequisite:** BIOL 1750

## BIOL 3700 - Systems Neuroscience

**Credit Hours:** 0 TO 3

An examination of the structure and function of the nervous system. The course is designed to develop a detailed understanding of the nervous system structure and function from the molecular level to the level of complex circuits such as learning and memory. While the primary emphasis is the human nervous system, a central theme is the comparison of the neurological circuits across phyla to identify basic organizational principles.

**Prerequisite:** BIOL 1700 or BIOL 2840 and BIOL 1900

## BIOL 3707 - Plant Taxonomy

**Credit Hours:** 0 TO 4

A study of relationships among the vascular plants, their classification and methods of identification. Plant families native to Western Pennsylvania are stressed.

**Prerequisite:** BIOL 1750

## BIOL 3810 - Human Anatomy and Physiology II Lecture

**Credit Hours:** 3

This course is a continuation of BIOL 2810. Topics covered will center attention on the integumentary, nervous, endocrine, immune, circulatory, respiratory, urinary, and digestive systems. Open to health science majors or by consent of instructor. Must be taken concurrently with BIOL 3811 unless it is being repeated.

**CoRequisite:** BIOL 2810

**General Education Attribute**

- Discoveries-Natural Science & Technology

## BIOL 3811 - Human Anatomy and Physiology II Laboratory

**Credit Hours:** 1

This lab course reinforces the material presented in BIO3810 with emphasis on anatomy and select physiology activities. Students will explore the interrelationship between the integumentary, nervous, endocrine, immune, circulatory, respiratory, urinary, and digestive systems. Must be taken concurrently with BIOL 3810 unless it is being repeated.

**CoRequisite:** BIOL 3810

**General Education Attribute**

- Competency-Applied Methodologies

## BIOL 3820 - Vertebrate Zoology

**Credit Hours:** 3

The study of the chordates with emphasis on the vertebrates in their evolutionary development from the lower to the higher forms. In addition, a careful study of the basic and important structures of each class of vertebrates, their

functions, life histories and natural histories (special adaptations and habits, origin and development) will be considered.

**Prerequisite:** BIOL 1400 or BIOL 1700 or BIOL 2840

## BIOL 3835 - Plant Physiology

**Credit Hours:** 0 TO 4

This course will examine and explore the link between the form and function in plants. Plant Physiologists are people interested in learning about what plants do, and what chemical and physical factors cause plants to respond as they do in their environment. This course will explore several important processes which allow plants to survive in their environment and we will examine the ecological implications of the physiological processes under investigation. We will primarily examine this relationship at the whole organism level. Laboratory experiments will reinforce the lecture topics.

## BIOL 4046 - Pathogenic Microbiology

**Credit Hours:** 4

Study of the infectious agents of mammals and the diseases that result from infection by these agents. The course will focus on bacterial agents, their diagnosis and treatment. The laboratory portion of the course incorporates experiential learning of diagnostic procedures and case studies involving examples of pathogenic organisms. Three lecture hours and three laboratory hours weekly. Fall annually.

**Prerequisite:** BIOL 3326 or BIOL 1900

## BIOL 4050 - Immunology

**Credit Hours:** 3

A detailed study of the immune system of animals, this course covers nonspecific and specific host responses to foreign materials, the interaction between cells of the specific immune response, the nature and diversity of the immune response, the practical applications of the immune response, and disorders associated with the immune response.

## BIOL 4250 - Molecular Mechanisms of Microbial Pathogenesis

**Credit Hours:** 3

Examines mechanisms of pathogenicity utilized by bacteria, viruses and eukaryotic microorganisms at the molecular level. Topics include the mechanics of bacterial secretion systems, specialized extracellular structures, toxins, host-pathogen interactions, horizontal gene transfer, intracellular pathogens, viral replication, viral pathogenesis, viral genetics and mechanisms of anti-microbial action. Three lecture hours weekly

**Prerequisite:** BIOL 3326 or BIOL 1900

## BIOL 4260 - Cell Physiology

**Credit Hours:** 0 TO 4

Study of the regulatory processes that occur within the eukaryotic cell that cover homeostasis and allow for adaptive

change. The course will focus on membrane biochemistry, transport, protein sorting, cell signaling, cytoskeletal nanomotors, and cell specialization. The laboratory portion of the course incorporates experiential learning of basic procedures that allow experientialists to uncover the workings of the eukaryotic cell. Three lecture hours and three laboratory hours weekly.

## BIOL 4270 - Endocrinology

**Credit Hours:** 0 TO 3

This course is designed to provide a broad overview of vertebrate endocrinology, which is the study of the endocrine system and hormone production. Hormones have a role in most physiologic functions, from energy availability to reproduction and behavior. Their signaling is complex and fascinating. In addition to the pituitary, thyroid, pancreas or reproductive organs, tissues including the heart, kidney, liver, skin, fat, bone and brain also have endocrine functions. This course will explore the anatomy, biochemistry and physiology of the endocrine systems and the pathophysiology of endocrine disorders. the course will also introduce principles of clinical diagnosis and management of endocrine abnormalities. Three lecture hours and two laboratory hours per week.

## BIOL 4300 - Biology of Cancer

**Credit Hours:** 3

This course encompasses the cellular and molecular biology of cancer, providing a fundamental understanding of contemporary cancer research on the characterization, prevention and treatment of the disease.

**Prerequisite:** BIOL 2202 or BIOL 1900

## BIOL 4310 - Developmental Biology

**Credit Hours:** 0 TO 4

This course provides an introduction to developmental biology. It will explore different modes of embryogenesis in invertebrates and vertebrates and examine the cellular and molecular mechanisms of animal development using a variety of model organisms and experimental techniques. Emphasis will be placed on the connection between development and disease, between developmental biology and evolution, and on the experimental approaches that have been used to shed light on developmental mechanisms. Current issues surrounding developmental biology, such as stem cells and reproductive technology, will also be discussed.

**Prerequisite:** BIOL 2202 and (BIOL 2840 or BIOL 1700 or BIOL 1900)

## BIOL 4320 - Molecular Biology

**Credit Hours:** 4

An in-depth discussion of genomes, nucleic acids, and proteins, and how biological mechanisms work at the molecular level. Emphasis is placed on the applications of molecular biology to fields such as medicine and research. You will gain hands-on laboratory experience with molecular biology techniques and develop computer skills in genomics.

**Prerequisite:** BIOL 1900 , BIOL 2202 or BIOL 3326 , CHEM 1108 , CHEM 1128

## BIOL 4385 - Biotechnology and DNA Methods

**Credit Hours:** 4

This capstone course covers techniques of biotechnology and DNA methods. It explores their underlying principles and applications in research, medicine, forensics, agriculture and conservation. Students gain lab experience with techniques and apply them to address scientific questions, acquiring key skills for biomedical or biological research.

**Prerequisite:** BIOL 2202 or BIOL 3326 and BIOL 4320 and CHEM 1108 and CHEM 1128 and BIOL 1900

## BIOL 4402 - Biometry

**Credit Hours:** 3

Intro to the collection, analysis, and presentation of biological data. Fundamental aspects of designing and executing descriptive and experimental studies emphasizing biological research. Stresses applications to undergraduate and graduate research in progress in the Department of Biology. Three lecture hours per week. Spring, alternate years.

## BIOL 4414 - Plant Ecology

**Credit Hours:** 4

Will examine the ecology of plants, which are influenced by both biotic and abiotic factors, at the individual, population and community levels. There is an emphasis on the vegetation of Pennsylvania and the broader region. Lab will focus on the sampling and quantitative analyses of plant populations and communities.

## BIOL 4421 - Global Change Ecology

**Credit Hours:** 4

Humans are causing rapid and widespread environmental change which exceeds natural variability in ecosystem dynamics and disturbance patterns. This course explores both the natural and human drivers of ecosystem changes to key ecological processes in our soils, atmosphere and hydrosphere, and the impacts on ecosystem function and diversity. We'll consider the role of science and management in providing sustainable solutions to global change. Three lecture hours and two laboratory hours weekly.

**Prerequisite:** BIOL 1400 and BIOL 1700 and BIOL 2248

## BIOL 4435 - Ichthyology

**Credit Hours:** 0 TO 4

An introduction to the morphology, taxonomy, ecology and distribution of the major groups of freshwater fishes, this course emphasizes the northeastern U.S. fauna.

**Prerequisite:** BIOL 2248

## BIOL 4442 - Dendrology

**Credit Hours:** 4

A study of the identification, classification, nomenclature of trees and shrubs to include their growth, structure, natural

history and economic importance. Identification will focus on leaves, morphology, bark and habitat. An emphasis is given to the forest communtiies and woody species common to the eastern United States.

## BIOL 4470 - Field Zoology and Systematics

**Credit Hours:** 3

This course is devoted to concepts and procedures of systematics, and to classifying and identifying fauna collected on field trips.

## BIOL 4473 - Freshwater Ecology

**Credit Hours:** 4

This course examines the structural and functional integrity of aquatic ecosystems and their responses to human impacts. Topics will include energy flow, nutrient cycling, ecosystem functioning, quantitative methods in assessing water quality, and other topics related to aquatic systems and their biological communities.

## BIOL 4475 - Wetlands Ecology

**Credit Hours:** 4

This course will emphasize wetlands of the United States and their unique habitat characteristics. There will be a focus on plants, soils and hydrology as the principal indicators of wetlands. The wetland regulatory framework will be reviewed, and the procedures for wetland determination and assessment reviewed and practiced in the field.

## BIOL 4480 - Topics in Field Biology

**Credit Hours:** 1 TO 6

Specialized off-campus residential programs offered by department faculty and emphasize the ecology, behavior and/or the natural history of organisms in their natural environments. Focus and credit hours will vary, depending on the length and location of course, course workload, and the site at which the course is offered.

## BIOL 4484 - Quantitative Methods in Aquatic Environmental Biology

**Credit Hours:** 0 TO 3

This course will focus on the practical skills required to test hypotheses and solve problems in the aquatic ecosystem. Lectures will explore the quantitative and analytical methods most often used by aquatic scientists, drawing liberally on applied examples. Students will learn the statistical and analytical principles that form the foundation for sound sampling programs and experiments. Laboratories will be aimed at gaining experience in the applications of these methods. There will be a strong focus on the proper use of field and laboratory equipment. We will explore methods used in the study of aquatic ecosystems, and we will emphasize the development of skills that are most often sought after by potential employers. Our local field sites offer a rich array of opportunities to use technology to better understand the environment, and this course will strive to focus on environmental issues of regional importance. Two lecture hours and three laboratory hours per week.

**Prerequisite:** BIOL 2248

## BIOL 4523 - Algology

**Credit Hours:** 3

A study of cytology, genetics and morphology as they relate to function; identification, classification, life histories, economic importance and ecological relations of the algae with emphasis on the algae of the region.

**Prerequisite:** BIOL 1700 and BIOL 1750

## BIOL 4550 - Evolution

**Credit Hours:** 3

An advanced course that examines the mechanisms resulting in biological evolution. Emphasis is placed on how these mechanisms operate at a variety of levels, from individual genes to distantly related species, and thereby produce the diversity of life observed on earth.

## BIOL 4570 - Biological Study Design and Data Analysis

**Credit Hours:** 3

This course examines the design and use of research hypotheses, controlled experiments, and data collection and analysis, as they apply to research in the biological sciences. Emphasis is on the role of statistical inference in the hypothetico-deductive approach to studying living organisms

## BIOL 4700 - Mycology

**Credit Hours:** 0 TO 4

A detailed examination of mushrooms, molds, and human mycoses, including an introduction to fungal ecology and assessment of fungal classification, as well as molecular systematics and an overview of medical significance. The course utilizes hands-on, student-driven, inquiry-based practices. Students will use scientific processes and procedures, data analysis, and research tools to investigate fungal morphogenesis, molecular diagnostics, culture techniques, ecological relationships, and human pathogenesis.

## BIOL 4720 - Biology of the Higher Invertebrates

**Credit Hours:** 3

Biology of Higher Invertebrates is an exploration of the life styles of the many animals without backbones, including form, function, and taxonomy. Lectures will focus on the unique features of different invertebrate phyla and the interesting ways animals interact with each other and their environments. We will cover topics in animal classification, life history and various types of human-invertebrate interactions. The laboratory section of this course will be composed of field work on campus and at Presque Isle, and laboratory work that examines invertebrate diversity and animal structure and function.

**Prerequisite:** BIOL 1700 and BIOL 2840

## BIOL 4740 - Marine and Freshwater Invertebrates

**Credit Hours:** 3

Examination of the ecological adaptations of aquatic invertebrates with emphasis on their adaptations and trophic

relationships. Three lecture hours weekly.

**Prerequisite:** BIOL 1400 and BIOL 1700 or BIOL 2840

## BIOL 4745 - Entomology

**Credit Hours:** 0 TO 4

A specialized study of insects, this course covers identification and classification, development phases, physiological characteristics, economic importance, and disease vectors.

**Prerequisite:** BIOL 2840 and BIOL 1900

## BIOL 4750 - Terrestrial Invertebrates

**Credit Hours:** 3

A study of the ecology, natural history, and classification of terrestrial invertebrates, with emphasis on their identification, evolutionary relationships, and human impact or importance. Three lecture and two laboratory hours weekly. Alternate years.

## BIOL 4770 - Forest Ecology and Management

**Credit Hours:** 4

This course explores the structure, dynamics and management of forest ecosystems. Lectures cover the ecology and taxonomy of Eastern U.S tree species and modern forestry practices for wildlife and ecosystem management. Labs focus on tree identification and field techniques for forest inventory and analysis.

**Prerequisite:** BIOL 1400 and BIOL 1700 and BIOL 2248

## BIOL 4775 - Mammalogy

**Credit Hours:** 0 TO 4

This course will provide an overview of the Class Mammalia. The lecture portion of the course will cover the evolution and classification of mammals, some basic physiology and behavior, and the ecology and conservation of mammals around the world. The lab portion of the class will involve a more in-depth study of mammal identification, focusing on the mammals of Pennsylvania.

**Prerequisite:** BIOL 2840 or BIOL 1700 and BIOL 2248 or BIOL 1400

## BIOL 4800 - Vegetation Sampling and Analysis

**Credit Hours:** 4

This course focuses on the practical and quantitative skills needed to survey plant communities. This includes ecology, taxonomy and identification, with a focus on the plants of Western PA. We will cover the statistical and analytical principles underlying vegetation sampling for deer management, wetland delineation, and habitat restoration.

**Prerequisite:** BIOL 1400 or BIOL 1700 and BIOL 2248

## BIOL 4810 - Herpetology

**Credit Hours:** 3

This course introduces the study of anatomy, physiology, life history, and habits of parasites that affect humans and domesticated animals. Special attention is given to the parasitic protozoa, worms, and insects. Laboratory, lectures, and demonstrations.

**Prerequisite:** BIOL 1700 and BIOL 2248 and BIOL 2840

## BIOL 4850 - Mammalian Reproductive Physiology

**Credit Hours:** 3

This course for advanced undergraduate and graduate biology students emphasizes the reproductive physiology of humans and domesticated animal species.

**Prerequisite:** BIOL 2810 and BIOL 3810 or BIOL 2710 and BIOL 2720

## BIOL 4860 - Comparative Vertebrate Physiology

**Credit Hours:** 0 TO 4

A comparative approach to the study of physiological systems in the kingdom Animalia. Emphasis is on vertebrate organisms, but invertebrate examples are used where appropriate.

**Prerequisite:** BIOL 2840 or BIOL 1700 or BIOL 1900

## BIOL 4880 - Pathophysiology

**Credit Hours:** 3

This course introduces students to understanding how the body responds to diseases resulting from homeostatic imbalances. After completing this course, students will understand how a loss of homeostasis results in pathologies, how pathophysiological changes in the body progress, and how the body responds to those changes both at a local and systemic level. Topics include diseases and disorders related to cells and cell proliferation, as well as the nervous, endocrine, cardiovascular, respiratory, digestive, urogenital, and muscular systems.

**Prerequisite:** BIOL 2810 and BIOL 3810 or BIOL 2710 and BIOL 2720

## BIOL 4951 - Internship in Biology

**Credit Hours:** 1 TO 4

The internship provides practical observation and experience in fields related to the biological sciences. 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.

**General Education Attribute**

- Competency-Applied Methodologies
- Competency-Keystone Experience

## BIOL 4985 - Biotechnology and DNA Methods

**Credit Hours:** 4

This capstone course covers techniques of biotechnology and DNA methods. It explores their underlying principles and applications in research, medicine, forensics, agriculture and conservation. Students gain lab experience with techniques and apply them to address scientific questions, acquiring key skills for biomedical or biological research.

## BIOL 4992 - Ethology

**Credit Hours:** 4

Ethology examines animal behavior within the framework of evolutionary biology, using comparative methods under both natural and experimental conditions. In both lecture and the laboratory, we will examine how ecology, anatomy & physiology, or development patterns influence the behavior of a wide range of animal taxonomy.

## BIOL 4999 - Research in Biology

**Credit Hours:** 1 TO 4

This course is intended for advanced undergraduate students who wish to develop an independent research project within biology. Students identify problems for investigation and complete all phases of study, including writing a research report and/or presenting the results of their project.

**General Education Attribute**

- Competency-Applied Methodologies
- Competency-Keystone Experience

## BLAW 2000 - Legal and Ethical Environment of Business

**Credit Hours:** 3

This course surveys the legal environment business owners and employees face with attention to sources of law and the arenas of dispute resolution as well as to the relationship between law and ethics. Criminal law, tort law, administrative law, and administrative law are reviewed. Contract law is examined in greater depth.

**General Education Attribute**

- Competency-Ethical Reasoning

## BLAW 3000 - Legal and Ethical Environment of Business II

**Credit Hours:** 3

This course studies general substantive business law topics; i.e.: employment relationships, agency, partnerships, corporations, sales, negotiable instruments, real estate law, and employment law, including ethical dimensions, at both the individual and organizational levels.

**Prerequisite:** BLAW 2000

## BLAW 4030 - Legal Risks of Operating a Business in Cyberspace

**Credit Hours:** 3

Most business operates at least partially online, but few of their managers have adequately examined the risks of doing so. This course introduces them to the legal and ethical considerations of conducting business in cyberspace, including internet policies, cybercrime, data privacy, e-contracts and electronic discovery.

## BLAW 4410 - International Business Law

**Credit Hours:** 3

A study of international law and agreements affecting the global commons.

**Prerequisite:** BLAW 2000

## BSAD 1000 - Introduction to Business

**Credit Hours:** 3

Introduces non-business students to a variety of business concepts with an emphasis on the ethical, global, inclusive, and collaborative nature of contemporary business practices. Students will develop analytical, technical, and personal skills for academic and career success.

## BSAD 3200 - Business Ethics

**Credit Hours:** 3

The course provides a framework to identify, analyze and understand how business people make ethical decisions and deal with ethical issues. Using a case method approach, students will analyze real life business situations and gain insight into the realities and complexity of making decisions in a business environment.

**Prerequisite:** BSAD 1000 or MGMT 3000 or BLAW 2000

## BSAD 3990 - Special Topics in Business

**Credit Hours:** 1 TO 16

This course allows for the examination of a particular problem, theme or issues viewed through the lens of accounting, economics, finance, management, marketing or related disciplines. The topic(s) address will vary from semester to semester. The course is repeatable with different topics.

## BSAD 4900 - Business Capstone

**Credit Hours:** 3

Think strategically about organizations, including present position, long-term direction, ethical stance, competitive capabilities, caliber of present strategy, and opportunities for gaining sustainable competitive advantage by integrating knowledge of accounting, economics, finance, management and marketing.

**Prerequisite:** (ACC 3000 or ACC 3050) and FINA 3000 and MGMT 3000 and MKTG 3000 and BSAD 3200
**General Education Attribute**

- Competency-Information Literacy

- Competency-Intensive Writing

## BSAD 4930 - Field Studies in Business

**Credit Hours:** 3

This course utilizes practical experience in the business field for immersive learning. It can entail clinical work, client-based projects, service learning, study abroad, and more. The topics addressed and experiences conducted can be unique to the student and the semester. The course is repeatable with different topics and experiences.

**Prerequisite:** MGMT 3000
**General Education Attribute**

- Competency-Keystone Experience

## BSAD 4950 - Internship for Department of Management and Marketing Programs

**Credit Hours:** 1 TO 12

Students are placed with an organization for a practical training experience to supplement academic learning. Through coursework, students apply the theories, concepts, and techniques learned for further career readiness and success.

**General Education Attribute**

- Competency-Keystone Experience

## BSIN 2000 - Management Information Systems

**Credit Hours:** 3

This course provides insight into the applications of information systems used by business professionals. It stimulates the system techniques allowing students to analyze complex technologies, abstract behavioral concepts, and applications in business areas, such as marketing, human resource management, finance, accounting and operations.

**General Education Attribute**

- Foundations-Tech Literacy

## BSIN 3210 - Accounting Information Systems

**Credit Hours:** 3

This course will provide oversight on accounting system functions, implement / review internal system controls, and understand how to ensure the organizations have valid, accurate, and timely financial information. Students will make decisions in specialized areas of accounting (managerial, financial, auditing, and tax accounting).

## BSIN 3750 - Information Technology Ethics

**Credit Hours:** 3

The course provides background and insight into the ethical challenges posed by rapidly changing Information Technology. Students will examine and analyze the issues and controversies that comprise the field of cyberethics and cybertechnology in the professional and personal aspects of Information Technology Ethics.

## BSIN 3850 - Healthcare Information Systems

**Credit Hours:** 3

The course will provide students with an overview of Information Systems used within the Healthcare industry and the challenges it faces. Students will explore current trends in Healthcare IS and assess the challenges facing the industry when selecting and implementing a Healthcare Information System.

## BSIN 4000 - Business Driven Management Information Systems

**Credit Hours:** 3

This course focuses on components that are core to business applications and management control of information systems which assist in planning, organizing, and controlling business activities. It also emphasizes the physical and logical components of business information systems along with decision support / expert systems.

## BSIN 4210 - Strategic Issues in Management Information Systems

**Credit Hours:** 3

This course will discuss the strategic roles and responsibilities of IT Executives and Managers by addressing real world current issues facing an IT organization. Students will explore how firms can gain and sustain a competitive advantage using information systems by applying concepts on how IT drives organizational value.

## BSIN 4800 - Strategic Issues in MIS

**Credit Hours:** 3

This course will discuss the strategic roles and responsibilities of IT Executives and Managers. Students will explore how firms can gain and sustain a competitive advantage using information systems. Additionally, the course will provide an understanding of how IT drives organizational value. Key concepts around approaches to managing information systems functions in an organization and ensuring alignment with business strategies will be discussed while addressing real world current issues facing an IT organization.

## BSIN 4950 - Internship for the Department of Management and Marketing Programs

**Credit Hours:** 1 TO 12

Students are placed with an organization for a practical training experience to supplement academic learning. Through coursework, students apply the theories, concepts, and techniques learned for further career readiness and success.

**General Education Attribute**

- Competency-Keystone Experience

## CHEM 1040 - Preparation for Chemistry

**Credit Hours:** 3

This course covers basic chemistry with special attention to the elements and reactions that occur in biological systems.

Topics include stoichiometry, solutions, acids, bases, and nuclear chemistry.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## CHEM 1050 - Chemistry for Allied Health I

**Credit Hours:** 3

First semester of a one-year sequence introducing students in the Allied Health Sciences to the principles of General, Organic, and Biological Chemistry, including atomic theory, the periodic table, chemical bonding, physical and chemical properties, kinetics, equilibrium, acid-base chemistry, the laws of thermodynamics, and nuclear chemistry.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## CHEM 1078 - Current Questions in Science

**Credit Hours:** 3

The course will explore current and sometimes controversial topics in science. Topics will vary, and will be related to the natural science discipline prefix including concepts in chemistry, physics, geology, meteorology and climate science, geography, and mathematics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## CHEM 1080 - Physical Science Chemistry

**Credit Hours:** 3

Explores selected chemical principles with the purpose of providing a background that will enable students to understand issues involving the interaction of science and society. Intended for non-science majors and does not assume prior familiarity with chemistry.

## CHEM 1108 - General Chemistry I

**Credit Hours:** 4

This is the first of a two semester course sequence that explores fundamental concepts in chemistry including atomic theory, molecular structure, and molecular and chemical equations.

**Prerequisite:** MATH 1220 or MATH 1230 or MATH 1410 or MATH 2410
or

**Corequisite:** MATH 1220 or MATH 1230 or MATH 1410 or MATH 2410
**General Education Attribute**

- Discoveries-Natural Science & Technology
- Competency-Quantitative Application
- Competency-Applied Methodologies

## CHEM 1128 - General Chemistry II

**Credit Hours:** 4

This is the second of a two semester course sequence that explores fundamental concepts in chemistry including chemical reactions and equations, thermodynamics and kinetics, and equilibrium.

**Prerequisite:** MATH 1220 or MATH 1230 or MATH 1410 or MATH 2410 and CHEM 1108
**General Education Attribute**

- Discoveries-Natural Science & Technology
- Competency-Quantitative Application
- Competency-Applied Methodologies

## CHEM 1140 - Fundamentals of Chemistry I

**Credit Hours:** 4

This course covers basic chemistry with special attention to the elements and reactions that occur in biological systems. Topics include stoichiometry, solutions, acids, bases, and nuclear chemistry. There are three hours of laboratory per week.

## CHEM 1178 - Discovering Physical Sciences

**Credit Hours:** 3

The course will explore the basic principles of physical science which describe the world we live in and the universe that surrounds us. Topics will vary related to the physical science discipline prefix including concepts in chemistry, physics, geology, meteorology and climate science, geography, and mathematics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## CHEM 1278 - Discovering Environmental Sciences

**Credit Hours:** 3

The course will explore and apply scientific principles that describe and explain interesting current topics in the environmental sciences. Topics will be related to the environmental science discipline prefix including concepts in biology, meteorology and climate science, geology, geography, chemistry and physics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## CHEM 1800 - Chemistry in the Kitchen

**Credit Hours:** 3

This course covers the basic chemical principles that govern reactions in food and beverage products. The basics of chemistry are taught in the context of foods and their preparation. Reactions and interactions in proteins, carbohydrates and lipids will be covered. Additionally, the effects of changing reaction conditions on taste, texture and quality will be

discussed. In-class activities may include simple food preparation. Students may be required to do some simple activities involving "chemistry in the kitchen" at home (or in the residence hall).

## CHEM 2010 - Chemistry Career and Professional Development I

**Credit Hours:** 2

This is the first course in the two-course series of chemistry career and professional development. It focuses on career readiness, ethics, laboratory safety, techniques, and data analysis.

**Prerequisite:** CHEM 2200

## CHEM 2200 - Organic Chemistry I

**Credit Hours:** 3

This chemistry course is the first of a two-semester sequence that focuses on basic principles that govern carbon based compounds. These principles include bonding, functional groups, nomenclature, structure, stereochemistry, physical and chemical properites, and reaction mechanisms.

**Prerequisite:** CHEM 1128
**CoRequisite:** CHEM 2205

## CHEM 2205 - Organic Chemistry I Laboratory

**Credit Hours:** 1

This chemistry laboratory course is the first of a two-semester sequence that focuses on the investigation of carbon based compounds. These investigations include characterization, purification, and synthetic techniques.

**Prerequisite:** CHEM 1128
**CoRequisite:** CHEM 2200

**General Education Attribute**

- Competency-Intensive Writing

## CHEM 2240 - Fundamentals of Chemistry II

**Credit Hours:** 4

An introduction to the theory and practical applications of Organic Chemistry. In addition to covering the essential and most important organic reactions, theoretical concepts such as reaction mechanisms are discussed. The course is intended to provide background information for students in the health sciences and biology. There is a three hour lab per week

**Prerequisite:** CHEM 1140 or CHEM 1128

## CHEM 2250 - Organic Chemistry II

**Credit Hours:** 3

This chemistry course is the second of a two semester sequence that focuses on continued study principles that govern carbon-based structures including a continued focus on physical and chemical properties of functional groups, reaction mechanisms,functional group transformatioins, and organic synthesis.

**Prerequisite:** CHEM 2200

## CHEM 2255 - Organic Chemistry II Laboratory

**Credit Hours:** 1

This chemistry laboratory course is the second of a two-semester sequence that focuses on the investigation of carbon based compounds. These investigations include characterization, purification, and synthetic techniques.

**Prerequisite:** CHEM 2200 and CHEM 2205
**CoRequisite:** CHEM 2250

## CHEM 2450 - Environmental Chemistry

**Credit Hours:** 4

This is an in-depth course in the chemistry curriculum. It is a comprehensive overview of major environmental problems based on origin, fate, toxicity and remediation of chemical pollutants. Modern environmental pollution issues such as: global warming, ozone depletion, photochemical smog, acid rain, fine particulate matter, pesticides, toxic metals and alternative energy are introduced. Chemical principles for understanding various air, water and soil pollution and relevant control strategies are also covered.

**Prerequisite:** CHEM 1128

## CHEM 2680 - Nutritional Science

**Credit Hours:** 3

Introduces the basic principles of human nutrition. Explores the structure of proteins, fats, carbohydrates, vitamins, and minerals and their role in metabolism. Analyzes nutritional needs of various age groups, nutrition and disease, and recent research in nutritional problems.

## CHEM 2800 - Fermentation Analysis

**Credit Hours:** 4

This course will examine analytical methods and instrumentation for the identification of chemical compounds, ions, and molecules found throughout the process of fermented commercial goods. Particular attention will be focused on the methodology for identification and proper treatment of problematic compounds found in the production of such goods. The purpose of this course is to provide an introductory analytical background for fermentation.

**Prerequisite:** CHEM 1128 or permission from instructor.

## CHEM 2999 - Laboratory Safety

**Credit Hours:** 1

This course instructs students in the safe handling of materials. Students learn about chemical reactivity, storage, personal protection, and available information sources.

**Prerequisite:** CHEM 1128

## CHEM 3010 - Chemistry Career and Professional Development II

**Credit Hours:** 2

This is the second of a two semester sequence that prepares chemistry majors for future careers through development of information technology and presentation skills. It focuses on information literacy, common chemistry software, and data presentation.

**Prerequisite:** CHEM 3400
**General Education Attribute**

- Competency-Information Literacy

## CHEM 3250 - Organic Spectroscopy

**Credit Hours:** 3

Applies modern spectroscopic techniques to the determination of the structures of organic compounds. Discusses the techniques of infrared, nuclear magnetic resonance, and mass spectroscopy, emphasizing their application toward the elucidation of structures of organic compounds. Presents necessary theoretical background and applications. Required of all chemistry majors.

**Prerequisite:** CHEM 2250

## CHEM 3270 - Natural Products Chemistry

**Credit Hours:** 3

This course provides a comprehensive overview of secondary metabolites found in nature, particularly in plants. The chemistry and biochemistry behind important classes of compounds will be covered. The biological relevance of the various natural products will be discussed. Students that complete this class will examine natural products and determine their classifications, importance and possible sources.

**Prerequisite:** CHEM 4600

## CHEM 3290 - Isol. & Char. of Nat. Products

**Credit Hours:** 2

This course will provide a comprehensive overview and hands-on exposure to established and current methods of isolation and purification of natural products for the purpose of identifying the ingredients that give plants their bioactivity. The course will provide students the essential skills to carry out the analytical procedures of extraction, isolation and implementation of widely-used methods and instruments.

**Prerequisite:** CHEM 2250

## CHEM 3300 - Inorganic Chemistry I

**Credit Hours:** 3

This is the first course in a two-semester sequence that focuses on contemporary inorganic chemistry. Special attention will be given to atomic structure and periodic trends, bonding, group theory, molecular orbital theory, and solid state structures.

**Prerequisite:** CHEM 2200 and CHEM 2205
**CoRequisite:** CHEM 3305 or CHEM 3315

## CHEM 3305 - Inorganic Chemistry I Laboratory

**Credit Hours:** 1

This is the first laboratory course in a two-semester sequence that focuses on the investigation of inorganic compounds. These investigations include modeling, computation, synthesis, purification, and characterization techniques.

**Prerequisite:** CHEM 2200 and CHEM 2205
**CoRequisite:** CHEM 3300

## CHEM 3315 - Intermediate Chemistry I Laboratory

**Credit Hours:** 1

This is a foundation course for chemistry majors with an emphasis on synthesis and characterization of organic, inorganic, and organometallic molecules using higher level experimental protocols and spectroscopic methods. Topics in this integrated laboratory course include proper use of the experimental notebook, molecular modeling, and spectroscopic theory.

**Prerequisite:** CHEM 2200

## CHEM 3350 - Inorganic Chemistry II

**Credit Hours:** 3

This is the second course in a two-semester sequence that focuses on contemporary inorganic chemistry. Special attention will be given to main group chemistry, coordination chemistry, and organometallic chemistry.

**Prerequisite:** CHEM 3300

## CHEM 3355 - Inorganic Chemistry II Laboratory

**Credit Hours:** 1

This is the second laboratory course in a two-semester sequence that focuses on the investigation of inorganic compounds. These investigations include modeling, computation, synthesis, purification, and characterization techniques.

**Prerequisite:** CHEM 3305
**CoRequisite:** CHEM 3350

## CHEM 3370 - Chemistry of the Elements

**Credit Hours:** 2

Introduces coordination and descriptive inorganic chemistry. Laboratory focuses on the properties and reaction chemistry of the elements and inorganic compounds

## CHEM 3400 - Quantitative Chemical Analysis

**Credit Hours:** 3

This course covers principles of quantitative nalysis, including analytical methods used in "wet" chemistry, basic statistics for error analysis, common systems of equilibria and their applications, foundations of electrochemistry, and introduction to instrumentation.

**Prerequisite:** CHEM 1128

## CHEM 3405 - Quantitative Chemical Analysis Laboratory

**Credit Hours:** 1

This course includes laboratory activities involving common analytical techniques, such as making and using standards, calibrations, error analysis, titrations, analytical equipment, electrochemical techniques, spectrophotometers, and chromatography.

**Prerequisite:** CHEM 1128
**CoRequisite:** CHEM 3400

## CHEM 3415 - Intermediate Chemistry II Lab

**Credit Hours:** 1

This is a foundation course for chemistry majors with an emphasis on synthesis and characterization of organic, inorganic, and organometallic molecules using higher level experimental protocols and spectroscopic methods. Topics in this integrated laboratory course include proper use of the experimental notebook, molecular modeling, and spectroscopic theory.

**Prerequisite:** CHEM 3315

## CHEM 3450 - Instrumental Methods Analysis

**Credit Hours:** 3

This course introduces the theory, fundamental principles, and application of modern instrumentation to chemical analysis.

**Prerequisite:** CHEM 2200

## CHEM 3455 - Instrumental Analysis Laboratory

**Credit Hours:** 1

This course includes laboratory activities involving common applications of modern instrumentation.

**Prerequisite:** CHEM 3405 or CHEM 3415
**CoRequisite:** CHEM 3450

## CHEM 3640 - Fundamentals of Chemistry III

**Credit Hours:** 4

This course introduces General Biochemistry with particular emphasis on the structure of molecules.Topics include the chemistry and metabolism of carbohydrates, lipids, proteins and nucleic acids, enzyme structure/function and genetic information transfer.There is a three hour lab per week.

**Prerequisite:** CHEM 2240 or CHEM 2250

## CHEM 3650 - Toxicology

**Credit Hours:** 3

This course provides in-depth study of chemistry knowledge involved in the main classes of hazardous materials including explosives, compressed gases, flammable liquids and solids, oxidizers, poisons, corrosives, and radioactive materials. Chemical principles such as molecular structures, reactivity, and compatibility will be examined for each class of hazardous materials. The course will also introduce chemical safety and relevant regulations involved with hazardous materials in various industries, laboratories, and the environment.

**Prerequisite:** CHEM 1128

## CHEM 3670 - Drugs from Discovery to Design

**Credit Hours:** 3

A study of the drug development and the pharmaceutical industry. The course will, follow the path that new drugs take from their discovery in the laboratory, through in vitro testing, clinical trails, to final Food and Drug Administration (FDA) approval and post-market survellance. Attention will be paid to the role of the FDA, and ethical issues at every step along the path to market. Students will also examine drugs as molecules and how they function physiologically, as well as a look at the major in vivo targets of drugs.

**Prerequisite:** CHEM 1108

## CHEM 3900 - Special Topics

**Credit Hours:** 1 TO 3

This is an in-depth special topics course in the discipline of chemistry. The specific topics will be chosen by the instructor.

## CHEM 3999 - Scientific Literature

**Credit Hours:** 1

This course introduces science, education majors, and others to systematic methods of accessing scientific information. While the focus is on searching the chemical literature, students will be exposed to searching information relevant to other scientific disciplines. Students learn to use important library resources such as abstracts, reviews, monographs, and on-line sources.

**Prerequisite:** CHEM 3400

## CHEM 4115 - Advanced Chemistry Laboratory

**Credit Hours:** 1

This is a laboratory course designed to further develop experiences in advanced laboratory experiences including laboratory techniques and instrumentation.

**Prerequisite:** CHEM 3405 or CHEM 3415

## CHEM 4200 - Advanced Organic Chemistry

**Credit Hours:** 3

This is an in-depth special topics course which continues the study of carbon-based structures. The specific topics will be chosen by the instructor and may include topics in physical organic chemistry, spectroscopy, synthesis, and other advanced topics in Organic Chemistry.

**Prerequisite:** CHEM 2250

## CHEM 4250 - Polymer Chemistry

**Credit Hours:** 3

This lecture course introduces nomenclature, classification, synthesis, chemical and physical properties, characterization, and processing methods of various types of polymers. Applications of polymers in a wide range of areas are also reviewed.

**Prerequisite:** CHEM 2250

## CHEM 4500 - Physical Chemistry I

**Credit Hours:** 3

This course is the first of a two-course sequence in physical chemistry. Topics include properties of gases, laws of thermodynamics, phases of matter, chemical equilibrium, and chemical kinetics.

**Prerequisite:** PHYS 1500 and PHYS 1510 and PHYS 1600 and PHYS 1610 or PHYS 2500 and PHYS 2510 and PHYS 2600 and PHYS 2610

## CHEM 4505 - Physical Chemistry I Laboratory

**Credit Hours:** 1

This course is designed to familiarize students with the practical aspects of experimental physical chemistry. The laboratory experience will illustrate the fundamental concepts discussed in the Physical Chemistry 1 lecture course.

**Prerequisite:** PHYS 1500 and PHYS 1510 and PHYS 1600 and PHYS 1610 or PHYS 2500 and PHYS 2510 and PHYS 2600 and PHYS 2610

## CHEM 4515 - Intermediate Chemistry III Laboratory

**Credit Hours:** 1

A foundation course for chemistry majors. The primary focus will be on use of instrumentation to obtain data, calculate and increase understanding of chemical phenomenon.

**Prerequisite:** CHEM 3315

## CHEM 4550 - Physical Chemistry II

**Credit Hours:** 3

This course is a continuation of Physical Chemistry 1 and is the second of a two-semester sequence of physical chemistry. Topics include model quantum systems, quantum chemistry, atomic and molecular spectroscopy, and atomic and molecular structure.

**Prerequisite:** CHEM 4500 and CHEM 4505 or CHEM 4515

## CHEM 4555 - Physical Chemistry II Laboratory

**Credit Hours:** 1

This course is designed to familiarize students with the practical aspects of experimental physical chemistry. The laboratory experience will illustrate the fundamental concepts discussed in the Physical Chemistry 2 lecture course.

**Prerequisite:** CHEM 4505
**CoRequisite:** CHEM 4550

## CHEM 4600 - Biochemistry I

**Credit Hours:** 3

This course is a study of the chemical and physical properties of proteins, nucleic acids, carbohydrates, and lipids. An introduction to biochemical membranes, signaling, and bioenergetics.

**Prerequisite:** CHEM 2250

## CHEM 4605 - Biochemistry I Laboratory

**Credit Hours:** 1

This course will introduce students to the fundamental techniques employed in modern biochemistry, with emphasis in

hands-on training to further skills in biochemical techniques.

**Prerequisite:** CHEM 2250
**Prerequisite or CoRequisite:** CHEM 4600
**General Education Attribute**

- Competency-Intensive Writing

## CHEM 4650 - Biochemistry II

**Credit Hours:** 3

A further analysis of the chemical and physical properties of biomolecules, including the understanding and regulation of metabolic pathways, bioenergetics, and the biochemical nature of multiple disease states.

**Prerequisite:** CHEM 4600

## CHEM 4670 - Biochemistry Basis of Human Disease

**Credit Hours:** 3

In the course students will study they biochemical relationships and breakdown within metabolic and signaling pathways resulting in multiple disease states. Students will develop a deeper understanding for the points of regulation in metabolic processes, how bimolecular mutations affect disease phenotype, current treatments including drug design, efficacy and toxicity, and the overall impact of these afflictions on societal healthcare.

**Prerequisite:** CHEM 4600

## CHEM 4700 - Forensic Analysis

**Credit Hours:** 3

This course will provide students with theoretical knowledge and technical skills in the areas of forensic analysis of microscopic evidence and physiological fluids. This course will include both lecture and laboratory components.

**Prerequisite:** CHEM 3400

## CHEM 4750 - Advanced Environmental Chemistry

**Credit Hours:** 3

This is an in-depth elective course in the chemistry curriculum. It focuses on the sources, transport, reactions, effects and fate of chemical species in the atmosphere, hydrosphere and geosphere. Transformation and interaction of chemical contaminants within and between the three environmental systems are covered. Advanced chemistry concepts such as thermodynamics, photolysis, catalytic reactions, chemical equilibria, and kinetics are emphasized in the course. Case studies and contemporary literature in the field are discussed.

**Prerequisite:** CHEM 2250 and CHEM 3400

## CHEM 4800 - Fermentation Chemistry

**Credit Hours:** 4

This course will provide students with a biochemical understanding of the natural process of fermentation in its many forms, including but not limited to brewing (beer/cider), vinification, fermented foods, and chemical synthesis. The course will focus heavily on applied fermentation in the laboratory setting, supplemented with a theoretical and historical perspective on the development of fermentation. This course is the capstone in the Fermentation Science program.

**Prerequisite:** CHEM 2800

## CHEM 4900 - Chemistry Capstone

**Credit Hours:** 2

This is the capstone experience for chemistry majors with a focus on presenting research findings to the chemistry community.

**Prerequisite:** CHEM 4500 and CHEM 3010
**General Education Attribute**

- Competency-Keystone Experience

## CHEM 4905 - Chemistry Research I

**Credit Hours:** 1 TO 2

This is a variable credit research course focused on undergraduate laboratory research experiences under the direction of faculty.

**Prerequisite:** CHEM 4500

## CHEM 4915 - Chemistry Research II

**Credit Hours:** 1 TO 2

This is the second of a series of research courses focused on continuation of undergraduate laboratory research experiences under the direction of faculty.

**Prerequisite:** CHEM 4905

## CHEM 4950 - Chemistry Internship

**Credit Hours:** 0 TO 6

This is an upper-division elective course intended for chemistry majors who wish to advance their academic growth through an external work environment. Designed to supplement classroom and laboratory studies, internships provide students with additional knowledge and skills and apply previously learned information to on-site situations. Student will work under joint supervision between the internship location and a department faculty member. Students are to complete the university internship training process before registration for the course.

**Prerequisite:** CHEM 3315 or CHEM 3405

## CHEM 4997 - Independent Study-Chemistry

**Credit Hours:** 1

This course aims to serve those students whose scholarly bent seems most clearly adapted to independent work. Students are permitted to solve problems and to earn credit for work performed outside the classroom requirements of any specific course in the curriculum.

## CHEM 4998 - Chemistry Seminar

**Credit Hours:** 3

This course is an introduction to chemistry literature an presentations. Students will learn how to search the chemistry literature for topics of current interest using databases, compilation of a bibliography, preparation of an abstract, and presentation of a poster and seminar.

## CHIN 1000 - Introduction to Chinese Cultures and Languages

**Credit Hours:** 3

Introduces basic facts about Chinese cultures and languages. Topics include Chinese customs and traditions, geography and history, beliefs and spirituality, current economic, political and social affairs, and contributions to art, literature, science, and technology of the world. Course taught in English.

## CHIN 1001 - Elementary Chinese I

**Credit Hours:** 3

Introduces the Chinese language, emphasizing all language skills - listening, speaking, reading and writing.

**General Education Attribute**

- Discoveries-Art/Humanities

## CHIN 1002 - Chinese Two

**Credit Hours:** 3

Continuation of CHIN 1001 - Elementary Chinese I and further develops four basic skills in the Chinese language: listening, speaking, reading and writing.

**Prerequisite:** CHIN 1001
**General Education Attribute**

- Competency-Intercultural Fluency

## CHIN 2001 - Chinese Three

**Credit Hours:** 3

Systematic review of basic grammar and expansion of vocabulary in Mandrin Chinese: graded readings, conversation, composition, and translation based on selected topics.

**Prerequisite:** CHIN 1002
**General Education Attribute**

- Competency-Intercultural Fluency

## CHIN 3000 - Studies in Chinese Cultures and Languages

**Credit Hours:** 3

Introduces a variety of topics in Chinese Studies and discusses them critically and in depth. Taught in English.

**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Intensive Writing

## CHIN 3001 - Chinese Four

**Credit Hours:** 3

Continuation of CHIN 2001 - Chinese Three. Further study of grammar and development of communication skills in Chinese.

**Prerequisite:** CHIN 2001
**General Education Attribute**

- Competency-Intercultural Fluency

## CMAC 1200 - Problem Solving and Programming Constructs

**Credit Hours:** 3

This course will provide the student with basic literacy of computers, present problem solving heuristics and structured programming techniques, present language independent data types, compose operations and programming constructs, introduce arrays and linked lists, and implement fundamental programs using an appropriate programming language.

**General Education Attribute**

- Foundations-Tech Literacy

## CMAC 1240 - Computer Programming I

**Credit Hours:** 3

This course builds on CMAC 1200. It gives the student a thorough understanding of the presently adopted language so that the student will develop the ability to program in the language. Emphasis is placed on efficient software development using structured programming techniques. Students are required to write, test and run programs.

**Prerequisite:** CMSC 1200 or CMAC 1200
**General Education Attribute**

- Discoveries-Natural Science & Technology

## CMAC 1510 - Creating Games for Great Good

**Credit Hours:** 3

Modern video games are used not only for entertainment, but for training, education, and many other purposes as well. This course will discuss contemporary uses of games as well as the basics of how to design and create them, both practically and responsibly. Students will create a basic game, using a game creation tool, as part of this course.

## CMAC 2000 - Introduction to Cybersecurity

**Credit Hours:** 3

This course is a broad overview to the field of cybersecurity and serves as a foundation for understanding key concepts related to protecting information assets. Topics include common cyberattacks, cryptography, security protocols, attack mitigation mechanisms, and cyber wellness. This course forms the basis for future cybersecurity courses.

**General Education Attribute**

- Wellness & Personal Health

## CMAC 2010 - Operating Systems

**Credit Hours:** 3

This course focuses on fundamental principles in modern operating systems including Windows, Unix/Linux and Mac OS. Students learn about the services provided by operating systems' software, memory management, process scheduling and communication, storage, input/output, and distributed systems. OS security and data protection and the interaction between computers will be also covered.

## CMAC 2040 - Object Oriented Programming

**Credit Hours:** 3

Object Oriented Programming- This course teaches object-oriented programming. Object-orientated programming offers a natural method for designing software systems that build on the concepts of data abstraction, information hiding and modularity. Students will design and implement solutions to problems using an object-oriented programming language.

**Prerequisite:** CMSC 1240 or CMAC 1240

## CMAC 2100 - Logic and Switching Theory of the Computer

**Credit Hours:** 3

This course provides the student with an in-depth study of the basis of digital computers. Number systems, arithmetic operations, codes, Boolean algebra, Boolean minimization techniques, state transition tables and state transition graphs are discussed. Extensive emphasis is placed on the analysis and synthesis of synchronous and asynchronous combinational networks which form digital computers.

**Prerequisite:** MATH 1510

## CMAC 2400 - Computer and Networking

**Credit Hours:** 3

This course covers concepts in the design and implementation of computer communication networks, their protocols, the applications, and advanced principles of computer networks. Security issues in communication networks will be also studied, including secure communication, authentication, firewalls and intrusion detection.

## CMAC 2450 - Applied Cryptography

**Credit Hours:** 3

An introduction to cryptography with the number theory portion tied in. The following topics will be covered: Modular Arithmetic, Classical Cryptography, Public Key Cryptography, Introduction to Complexity, and their corresponding implementations in an appropriate computer programming language.

## CMAC 2600 - Cybersecurity Concepts

**Credit Hours:** 3

This course introduces students to more principles of cybersecurity beyond Into to Cybersecurity. Topics will include cyber ethics, encryption, disaster recovery, cloud security, IoT security, and cyber threats

**Prerequisite:** CMAC 2000

## CMAC 2750 - Project Management

**Credit Hours:** 3

This course focuses on the management and change control for both general and IT-related projects. Technical and behavioral aspects of project management are applied within the context of an information systems development project.

## CMAC 3000 - Principles of Responsible Computing

**Credit Hours:** 3

This course covers ethical and legal frameworks used in computing professions. Emphasis will be on the decision-making methodology in framing ethically-charged situations that arise from the use/misuse of technology and in strategies to mitigate conditions that impact the technologies employed by individuals, organizations, and society.

**Prerequisite:** ENGL 1200 and CMIS 2200 or CMSC 2040
**General Education Attribute**

- Competency-Ethical Reasoning
- Competency-Information Literacy

## CMAC 3020 - Introduction to Human Computer Interaction

**Credit Hours:** 3

This course surveys human-computer interaction concepts, theory, and practice, focusing on its interdisciplinary nature. Human needs and capabilities as well as technological opportunities in the design of interactive systems are examined. The process of designing user interfaces, both from the perspective of design activities and the evaluation of user

interface designs are examined, including user requirements gathering, with emphasis on usability goals; user analysis; user task analysis; design, rapid prototyping, and user-centered formative evaluation.

**Prerequisite:** CMSC 1200 or CMAC 1200

## CMAC 3040 - Data Structures

**Credit Hours:** 3

The design, use and programming of data structures, such as stacks, queues, linked lists and binary trees, will be discussed. Sorting and searching methods are also discussed in this course. The analysis of algorithms will be considered as well as the applications of the various data structures.

**Prerequisite:** CMSC 2040 or CMAC 2040

## CMAC 3100 - Computer Architecture and Assembly Language

**Credit Hours:** 3

This course introduces computer architecture and organization through the lens of assembly language programming. Topics include processor/memory organization, processor control, instruction set architecture, and data representation. The programming provides a working grasp of low-level features, such as registers, program control, and input/output.

**Prerequisite:** CMAC 1240 or CMSC 1240

## CMAC 3140 - Analysis of Algorithms

**Credit Hours:** 3

This course covers algorithm analysis theory and techniques. Students learn properties of both efficient and inefficient algorithms. The importance of analyzing algorithms before implementing them will be emphasized. This course will teach the skills necessary to determine the best algorithm for a given problem. We will investigate greedy, graph theoretic, divide and conquer, and distributed algorithms. We will cover both polynomial time algorithms and NP-completeness.

**Prerequisite:** CMSC 3040 or CMAC 3040

## CMAC 3180 - Data Communication and Networking

**Credit Hours:** 3

This course provides an overview of the basic principles and technologies of data communications and networking systems. Topics include transmission techniques, mutiplexing, flow and error control, routing and congestion control. The course will introduce switched, broadcast and wireless networking technologies. TCP/IP and the OSI protocol architectures will be investigated.

**Prerequisite:** (CMSC 3240 or CMAC 3100) and MATH 1510

## CMAC 3200 - Database Application Programming

**Credit Hours:** 3

This course covers data models using Data Definition Language, use Data Manipulation Language to create complex action queries in tandem with Transaction Control Language, and use SQL (structured query language) to create and call stored program and procedures, work with cursor structures , create and execute database triggers.

**Prerequisite:** CMIS 3150 or CMSC 2040

## CMAC 3210 - Database Systems

**Credit Hours:** 3

This course introduces the student to fundamentals of database design and use. Through the analysis of business processes, students will create conceptual database designs, in MS-Visio - for example, via normalization and entity-relationship modeling. Students will prove their models by implementing them using Oracle's DDL SQL, and manipulate data in those structures using Oracle's DML SQL and PL/SQL (Procedural Language/SQL).

## CMAC 3320 - Technical Computing Using Java

**Credit Hours:** 3

This course enables the student to acquire a thorough understanding of the Java language and its application in solving engineering and real world problems. Both Java programs and Applets will be studied. Emphasis is placed on efficient software development using structured programming techniques. Students are required to design, write, test, and run programs using an appropriate version of Java.

**Prerequisite:** MATH 2420 and (CMSC 2040 or CMAC 2040)

## CMAC 3350 - Biometrics

**Credit Hours:** 3

This course concentrates on the unique advantages that biometrics brings to computer security, but also addresses challenging issues such as security strength, recognition rates, and privacy, as well as alternatives of passwords and smart cards. Students will gain knowledge in the building blocks of this field: image and signal processing, pattern recognition, security and privacy, and secure systems design. By the end of the course, students will be able to evaluate and design security systems that include biometrics.

## CMAC 3370 - Data Warehousing & Business Intelligence

**Credit Hours:** 3

Information and the Data on which they are based, are vital corporate assets, stored in organizational databases, data warehouses, and data marts and provide competitive advantage for businesses. Organizations use data to make data-driven, informed decisions. In this course, students will learn the purpose and applications of data warehousing (DW) environment built from multiple data sources for analytical and information processing. DW stores information organized in a unified data model for the purposes of business decision making. An enterprise data warehouse offers an integrated corporate knowledge repository and provides tools for users to gain insights for decision making, based on facts and not intuition. Students will be introduced to how data warehousing offers business intelligence (BI) for analysts, managers and decision makers. BI topics include query, reporting and OLAP cubes

**Prerequisite:** CMIS 2720

## CMAC 3380 - Python

**Credit Hours:** 3

This course enables the student to acquire a thorough understanding of the Python language and its application in solving real world problems. Emphasis is placed on efficient software development using structured programming techniques, Object Oriented Programming, GUI interfaces, as well as a variety of Python modules and packages. Students are required to design, write, test, and run programs using an appropriate version of Python.

**Prerequisite:** CMSC 1240 or CMIS 1200 or CMAC 1240

## CMAC 3450 - Cybersecurity Risk Management & Assessment

**Credit Hours:** 3

In business today, risk plays a critical role. Almost every business decision requires executives and managers to balance risk and reward. This course introduces students to the strategic discipline of assessing, prioritizing, monitoring and controlling the impact of uncertainty on organizational objectives.

## CMAC 3500 - Web Programming I

**Credit Hours:** 3

This course is designed for the Computer Information Systems major. It provides the student with a thorough understanding of HTML, in order to enable the student to create Web pages and Web sites using HTML. It also provides the student with a thorough understanding of at least one client-side scripting language, in order to enable the student to begin creating data-base driven Web sites. Students are required to write and test Web pages and Web sites that use client-side scripts.

**Prerequisite:** CMIS 2200 or CMAC 2040 or CMSC 2040

## CMAC 3550 - Wireless Network and Security

**Credit Hours:** 3

This course is designed to provide the student with an understanding of the principles and concepts of wireless data network and security. Students will study wireless standards (such as IEEE 802.11 a/b/g/n, ZigBee, 2G/3G/4G/LTE). The course will survey the state of the art in wireless networks and security. Students will also learn security and privacy issues associated with wireless networks. Various attacks against wireless networks and their defense strategies will be analyzed.

## CMAC 3580 - Systems Programming

**Credit Hours:** 3

This course introduces students to communicating with operating systems through an application programming interface (API). Students will write programs in high level programming languages to interact with various operating systems. Additionally, students will study script programming with a focus on interacting with and configuring operating systems and performing systems administration tasks.

**Prerequisite:** CMSC 1240 or CMIS 1200

## CMAC 3610 - Leadership and Professional Development

**Credit Hours:** 3

This course is intended to prepare students for the leadership decisions and actions that are inherent in practice as well as every-day life issues. Professional and personal growth are discussed at great length and principles and applications of personal leadership practices will be explored in depth. Techniques for managing change and empowering others also are included in this course. Topics related to effective leadership are issues of communication, motivation, delegation, team building, and quality improvement. Finally, students will have the opportunity to perform a SWOT analysis on their business or self (whichever is applicable). This culminating activity is designed to strengthen the students' leadership abilities and skills.

## CMAC 3640 - Computer Forensics and Incident Response

**Credit Hours:** 3

This course will aim to train students to determine who is responsible for a malicious attack that happened on the computer while documenting the evidence and performing a proper investigation. It will also teach students how an organization should handle a cyber attack. Topics will include computer forensics, legal requirements for conducting an investigation, cloud incident response, mobile device incident response, network forensics, intrusion detection and analysis, and forensics tools.

**Prerequisite:** CMAC 2600

## CMAC 3700 - 2D Game Programming

**Credit Hours:** 3

This course introduces concepts and techniques for the programming of two-dimensional games. Students will learn about the basics of making two-dimensional games, as well as how to work with a two-dimensional game engine environment (for example, GameMaker Studio). Additionally, students will construct at least one two-dimensional game during this course. This course focuses on the programming behind creating games in a commonly used language for that purpose (for example, GML or C++), and as such will also reinforce may important programming concepts from other courses.

**Prerequisite:** CMSC 2040 or CMAC 2040

## CMAC 3720 - 3D Game Programming

**Credit Hours:** 3

This course introduces concepts and techniques important for the programming of three-dimensional games. Students will learn about the basics of making three-dimensional games, as well as how to work with a three-dimensional game engine environment (for example, Unity). Additionally, students will construct at least one three-dimensional game during the course. This course focuses on the programming behind creating games in a commonly used language for that purpose (for example, GML or C++), and as such will also reinforce many important programming concepts from other courses.

**Prerequisite:** CMAC 2040 or CMSC 2040

## CMAC 3740 - Mobile Application Development

**Credit Hours:** 3

This course introduces students to mobile application design and development while utilizing Software Development Kits (SDKs) to develop mobile applications. Students will learn user interface design in combination with event driven programming. An overview of required programming languages and SDK tools will be covered along with object-oriented development, source code control and testing.

**Prerequisite:** CMAC 2040 or CMIS 2200

## CMAC 3780 - Computer Graphics

**Credit Hours:** 3

Provides an overview and application of the principles and tools of computer graphics. Includes characteristics of graphical display devices, graphics software primitives, representation, manipulation, and display of two- and three-dimensional objects, interactive graphics and the graphical user interface, and animation. Includes graphics programming projects.

**Prerequisite:** CMSC 3040 or CMAC 3040

## CMAC 3830 - Introduction to Machine Learning

**Credit Hours:** 3

This course introduces various machine learning concepts and algorithms. Students will learn about the basics of machine learning as well as how machine learning is used during interactions in their everyday lives. Students will also be exposed to machine learning through a programming framework or GUI application (for example, Weka).

**Prerequisite:** CMSC 1200 or CMAC 1200

## CMAC 3990 - Special Topics in Computer Science

**Credit Hours:** 1 TO 3

Provides for focused study of a special interest topic in computing using learning formats selected by the instructor as best suited for the particular course.

**Prerequisite:** Prerequisites for particular course set by the instructor.

## CMAC 4000 - Operating Systems

**Credit Hours:** 3

This course involves an introductory study of the main elements of an operating system memory management, process management, device management, and file management. An operating system defines an abstraction of hardware behavior with which programmers can control the hardware. It also manages resource sharing among the computer's users. This course investigates these concepts as well as issues that influence the design of contemporary operating systems, including management of processes, memory, devices, and files. Additional special topics may include scripting, security, fault tolerance, and real-time systems.

**Prerequisite:** CMSC 3240 or CMAC 3100

## CMAC 4120 - Parallel Processing

**Credit Hours:** 3

Studies the architecture, algorithms, and programming that are involved with parallel processing. Students will learn how parallel architecture affects the design of parallel algorithms and parallel programming. Architectures shall include the prevailing message passing and shared memory architectures. Students will learn how to design parallel algorithms and how to think in parallel. Students will learn how to write parallel programs, using a prevailing parallel programming language. Programming may be done by remotely using an account at a supercomputer center, using serial computers that are working together to solve a problem (a cluster), or using an individual computer which has multiple processors within it.

**Prerequisite:** CMSC 3040 and CMSC 3240

## CMAC 4140 - Theory of Languages

**Credit Hours:** 3

This course is an introduction to abstract machine theory, combinatorial systems, computable functions, and formal linguistics. Topics include finite-state machines, regular sets, Turing machines, Chomsky hierarchy grammars and languages. Emphasis is on surveying basic topics and developing an intuitive understanding in the theory of languages.

**Prerequisite:** CMSC 2100 or CMAC 2100

## CMAC 4180 - Language Translation

**Credit Hours:** 3

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.

**Prerequisite:** CMSC 4140 or CMAC 4140

## CMAC 4200 - Artificial Intelligence

**Credit Hours:** 3

Surveys the thinking and some of the pioneering efforts in the area of artificial intelligence (AI), integrated with more traditional approaches to decision-making. Applies AI principles through the use of logic programming languages.

**Prerequisite:** CMSC 3040 or CMAC 3040

## CMAC 4500 - Web Programming II

**Credit Hours:** 3

This course introduces the student to server-side technologies. Students are required to write and test database driven websites that use both client-side and server-side scripts.

**Prerequisite:** CMIS 3500 or CMAC 3500 and CMIS 3200 or CMAC 3200

## CMAC 4640 - Information Systems Auditing and Security

**Credit Hours:** 3

Analyzes the information system audit process, provision and evaluation of controls in all aspects of information system operation, and the provision and maintenance of computer security. Stresses internal controls while examining specific controls and security.

**Prerequisite:** CMAC 2000 or CMSC 2000

## CMAC 4680 - Security Management

**Credit Hours:** 3

This course introduces the development, documentation, and implementation of policies and procedures for protecting an organization's information assets. Topics will include personnel security, system security testing, types of security management (accounts, assets, change, and risk), business impact analysis, organizational policies, and cyber governance.

**Prerequisite:** CMAC 4640

## CMAC 4900 - Senior Project I: Software Engineering

**Credit Hours:** 3

This course introduces students to software engineering. They will study its history, terminology, requirements, specifications, and design. The students will write requirements, specifications, and design documents, and one or more papers on software engineering topics.

**Prerequisite:** CMAC 2040 or CMSC 2040 and ENGL 3230
**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## CMAC 4920 - Senior Project II

**Credit Hours:** 3

This course is a continuation of CMSC/CMAC 4900 and the capstone course of the program. The project proposal developed and designed in the first Senior Project class will be implemented in this course. The student will produce a project users' manual and will demonstrate proficiency in the academic program through the development of the project.

**Prerequisite:** CMSC 4900 or CMAC 4900
**General Education Attribute**

- Competency-Applied Methodologies
- Competency-Keystone Experience

## CMAC 4950 - Internship

**Credit Hours:** 1 TO 15

The internship in computer science is intended to give the student an opportunity for on-the-job experience in theoretical or applied computer science. The internship shall incorporate meaningful productive experience usually during the junior year. Time spent and the nature of the experience is usually under the control of the local agency and is used in the determination of the amount of credit obtained. In addition to the hours spent on the job, the student shall also be responsible to the department Internship Coordinator.

**Prerequisite:** Permission of the department Internship Coordinator.

## CMIS 1010 - Making Data Work for You

**Credit Hours:** 3

This course is intended to teach those from all different disciplines how to gather, clean, store, and use data in ways that will enhance their professional lives. This will be achieved through the introduction of various tools and techniques such as spreadsheet software, data analysis tools, visualization tools, and basic scripting.

**General Education Attribute**

- Foundations-Tech Literacy

## CMIS 1100 - Introduction to Information Systems

**Credit Hours:** 3

This course introduces students to the role and value of information systems (IS) to businesses and society, technological and non-technological components of IS and managing information and data resources. Students learn to use software and systems for analysis, modeling and retreival of data, and for managing processes and projects.

**General Education Attribute**

- Foundations-Tech Literacy

## CMIS 1150 - Introduction to Website Development

**Credit Hours:** 3

This course introduces the student to website development by covering topics of: the Internet and its architecture, standards effecting websites, website design issues, and the building and publishing of a website. Students will put to use the skills learned by creating a small website.

**General Education Attribute**

- Foundations-Tech Literacy

## CMIS 1200 - Application Programming I

**Credit Hours:** 3

Introduces programming concepts within business and technological context. Topics include programming basics (control structures, loops,data types, operations and methods), computer organization, algorithmic thinking and social and professional issues.

**General Education Attribute**

- Foundations-Tech Literacy

## CMIS 1210 - Data Analysis via Spreadsheets

**Credit Hours:** 3

This course provides an in depth study of the application of spreadsheet software for data analysis. Students will work individually and collaboratively to analyze data from various domains. Emphasis will be placed on documenting and presenting solutions.

**General Education Attribute**

- Foundations-Tech Literacy

## CMIS 2010 - Operating Systems

**Credit Hours:** 3

This course focuses on fundamental principles in modern operating systems including Windows, Unix/Linux and Mac OS. Students learn about the services provided by operating systems' software, memory management, process scheduling and communication, storage, input/output, and distributed systems. OS security and data protection and the interaction between computers will be also covered.

## CMIS 2015 - Data Analytics Tools

**Credit Hours:** 3

This course introduces students to a selected data analytics scripting tool in common use in industry and academia. Students will explore basic data analysis in the selected tool as well as additional packages that are available. The platform will vary with course offering, and this course may be repeated when presented with a different platform.

## CMIS 2170 - Spreadsheets and Office Apps

**Credit Hours:** 3

Introduces the basic concepts of microcomputers and software applications. Includes commonly available software packages and graphics.

## CMIS 2200 - Application Programming II

**Credit Hours:** 3

This course provides students with advanced techniques for design and implementation of business solutions using object-oriented programming concepts. This course also covers the data structures that are typically learned in a traditional CS2 course. Emphasis is placed on efficient software development for business related problems. Students are required to write, test and run programs.

**Prerequisite:** CMIS 1200

## CMIS 2400 - Computer and Networking

**Credit Hours:** 3

This course covers concepts in the design and implementation of computer communication networks, their protocols, the applications, and advanced principles of computer networks. Security issues in communication networks will be also studied, including secure communication, authentication, firewalls and intrusion detection.

## CMIS 2450 - Applied Cryptography

**Credit Hours:** 3

An introduction to cryptography with the number theory portion tied in. The following topics will be covered: Modular Arithmetic, Classical Cryptography, Public Key Cryptography, Introduction to Complexity, and their corresponding implementations in an appropriate computer programming language.

**Prerequisite:** CMIS 1200

## CMIS 2720 - Database Management Systems for Decision Making

**Credit Hours:** 3

Databases facilitate decision makers to perform qualitative analysis on their data. Organizations use data to make data-driven, informed decisions. In this course, students will be introduced to the database concepts, analysis, design and focus on the usage of a modern relational databases. Student will learn how to use database management systems.

**Prerequisite:** CMSC 1200 and CMIS 1200

## CMIS 2750 - Project Management

**Credit Hours:** 3

This course focuses on the management and change control for both general and IT-related projects. Technical and behavioral aspects of project management are applied within the context of an information systems development project.

## CMIS 3000 - Principles of Responsible Computing

**Credit Hours:** 3

This course covers ethical and legal frameworks used in computing professions. Emphasis will be on the decision-making methodology in framing ethically-charged situations that arise from the use/misuse of technology and in strategies to mitigate conditions that impact the technologies employed by individuals, organizations, and society.

**Prerequisite:** ENGL 1200 and CMAC 2000 and CMIS 2200 or CMSC 2040 or CMAC 2040
**General Education Attribute**

- Competency-Ethical Reasoning
- Competency-Information Literacy

## CMIS 3020 - Visual Programming

**Credit Hours:** 3

This course teaches *Windows* applications programming using the object-oriented event-driven programming paradigm, with the programming language VisualBasic.NET. It is designed as a beginning OOED programming course, but assumes students have basic *Windows* file management skills, and are familiar with the generic programming language constructs of decision structures and looping.

**Prerequisite:** CMIS 2200

## CMIS 3125 - Systems Analysis & Design

**Credit Hours:** 3

This project course introduces students to "systems thinking" and experientially introduces the students to some of the basic concepts and tools of systems analysis within the context of a real-life business problem. The traditional SDLC waterfall approach to systems analysis and design is stressed in order to prepare students for any business type or size (some of which may not have modern analysis and design tools). Students entering into this course must have a basic understanding of business and the idea of using programs that are integrated into systems to solve business problems. This requisite knowledge is built upon in teaching students how to analyze a business's current information system; how to extrapolate user needs and the business's additional processing requirements; and then how to design a system that not only meets the stipulated requirements while remaining within the project's constraints, but remains in line with the entity's mission/vision and optimizes business processes to position the entity more competitively in the market.

**Prerequisite:** CMIS 1100 and CMIS 1200 and ENGL 1200 and MGMT 3000 or GGIS 1510 and ENGL 3230 or ENGL 3210

## CMIS 3150 - Database Design & Modeling

**Credit Hours:** 3

This is an introduction to data modeling for current, RDBMS (Relational Data Base Management Systems) structures used in industry today. The student is introduced to some file system history and predecessors to RDMBS, along with appropriate DBMS terminology. The focus of the course is to develop the analysis skills needed to successfully translate business processes into viable data models that enable maximum transaction-processing speed. Students will employ Codd's normalization technique and model the data using Entity Relationship Diagraming including Specialization Hierarchies, with Crow's Foot notation.

**Prerequisite:** CMIS 3125

## CMIS 3200 - Database Application Programming

**Credit Hours:** 3

This course covers data models using Data Definition Language, use Data Manipulation Language to create complex action queries in tandem with Transaction Control Language, and use SQL (structured query language) to create and call stored program and procedures, work with cursor structures , create and execute database triggers.

**Prerequisite:** CMIS majors: CMIS 2200 and CMIS 3150
CMSC/CMAC majors: CMSC 2040 or CMAC 2040

## CMIS 3210 - Database Systems

**Credit Hours:** 3

This course introduces the graduate student to fundamentals of database design and use. Through the analysis of business processes, students will create conceptual database designs, in MS-Visio - for example, via normalization and entity-relationship modeling. Students will prove their models by implementing them using Oracle's DDL SQL, and manipulate data in those structures using Oracle's DML SQL and PL/SQL (Procedural Language/SQL).

## CMIS 3250 - CISCO CCNA I

**Credit Hours:** 0 TO 4

This course is designed for the information systems major. It is the first in a series of three CCNA (Cisco Certified Networking Associate) courses. It provides the student with a thorough understanding of basic computer networking concepts.

## CMIS 3260 - CISCO CCNA II

**Credit Hours:** 0 TO 4

This course is designed for the Information Systems major. It is the second in a series of three CCNA (CISCO Certified Networking Associate) courses. It provides the student with a thorough understanding of the router and switch basics involved in computer networking.

**Prerequisite:** CMIS 3250

## CMIS 3270 - CISCO CCNA III

**Credit Hours:** 0 TO 4

This course is designed for the information systems major. It is the third in a series of three CCNA (CISCO Certified Networking Associate) courses. It provides the student with a thorough understanding of the switching basics and intermediate routing involved in computer networking.

**Prerequisite:** CMIS 3260

## CMIS 3340 - COBOL

**Credit Hours:** 3

This course introduces students to the essential elements of the COBOL language using well-structured programming techniques. Students will write and execute report programs, control break programs, data validation programs, programs that implement tables and sequential update programs. Good analysis, design and structure will be emphasized.

**Prerequisite:** CMIS 2200 or CMSC 1240

## CMIS 3350 - Biometrics

**Credit Hours:** 3

This course concentrates on the unique advantages that biometrics brings to computer security, but also addresses challenging issues such as security strength, recognition rates, and privacy, as well as alternatives of passwords and smart cards. Students will gain knowledge in the building blocks of this field: image and signal processing, pattern

recognition, security and privacy, and secure systems design. By the end of the course, students will be able to evaluate and design security systems that include biometrics.

## CMIS 3450 - Cybersecurity Risk Management & Assessment

**Credit Hours:** 3

In business today, risk plays a critical role. Almost every business decision requires executives and managers to balance risk and reward. This course introduces students to the strategic discipline of assessing, prioritizing, monitoring and controlling the impact of uncertainty on organizational objectives.

## CMIS 3500 - Web Programming I

**Credit Hours:** 3

This course is designed for the Computer Information Systems major. It provides the student with a thorough understanding of HTML, in order to enable the student to create Web pages and Web sites using HTML. It also provides the student with a thorough understanding of at least one client-side scripting language, in order to enable the student to begin creating data-base driven Web sites. Students are required to write and test Web pages and Web sites that use client-side scripts.

**Prerequisite:** CMIS 2200 or CMAC 2040 or CMSC 2040

## CMIS 3550 - Wireless Network and Security

**Credit Hours:** 3

This course is designed to provide the student with an understanding of the principles and concepts of wireless data network and security. Students will study wireless standards (such as IEEE 802.11 a/b/g/n, ZigBee, 2G/3G/4G/LTE). The course will survey the state of the art in wireless networks and security. Students will also learn security and privacy issues associated with wireless networks. Various attacks against wireless networks and their defense strategies will be analyzed.

## CMIS 3600 - Systems Project Management

**Credit Hours:** 3

This course, taken from the latest Model Curriculum for Information Systems (IS 2002), is intended for CIS or CS majors. Building on the systems analysis and design concepts of CMIS 3125, this course focuses on the management and completion of a systems-software development project. Both technical and behavioral aspects of project management are applied within the context of an information systems development project.

**Prerequisite:** CMIS 3125

## CMIS 3610 - Leadership and Professional Development

**Credit Hours:** 3

This course is intended to prepare students for the leadership decisions and actions that are inherent in practice as well as every-day life issues. Professional and personal growth are discussed at great length and principles and applications of personal leadership practices will be explored in depth. Techniques for managing change and empowering others

also are included in this course. Topics related to effective leadership are issues of communication, motivation, delegation, team building, and quality improvement. Finally, students will have the opportunity to perform a SWOT analysis on their business or self (whichever is applicable). This culminating activity is designed to strengthen the students' leadership abilities and skills.

## CMIS 3720 - Decision Support Systems

**Credit Hours:** 3

This course presents the concept of decision-making within the framework of a contextualized management information system that utilizes databases or spreadsheets as tools in the problem- solving process. The course distinguishes between two logical components of a management information system: the transactional processing systems (TPS) and decision support systems (DSS), in which computer-based systems aid decision-makers in confronting problems through direct interaction with data and analysis models. Some of the topics covered include critical thinking problem-solving through decision support, information requirements diagramming and influence diagramming, modeling, decision-making, frames of references in decision-making, and decision-making techniques such as goal seeking, "What If" scenarios and graphic displays.

**Prerequisite:** CMIS 3125 or permission of instructor.

## CMIS 3990 - Special Topics in Information Systems

**Credit Hours:** 3

This course allows current topics in information systems to be offered to the students in a timely fashion. The topics are not covered in other courses and will not be regularly offered as a special topic. The student is able to take the course several times as long as the course is covering topics different than those already taken. The course topic depends on the current trends in the field of information systems and the interests of the students and the instructor.

## CMIS 4030 - Data Communications

**Credit Hours:** 3

Focuses on the OSI model of data communications and uses the model as the basis for discussions of protocols, topologies, transmission media, and communications security. The TCP/IP protocol suite is examined in detail.

**Prerequisite:** CMAC 3180 or CMIS 3250

## CMIS 4110 - Systems Development Project

**Credit Hours:** 3

Students develop a computer-based solution to a real problem obtained from the university or the community. Working as a member of a group/team, students evaluate an existing system; identify alternative solutions; select a solution; develop a project plan; and design, implement, test, and document the system. Utilizes current technology whenever possible, including microcomputers, and a relational database.

**Prerequisite:** Senior CS or IS major.

## CMIS 4250 - Applications of Machine Learning and Deep Learning

**Credit Hours:** 3

In this course, students apply machine learning and deep learning methods to evaluate data sets pertaining to various business contexts. Students will identify one or more learning tasks, accomplish each task using learning models, quantitatively evaluate the models, use software packages and tools to implement algorithms.

**Prerequisite:** MATH 1510 and STAT 2020
**General Education Attribute**

- Competency-Quantitative Application
- Competency-Applied Methodologies

## CMIS 4500 - Web Programming II

**Credit Hours:** 3

This course introduces the student to server-side technologies. Students are required to write and test database driven websites that use both client-side and server-side scripts.

**Prerequisite:** CMIS 3500 or CMAC 3500 and CMIS 3200 or CMAC 3200

## CMIS 4640 - Information Systems Auditing and Security

**Credit Hours:** 3

Analyzes the information system audit process, provision and evaluation of controls in all aspects of information system operation, and the provision and maintenance of computer security. Stresses internal controls while examining specific controls and security.

**Prerequisite:** CMAC 2000 or CMSC 2000

## CMIS 4680 - Security Management

**Credit Hours:** 3

This course introduces the development, documentation, and implementation of policies and procedures for protecting an organization's information assets. Topics will include personnel security, system security testing, types of security management (accounts, assets, change, and risk), business impact analysis, organizational policies, and cyber governance.

**Prerequisite:** CMIS 4640 or CMAC 4640

## CMIS 4720 - ERP

**Credit Hours:** 3

This course will provide students an understanding of the methodology of Enterprise Resource Planning as a streamlining of business processes to optimize decision making through near-perfect, real-time data integration on a global scale. The concept of the use of an enterprise software solution to achieve this will be covered with emphasis on the improvements in productivity and the value added by moving decision making down the corporate ladder, where the collective goal is to gain global competitive advantage.

**Prerequisite:** CMIS 3125 and ACC 2000

## CMIS 4900 - Senior Capstone I

**Credit Hours:** 3

In this course students work in teams on a service-learning project to analyze a series of disparate business processes in order to redesign into an optimized and streamlined information systems (software) solution by considering technical, user & business requirements. The solution is developed and implemented in part II of the capstone series.

**Prerequisite:** CMIS 3150 and CMIS 3200 and CMIS 4500 and CMIS 3600
**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Intensive Writing

## CMIS 4920 - Senior Capstone II

**Credit Hours:** 3

In this second part of the capstone series, students work in project teams and apply a software development methodology to develop and implement the information systems (software) solution designed in Part I of the capstone. Each team will produce a software installation support and system users' manual for their respective system.

**Prerequisite:** CMIS 4900 and CMIS 4500 and CMIS 3600
**General Education Attribute**

- Competency-Applied Methodologies
- Competency-Keystone Experience

## CMIS 4950 - CIS Internship

**Credit Hours:** 0 TO 15

This course is designed for majors in the computing-disciplines who are seeking work experience in a related area. This intern experience will enable the student to apply her/his educational background in his/her field to a real work place. The internship will provide the student with the valuable experience that should enhance the student's job opportunities upon graduation. Variable credits (1-15) depending on the length of the internship and the number of hours devoted to the internship.

**Prerequisite:** Students should have completed 64 credits with a good grade-point average plus have sufficient background to meet the needs of the particular internship in which they will be participating.

## CMSC 1040 - Personal Productivity Software

**Credit Hours:** 3

This course familiarizes students with the use of PC productivity software (word processing, spread sheet management, file management, and presentation software) and its effects on society.

**General Education Attribute**

- Foundations-Tech Literacy

## CMSC 1200 - Problem Solving and Programming Constructs

**Credit Hours:** 3

This course will provide the student with basic literacy of computers, present problem solving heuristics and structured programming techniques, present language independent data types, compose operations and programming constructs, introduce arrays and linked lists, and implement fundamental programs using an appropriate programming language.

**General Education Attribute**

- Foundations-Tech Literacy

## CMSC 1240 - Computer Programming I

**Credit Hours:** 3

This course builds on CMSC 1200. It gives the student a thorough understanding of the presently adopted language so that the student will develop the ability to program in the language. Emphasis is placed on efficient software development using structured programming techniques. Students are required to write, test and run programs.

**Prerequisite:** CMSC 1200 or CMAC 1200

## CMSC 1245 - Principles of Programming II

**Credit Hours:** 3

Topics include user-defined data types, data structures including lists, stacks and queues, several sorting and searching algorithms, pointers, an introduction to object-oriented programming, and recursion.

**Prerequisite:** (CMSC 1200 or CMAC 1200) and (CMSC 1240)

## CMSC 1380 - Introduction to Programming with Python

**Credit Hours:** 3

This course develops computational problem solving and programming skills using Python for students in non-computing majors. Students will learn programming constructs and how to develop different solutions that involve analyzing, processing and visualizing data. The course includes hands-on programming activities.

**General Education Attribute**

- Foundations-Tech Literacy

## CMSC 2000 - Introduction to Cybersecurity

**Credit Hours:** 3

This course is a broad overview to the field of cybersecurity and serves as a foundation for understanding key concepts related to protecting information assets. Topics include common cyberattacks, cryptography, security protocols, attack mitigation mechanisms, and cyber wellness. Forms the basis for more advanced studies in cybersecurity.

**General Education Attribute**

- Wellness & Personal Health

## CMSC 2010 - Operating Systems

**Credit Hours:** 3

This course focuses on fundamental principles in modern operating systems including Windows, Unix/Linux and Mac OS. Students learn about the services provided by operating systems' software, memory management, process scheduling and communication, storage, input/output, and distributed systems. OS security and data protection and the interaction between computers will be also covered.

## CMSC 2040 - Object-Oriented Programming

**Credit Hours:** 3

Object Oriented Programming- This course teaches object-oriented programming. Object-orientated programming offers a natural method for designing software systems that build on the concepts of data abstraction, information hiding and modularity. Students will design and implement solutions to problems using an object-oriented programming language.

**Prerequisite:** CMSC 1240 or CMAC 1240

## CMSC 2100 - Logic and Switching Theory of the Computer

**Credit Hours:** 3

This course provides the student with an in-depth study of the basis of digital computers. Number systems, arithmetic operations, codes, Boolean algebra, Boolean minimization techniques, state transition tables and state transition graphs are discussed. Extensive emphasis is placed on the analysis and synthesis of synchronous and asynchronous combinational networks which form digital computers.

**Prerequisite:** MATH 1510

## CMSC 2400 - Computer and Networking

**Credit Hours:** 3

This course covers concepts in the design and implementation of computer communication networks, their protocols, the applications, and advanced principles of computer networks. Security issues in communication networks will be also studied, including secure communication, authentication, firewalls and intrusion detection.

## CMSC 2450 - Applied Cryptography

**Credit Hours:** 3

An introduction to cryptography with the number theory portion tied in. The following topics will be covered: Modular Arithmetic, Classical Cryptography, Public Key Cryptography, Introduction to Complexity, and their corresponding implementations in an appropriate computer programming language.

## CMSC 2750 - Project Management

**Credit Hours:** 3

This course focuses on the management and change control for both general and IT-related projects. Technical and behavioral aspects of project management are applied within the context of an information systems development project.

## CMSC 3040 - Data Structures

**Credit Hours:** 3

The design, use and programming of data structures, such as stacks, queues, linked lists and binary trees, will be discussed. Sorting and searching methods are also discussed in this course. The analysis of algorithms will be considered as well as the applications of the various data structures.

**Prerequisite:** CMSC 2040 or CMAC 2040

## CMSC 3100 - Assembly

**Credit Hours:** 3

In this course students will study assembly language. In doing so, students will develop some concepts related to the architecture and operations of the computer. Programs will be written and implemented using the instructions in this assembly language. Constructs such as selection, looping and subprograms will be implemented.

**Prerequisite:** CMSC 3040 or CMAC 3040

## CMSC 3140 - Analysis of Algorithms

**Credit Hours:** 3

This course covers algorithm analysis theory and techniques. Students learn properties of both efficient and inefficient algorithms. The importance of analyzing algorithms before implementing them will be emphasized. This course will teach the skills necessary to determine the best algorithm for a given problem. We will investigate greedy, graph theoretic, divide and conquer, and distributed algorithms. We will cover both polynomial time algorithms and NP-completeness.

**Prerequisite:** CMSC 3040 or CMAC 3040

## CMSC 3180 - Data Communication and Networking

**Credit Hours:** 3

This course provides an overview of the basic principles and technologies of data communications and networking systems. Topics include transmission techniques, mutiplexing, flow and error control, routing and congestion control. The course will introduce switched, broadcast and wireless networking technologies. TCP/IP and the OSI protocol architectures will be investigated.

**Prerequisite:** (CMSC 3240 or CMAC 3100) and MATH 1510

## CMSC 3200 - Database Application Programming

**Credit Hours:** 3

This course covers data models using Data Definition Language, using Data Manipulation Language to create complex action queries in tandem with Transaction Control Language, and using SQL (structured query language) to create and call stored program and procedures, work with cursor structures , create and execute database triggers.

## CMSC 3210 - Database Systems

**Credit Hours:** 3

This course introduces the graduate student to fundamentals of database design and use. Through the analysis of business processes, students will create conceptual database designs, in MS-Visio - for example, via normalization and entity-relationship modeling. Students will prove their models by implementing them using Oracle's DDL SQL, and manipulate data in those structures using Oracle's DML SQL and PL/SQL (Procedural Language/SQL).

## CMSC 3240 - Computer Architecture

**Credit Hours:** 3

This course provides the student with an in-depth study of the organization of the central processing unit, arithmetic logic unit, control unit, instruction formats, and addressing schemes of digital computers. Extensive emphasis is placed on the translation of assembly language instructions into their micro-sequence operations within the control unit and the interconnection and control of registers, arithmetic logic units, memory units, and busses which form the central processing unit and the digital computer.

**Prerequisite:** CMSC 3100

## CMSC 3320 - Technical Computing Using Java

**Credit Hours:** 3

This course enables the student to acquire a thorough understanding of the Java language and its application in solving engineering and real world problems. Both Java programs and Applets will be studied. Emphasis is placed on efficient software development using structured programming techniques. Students are required to design, write, test, and run programs using an appropriate version of Java.

**Prerequisite:** MATH 2420 and (CMSC 2040 or CMAC 2040)

## CMSC 3340 - COBOL

**Credit Hours:** 3

This course introduces students to the essential elements of the COBOL language using well-structured programming techniques. Students will write and execute report programs, control break programs, data validation programs, programs that implement tables and sequential update programs. Good analysis, design and structure will be emphasized.

**Prerequisite:** CMSC 1240 or CMAC 1240 or CMIS 2200

## CMSC 3350 - Biometrics

**Credit Hours:** 3

This course concentrates on the unique advantages that biometrics brings to computer security, but also addresses challenging issues such as security strength, recognition rates, and privacy, as well as alternatives of passwords and smart cards. Students will gain knowledge in the building blocks of this field: image and signal processing, pattern recognition, security and privacy, and secure systems design. By the end of the course, students will be able to evaluate and design security systems that include biometrics.

## CMSC 3360 - Fortran

**Credit Hours:** 3

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.

**Prerequisite:** CMSC 1200 or CMAC 1200

## CMSC 3380 - Python

**Credit Hours:** 3

This course enables the student to acquire a thorough understanding of the Python language and its application in solving real world problems. Emphasis is placed on efficient software development using structured programming techniques, Object Oriented Programming, GUI interfaces, as well as a variety of Python modules and packages. Students are required to design, write, test, and run programs using an appropriate version of Python.

**Prerequisite:** CMSC 1240 or CMIS 1200 or CMAC 1240

## CMSC 3450 - Cybersecurity Risk Management & Assessment

**Credit Hours:** 3

In business today, risk plays a critical role. Almost every business decision requires executives and managers to balance risk and reward. This course introduces students to the strategic discipline of assessing, prioritizing, monitoring and controlling the impact of uncertainty on organizational objectives.

## CMSC 3550 - Wireless Network and Security

**Credit Hours:** 3

This course is designed to provide the student with an understanding of the principles and concepts of wireless data network and security. Students will study wireless standards (such as IEEE 802.11 a/b/g/n, ZigBee, 2G/3G/4G/LTE). The course will survey the state of the art in wireless networks and security. Students will also learn security and privacy issues associated with wireless networks. Various attacks against wireless networks and their defense strategies will be analyzed.

## CMSC 3610 - Leadership and Professional Development

**Credit Hours:** 3

This course is intended to prepare students for the leadership decisions and actions that are inherent in practice as well as every-day life issues. Professional and personal growth are discussed at great length and principles and applications

of personal leadership practices will be explored in depth. Techniques for managing change and empowering others also are included in this course. Topics related to effective leadership are issues of communication, motivation, delegation, team building, and quality improvement. Finally, students will have the opportunity to perform a SWOT analysis on their business or self (whichever is applicable). This culminating activity is designed to strengthen the students' leadership abilities and skills.

## CMSC 3700 - 2D Game Programming

**Credit Hours:** 3

This course introduces concepts and techniques for the programming of two-dimensional games. Students will learn about the basics of making two-dimensional games, as well as how to work with a two-dimensional game engine environment (for example, GameMaker Studio). Additionally, students will construct at least one two-dimensional game during this course. This course focuses on the programming behind creating games in a commonly used language for that purpose (for example, GML or C++), and as such will also reinforce may important programming concepts from other courses. Offered fall, alternate years.

**Prerequisite:** CMSC 2040 or CMAC 2040

## CMSC 3720 - 3D Game Programming

**Credit Hours:** 3

This course introduces concepts and techniques important for the programming of three-dimensional games. Students will learn about the basics of making three-dimensional games, as well as how to work with a three-dimensional game engine environment (for example, Unity). Additionally, students will construct at least one three-dimensional game during the course. This course focuses on the programming behind creating games in a commonly used language for that purpose (for example, GML or C++), and as such will also reinforce many important programming concepts from other courses.

**Prerequisite:** CMSC 3700 or CMAC 3700

## CMSC 3780 - Computer Graphics

**Credit Hours:** 3

Provides an overview and application of the principles and tools of computer graphics. Includes characteristics of graphical display devices, graphics software primitives, representation, manipulation, and display of two- and three-dimensional objects, interactive graphics and the graphical user interface, and animation. Includes graphics programming projects.

**Prerequisite:** CMSC 3040 or CMAC 3040

## CMSC 3990 - Special Topics in Computer Science

**Credit Hours:** 1 TO 3

Provides for focused study of a special interest topic in computing using learning formats selected by the instructor as best suited for the particular course.

**Prerequisite:** Prerequisites for particular course set by the instructor.

## CMSC 3995 - Computer Science Seminar

**Credit Hours:** 3

This seminar introduces upper level computer science majors to the principles of computer science research. Emphasis is on reading and presenting current research literature, formulating research problems, conducting a literature search using both library and internet resources, and writing up the results of scientific inquiry. Additionally, social, ethical and legal issues in computing will be explored. Readings on a topical theme are selected by the instructor and vary from year to year, depending on the evolution of the frontiers of the science.

**Prerequisite:** MATH 1510

## CMSC 4000 - Operating Systems

**Credit Hours:** 3

This course involves an introductory study of the main elements of an operating system memory management, process management, device management, and file management. An operating system defines an abstraction of hardware behavior with which programmers can control the hardware. It also manages resource sharing among the computer's users. This course investigates these concepts as well as issues that influence the design of contemporary operating systems, including management of processes, memory, devices, and files. Additional special topics may include scripting, security, fault tolerance, and real-time systems.

**Prerequisite:** CMSC 3240 or CMAC 3100

## CMSC 4080 - Structures of Programming Languages

**Credit Hours:** 3

Students will study the four categories of programming languages: imperative, object-oriented, functional and logic. An in-depth discussion of the imperative languages will be followed by discussions of the other three paradigms. Students will be required to investigate at least one language.

**Prerequisite:** CMSC 3040

## CMSC 4120 - Parallel Processing

**Credit Hours:** 3

Studies the architecture, algorithms, and programming that are involved with parallel processing. Students will learn how parallel architecture affects the design of parallel algorithms and parallel programming. Architectures shall include the prevailing message passing and shared memory architectures. Students will learn how to design parallel algorithms and how to think in parallel. Students will learn how to write parallel programs, using a prevailing parallel programming language. Programming may be done by remotely using an account at a supercomputer center, using serial computers that are working together to solve a problem (a cluster), or using an individual computer which has multiple processors within it.

**Prerequisite:** CMSC 3040 and CMSC 3240

## CMSC 4140 - Theory of Languages

**Credit Hours:** 3

This course is an introduction to abstract machine theory, combinatorial systems, computable functions, and formal linguistics. Topics include finite-state machines, regular sets, Turing machines, Chomsky hierarchy grammars and languages. Emphasis is on surveying basic topics and developing an intuitive understanding in the theory of languages.

**Prerequisite:** CMSC 2100 or CMAC 2100

## CMSC 4180 - Language Translation

**Credit Hours:** 3

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.

**Prerequisite:** CMSC 4140 or CMAC 4140

## CMSC 4200 - Artificial Intelligence

**Credit Hours:** 3

Surveys the thinking and some of the pioneering efforts in the area of artificial intelligence (AI), integrated with more traditional approaches to decision-making. Applies AI principles through the use of logic programming languages.

**Prerequisite:** CMSC 3040 or CMAC 3040

## CMSC 4240 - Numerical Analysis

**Credit Hours:** 3

Numerical Analysis-In this course, various mathematical algorithms and applications relating to the numerical computation are investigated. Topics include: round off errors and computer arithmetic; numerical instability; error analysis and estimation; approximation; Gaussian elimination and pivoting strategies for linear systems; numerical integration and numerical solution of differential equations; curve fitting, polynomial approximation; and regression.

**Prerequisite:** (CMSC 3040 or CMAC 3040) and MATH 2420 and MATH 3210

## CMSC 4900 - Senior Project I: Software Engineering

**Credit Hours:** 3

This course introduces students to software engineering. They will study its history, terminology, requirements, specifications, and design. The students will write requirements, specifications, and design documents, and one or more papers on software engineering topics.

**Prerequisite:** CMSC 2040 or CMAC 1240 and ENGL 3230
**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## CMSC 4920 - Senior Project II

**Credit Hours:** 3

This course is a continuation of CMSC 4900 and the capstone course of the program. The project proposal developed and designed in the first Senior Project class will be implemented in this course. The student will produce a project users' manual and will demonstrate proficiency in the academic program through the development of the project.

**Prerequisite:** CMSC 4900
**General Education Attribute**

- Competency-Applied Methodologies
- Competency-Keystone Experience

## CMSC 4950 - Internship

**Credit Hours:** 1 TO 15

The internship in computer science is intended to give the student an opportunity for on-the-job experience in theoretical or applied computer science. The internship shall incorporate meaningful productive experience usually during the junior year. Time spent and the nature of the experience is usually under the control of the local agency and is used in the determination of the amount of credit obtained. In addition to the hours spent on the job, the student shall also be responsible to the department Internship Coordinator.

**Prerequisite:** Permission of the department Internship Coordinator.

## COMJ 1010 - Public Speaking

**Credit Hours:** 3

Introduces students to the knowledge and skills necessary for developing effective oral communication. Course topics include audience analysis and research, organization, language use, style, and delivery that facilitate effective communication with a variety of audiences. Students are responsible for delivery of multiple speeches.

**General Education Attribute**

- Foundations-Oral Communication

## COMJ 1040 - Media Writing

**Credit Hours:** 3

Introduces media professions and the writing skills needed to succeed in the modern media environment. Topics include approaches and strategies for writing across traditional, digital, and social media platforms. Students will practice writing and revising copy for print, broadcast, and digital media for diverse audiences and purposes.

**Prerequisite:** ENGL 1200

## COMJ 1101 - Exploring Human Communication

**Credit Hours:** 3

Explores the central issues and topics of human communication, processes, and environments. Topics include culture,

identity, organizations and relationships. Students will relate human communication concepts to their everyday experiences and practice effective communication skills in the process.

**General Education Attribute**

- Discoveries-Social Sciences

## COMJ 1102 - Exploring Pop Culture

**Credit Hours:** 3

Explores the impact of human communication on American popular culture. Topics include rhetoric, communication theory, and the roles of culture and stereotypes through a range of media including film, sports, music, video games, advertisements, television and technology. Students will examine the role of popular culture in their everyday life.

## COMJ 1103 - Exploring Social Media

**Credit Hours:** 3

Explores the concepts and theories used in planning and creating a social media campaign. Topics include current and past social media, message creation across media, strategies for successful social campaigns, industry terms and professional use of social media. Students will create, analyze, and evaluate social media content.

## COMJ 1104 - Exploring Journalism

**Credit Hours:** 3

Explores the traditional principles and practices of journalism, including history and theory. Topics include functions of the press in a democratic society, structure and nature of the press and media's relationship with government and the public. Students will analyze past and current journalistic work in America and beyond.

## COMJ 1105 - Exploring Sport Media

**Credit Hours:** 3

Explores sport communication and media involvement in modern sports. Topics include advertising, public relations and media with specific attention to blogging, broadcasting, social media, online and print publications. Students will examine traditional and non-traditional sport media in a global society.

## COMJ 1106 - Exploring Strategic Communication

**Credit Hours:** 3

Explores the fundamental components of strategic communication. Topics include how to communicate purposefully, how to persuade and how to do so ethically according to specific circumstances and stakeholders. Students will practice the basic concepts and principles of public relations, focusing on approaches, uses, tools and methods.

## COMJ 1107 - Exploring Mass Media

**Credit Hours:** 3

Explores American mass communication. Topics include historical development, organizational structure, functional and operational characteristics and contemporary uses of mass media. Students will review the impact of books, newspapers, magazines, movies, recordings, radio, TV, internet and new media in American society and beyond.

**General Education Attribute**

- Discoveries-Social Sciences
- Competency-Information Literacy

## COMJ 1108 - Exploring Health Communication

**Credit Hours:** 3

Explores theories and methodologies related to health communication. Topics include communication theories related to behavior change, normative messaging, information processing and management, and related communication competencies in health related settings. Students will identify, analyze and apply concepts to create normative PSAs.

## COMJ 1210 - Civil Discourse & Difficult Conversations

**Credit Hours:** 3

Explores conversation on controversial subjects with emphasis on recognizing conflict and engaging in constructive modes of interaction. Topics include civil discourse as the foundation for democratic institutions, sustainable relationships and collaborative decision-making. Students will construct, arrange and deliver oral presentations.

**General Education Attribute**

- Foundations-Oral Communication

## COMJ 2060 - Media Aesthetics & Technology

**Credit Hours:** 3

Introduces students to technology and techniques used in creating content for communicating specific messages. Topics include current technology for content creation, theory related to media aesthetics and composition, and how to use technology to create content to communicate messages. Students will create content suitable for a mass audience.

## COMJ 2070 - Audience Analytics

**Credit Hours:** 3

Introduces students to media-related analytical methods. Topics include interpretation and application of data dealing with media content, delivery, audiences and effects, and the application and use of audience analysis in producing messages. Students will analyze audiences and best practices in planning messaging campaigns.

## COMJ 2201 - Business & Professional COM

**Credit Hours:** 3

The goal of this course is to introduce students to the basics of business and professional communication in the US and in global companies. The course includes an introduction to research and interview skills, written and verbal professional communication, and collaboration in the workplace.

**General Education Attribute**

- Competency-Intensive Writing

## COMJ 2202 - Rhetorical Theory

**Credit Hours:** 3

Introduces the process of contemporary rhetorical theory the mid-twentieth century forward. Topics include contemporary sources of rhetoric such as non-governmental organizations, social movements, contemporary trials and advertising campaigns. Additional attention will be paid to the emerging non-Western traditions.

## COMJ 2221 - Argumentation & Debate

**Credit Hours:** 3

Advances students' understanding of argumentation techniques to develop analytical abilities, use of data, reasoning, and evidence to support arguments. Course topics include advocacy, models of argumentation, logic, and debate. Students will practice skills in constructing, delivering, and analyzing arguments in formal and informal situations.

## COMJ 2231 - Interpersonal Communication

**Credit Hours:** 3

Examines interpersonal communication theories, processes, functions and contexts. Topics include initiation, development, maintenance, repair, networking, and disengagement in interpersonal relationships. Students develop communication competency in navigating families, friendships, romantic partners, and workplace relationships.

**Prerequisite:** COMJ 1010 or COMJ 1101 or COMJ 1102 or COMJ 1103 or COMJ 1104 or COMJ 1105 or COMJ 1106 or COMJ 1107 or COMJ 1108 or COMJ 2201 or ENGL 1100
**General Education Attribute**

- Competency-Intercultural Fluency

## COMJ 2251 - Intercultural Communication

**Credit Hours:** 3

The course examines practical and theoretical aspects of intercultural communication with focus on developing constructive dialogue and sustainable relationships. Topics include issues of identity, verbal & nonverbal language, ethnocentrism, stereotypes, and overcoming tensions and conflict between people from different cultural backgrounds.

## COMJ 2404 - Newswriting

**Credit Hours:** 3

Introduces basic news gathering, reporting and writing focused on print journalism. Topics include current news and events, Associated Press style, credibility and ethics in writing and reporting. Students will gain experience through writing and revising articles for publication in student media organizations.

**Prerequisite:** ENGL 1200

**General Education Attribute**

- Competency-Intensive Writing

## COMJ 3060 - Communication Research

**Credit Hours:** 3

This course introduces students to the principles, practices, applications, and ethics of communication research. Students will learn the basics of research methods and design as well as the nature of interpretation, presentation, and use of research findings.

**Prerequisite:** Junior or Senior Standing
**General Education Attribute**

- Competency-Quantitative Application
- Competency-Applied Methodologies

## COMJ 3201 - Conflict, Power & Communication

**Credit Hours:** 3

This course examines conflict in interpersonal, organizational, and international contexts where hierarchical relations of power are prevalent. Emphasis is on the historical, socio-cultural, political and ethical dimensions of conflict development and resolution in everyday life. Students develop skills in conflict analysis, mediation, management, and transformation of relationships.

**Prerequisite:** COMJ 1010 or COMJ 1101 or COMJ 1102 or COMJ 1103 or COMJ 1105 or COMJ 1106 or COMJ 1107 or COMJ 1108 or COMJ 2201 or ENGL 1200
**General Education Attribute**

- Competency-Intercultural Fluency

## COMJ 3202 - Advocacy Campaigns

**Credit Hours:** 3

Examines theory, research, actions and proposed solutions to influence decision making at the local, state and federal level. Topics include strategies to promote positive change, protecting or changing rights, gaining eligibility for services or to assist in removal of barriers and limitations. Students develop advocacy strategies.

**Prerequisite:** COMJ 1010 or COMJ 1101 or COMJ 1102 or COMJ 1103 or COMJ 1104 or COMJ 1105 or COMJ 1106 or COMJ 1107 or COMJ 1108 or ENGL 1200

## COMJ 3211 - Social Advocacy & Persuasion

**Credit Hours:** 3

Examines how persuasion operates in moments of social advocacy in the public sphere. Topics include defining persuasion, understanding different vantage points and applications to forms of social expression (such as electoral campaigns and social movements). Students will develop competencies for navigating persuasion ethically in everyday life.

**General Education Attribute**

- Competency-Ethical Reasoning
- Competency-Applied Methodologies

## COMJ 3212 - Rhetoric of Popular Culture

**Credit Hours:** 3

Examines the way powerfully persuasive rhetorical messages pervade daily life in popular culture. Topics include popular culture and high culture, rhetoric and communication, and the roles of culture and stereotypes through a range of media including film, sports, music, video games, advertisements, television and technology.

**Prerequisite:** COMJ 1010 **or** COMJ 1101 **or** COMJ 1102 **or** COMJ 1103 **or** COMJ 1104 **or** COMJ 1105 **or** COMJ 1106 **or** COMJ 1107 **or** COMJ 1108 **or** COMJ 2201 **or** ENGL 1100

## COMJ 3236 - Leadership Communication

**Credit Hours:** 3

Examines theories of leadership and introduces students to the wide range of communication practices involved in the academic study of leadership. Topics include theoretical and experiential approaches to effective leadership communication. Students will analyze their personal leadership styles and develop leadership communication skills.

**Prerequisite:** COMJ 1010 **or** COMJ 1101 **or** COMJ 1102 **or** COMJ 1103 **or** COMJ 1104 **or** COMJ 1105 **or** COMJ 1106 **or** COMJ 1107 **or** COMJ 1108 **or** COMJ 2201 **or** ENGL 1100

## COMJ 3241 - Small Group Decision Making

**Credit Hours:** 3

Examines the theory and practice of small group communication, with a focus on developing productive interaction in teams, meetings, negotiations, and other group settings. Topics include issues of consensus building, group leadership and effective decision-making through communication practices.

**Prerequisite:** COMJ 1010 **or** COMJ 1101 **or** COMJ 1102 **or** COMJ 1103 **or** COMJ 1104 **or** COMJ 1105 **or** COMJ 1106 **or** COMJ 1107 **or** COMJ 1108 **or** COMJ 2201 **or** ENGL 1100

## COMJ 3261 - Nonverbal Communication

**Credit Hours:** 3

Examines nonverbal communication in a variety of settings and cultures. Topics include concepts of nonverbal communication, application to actual situations, and their relation to the entirety of the communication process. Students gain competency is communicating non-verbally with others.

**Prerequisite:** COMJ 1010 or COMJ 1101 or COMJ 1102 or COMJ 1103 or COMJ 1104 or COMJ 1105 or COMJ 1106 or COMJ 1107 or COMJ 1108 or COMJ 2201 or ENGL 1200

## COMJ 3271 - Communication & Gender

**Credit Hours:** 3

Examines the role of gender in shaping behaviors. Topics include aspects of language, culture, social roles, orientation, conflict, and identity. Students examine the role of communication in shaping, reproducing, sustaining, and challenging the socially constructed meanings of gender.

**Prerequisite:** COMJ 1010 **or** COMJ 1101 **or** COMJ 1102 **or** COMJ 1103 **or** COMJ 1104 **or** COMJ 1105 **or** COMJ 1106 **or** COMJ 1107 **or** COMJ 1108 **or** COMJ 2201 **or** ENGL 1100

## COMJ 3307 - Global Mass Communication

**Credit Hours:** 3

Examines the history, purpose, channels, content, technologies, policy, and regulation of international communications systems. Topics include differences in media infrastructure between nations and regions; international trends in the development, patterns in news, entertainment and information flows, and the emergence of global communication.

**Prerequisite:** COMJ 1010 or COMJ 1101 or COMJ 1102 or COMJ 1103 or COMJ 1104 or COMJ 1105 or COMJ 1106 or COMJ 1107 or COMJ 1108 or COMJ 2201 or ENGL 1200
**General Education Attribute**

- Competency-Intercultural Fluency

## COMJ 3405 - Sport Journalism

**Credit Hours:** 3

Focuses on writing for print, broadcast and new media. Topics include reporting strategies, interviewing athletes, sports jargon and statistics, stylistic considerations and story telling techniques. Students will write recaps, hard news and various features for related to sports at a variety of competition levels.

**Prerequisite:** ENGL 1200

## COMJ 3407 - Media Ethics

**Credit Hours:** 3

Provides students with a primer on the ethical implications of current mass media. Topics include the journalistic code of ethics, the impact of medium on validity and credibility, corporate social responsibility and how to make choices as an ethical communicator. Students will gain competencies in ethical creation and consumption of media.

**General Education Attribute**

- Competency-Ethical Reasoning

## COMJ 3414 - Publication Layout and Design

**Credit Hours:** 3

This course teaches principles of visual communication in print and electronic publications. Students gain design and production skills through extensive application of these principles to a wide variety of publications.

## COMJ 3424 - Digital Journalism

**Credit Hours:** 3

Examines current approaches to digital journalism. Topics include media convergence, citizen journalism, viral news, clickbait and fake news, hyper local journalism and current digital trends and innovations. Students will write and revise journalistic pieces suitable for publication in print, broadcast or online distribution channels.

**Prerequisite:** ENGL 1200

## COMJ 3434 - Broadcast Journalism

**Credit Hours:** 3

Examines journalistic approaches in broadcast news. Topics include the process of producing a media rich newscast, the realtionships between staff and crew members in various media organizations, and the practical elements of electronic news gathering. Students will create broadcast ready stories for use on television, radio or digital platforms.

**Prerequisite:** ENGL 1100
**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## COMJ 3609 - Video Production

**Credit Hours:** 3

Introduces students to the process of communicating messages with video. Topics include messaging strategy, aesthetics, audience analysis, pre-production and audio/video capture, post production and editing. Students will create individual and group video projects using professional audio equipment and video cameras.

## COMJ 3619 - Audio Production

**Credit Hours:** 3

Introduces students to professional audio recording techniques and practices. Topics include writing for audio, creative choices, professional hardware and software, and the application of those skills to digital audio recording. Students will produce audio recordings suitable for transmission through radio, streaming or other avenues.

## COMJ 3639 - Photojournalism

**Credit Hours:** 3

Introduces the theory and practice of photojournalism. Topics include covering news, features, sports, portraits, photo stories, lighting, ethics and history. Students will use digital technology to complete a series of photojournalistic assignments suitable for publication.

## COMJ 3649 - Studio Production

**Credit Hours:** 3

Provides instruction related to all elements of in-studio television production. Topics include pre-production,

production and post production of in-studio shows. Students develop skills in producing and directing, in-studio and control room crew positions, lighting techniques and design, and on-camera talent.

## COMJ 3659 - Postproduction

**Credit Hours:** 3

Provides students with skills in intermediate digital video postproduction editing. Topics include the aesthetics and techniques of editing, application of editing techniques, the video signal and components, and the role of the editor. Students will be prepared for non-linear editing certification upon successful completion of the course.

## COMJ 3679 - On Air Performance

**Credit Hours:** 3

Develops techniques of voice use desirable for radio, television, and sound reinforcement systems. Topics include coordinating the speaking voice with the meaning, the syntax and implications of the textual material and the challenges public voices face. Students will participate as vocal talent through radio, TV or other public address events.

## COMJ 3689 - Broadcast Media Management

**Credit Hours:** 3

This course introduces students to the problems of the organization and management of media companies with attention to the problems of the various departments within the organization such as programming, sales, engineering, traffic, and administration.

## COMJ 3806 - Organizational Communication

**Credit Hours:** 3

Examines structures and functions of communication in and between organizations. Topics include theoretical and applied perspectives, with emphasis on mindfulness in networks of interactive social systems, group dynamics, leadership, conflict, negotiation, consulting, training, public relations, and strategic communication.

**Prerequisite:** COMJ 1010 or COMJ 1101 or COMJ 1102 or COMJ 1103 or COMJ 1104 or COMJ 1105 or COMJ 1106 or COMJ 1107 or COMJ 1108 or ENGL 1200

## COMJ 3816 - Crisis Management

**Credit Hours:** 3

Examines crisis management for application in institutional and organizational contexts. Topics include planning, development, and execution of crisis management plans including risk assessment, media relationships, and image restoration. Students develop competencies for navigating crisis response strategies.

**Prerequisite:** COMJ 1010 **or** COMJ 1101 **or** COMJ 1102 **or** COMJ 1103 **or** COMJ 1104 **or** COMJ 1105 **or** COMJ 1106 **or** COMJ 1107 **or** COMJ 1108 **or** COMJ 2201 **or** ENGL 1100

## COMJ 3826 - Public Relations

**Credit Hours:** 3

Examines the practice of public relations and its role in our global society. Topics include program planning and evaluation, ethics, working with the media, and writing for PR. The principles of PR will be applied to corporations, governmental institutions, and non-profit organizations. Students will gain an understanding of PR career paths.

**Prerequisite:** COMJ 1010 **or** COMJ 1101 **or** COMJ 1102 **or** COMJ 1103 **or** COMJ 1104 **or** COMJ 1105 **or** COMJ 1106 **or** COMJ 1107 **or** COMJ 1108 **or** COMJ 2201 **or** ENGL 1100
**General Education Attribute**

- Competency-Ethical Reasoning

## COMJ 3836 - Strategic Communication

**Credit Hours:** 3

Examines the practice of strategic communication and provides application opportunities. Topics include historical background, processes, planning, and implementation, media strategies, creative development and international issues. Students will practice skills in writing, critical thinking and communication.

**Prerequisite:** COMJ 1010 **or** COMJ 1101 **or** COMJ 1102 **or** COMJ 1103 **or** COMJ 1104 **or** COMJ 1105 **or** COMJ 1106 **or** COMJ 1107 **or** COMJ 1108 **or** COMJ 2201 **or** ENGL 1100

## COMJ 3846 - Promotional Events & Publicity

**Credit Hours:** 3

Examines theory and applications in planning promotional events. Topics include organizing, budgeting, promoting, implementing, and evaluating events. This course employs specific communication strategies, such as targeting media and audiences with ethical and diversity considerations. Students will plan, implement and evaluate a promotional event.

**Prerequisite:** COMJ 1010 **or** COMJ 1101 **or** COMJ 1102 **or** COMJ 1103 **or** COMJ 1104 **or** COMJ 1105 **or** COMJ 1106 **or** COMJ 1107 **or** COMJ 1108 **or** COMJ 2201 **or** ENGL 1100

## COMJ 3856 - Communication Strategies for Advertising

**Credit Hours:** 3

Examines the basic principles, theories and applications of communication strategies related to advertising. Topics include historical background, planning and management, media strategies, creative development, international issues, and social and legal effects. Students will create a communication focused advertising campaign.

**Prerequisite:** COMJ 1010 **or** COMJ 1101 **or** COMJ 1102 **or** COMJ 1103 **or** COMJ 1104 **or** COMJ 1105 **or** COMJ 1106 **or** COMJ 1107 **or** COMJ 1108 **or** COMJ 2201 **or** ENGL 1100

## COMJ 3866 - Personal Selling

**Credit Hours:** 3

Examines the communicative aspects of professional sales, specifically human communication techniques. Topics include persuasive processes, intrapersonal, interpersonal, and organizational communicative aspects in sales and promotion. Focus is on skills training for the organizational communication professional.

**Prerequisite:** COMJ 1010 **or** COMJ 1101 **or** COMJ 1102 **or** COMJ 1103 **or** COMJ 1104 **or** COMJ 1105 **or** COMJ 1106 **or** COMJ 1107 **or** COMJ 1108 **or** COMJ 2201 **or** ENGL 1100

## COMJ 4060 - Career Planning for Communication Professionals

**Credit Hours:** 3

Serves as the primary skill building and strategy seeking experience for the practicum and internship program within the Department of Communication. Provides the basis for career entry and growth. extensive writing, research and individual professional development sessions are involved.

**Prerequisite:** Junior Standing
**General Education Attribute**

- Competency-Information Literacy

## COMJ 4211 - Language & Thought

**Credit Hours:** 3

This course examines the dynamic between language, thought, communication, and the construction of personal and social realities. Topics include ecological and philosophical perspectives on language and its use in relationships within and across cultures with a emphasis on an ethic of listening and attunement.

**Prerequisite:** COMJ 1010 or COMJ 1101 or COMJ 1102 or COMJ 1103 or COMJ 1104 or COMJ 1105 or COMJ 1106 or COMJ 1107 or COMJ 1108 or ENGL 1200

## COMJ 4221 - Conflict Management

**Credit Hours:** 3

Examines theoretical and practical aspects of managing conflict. Topics cover principled negotiation, psychological, social causes and manifestations of conflict, and practical steps for mediation. Students develop competencies related to conflict resolution strategies.

**Prerequisite:** COMJ 1010 or COMJ 1101 or COMJ 1102 or COMJ 1103 or COMJ 1104 or COMJ 1105 or COMJ 1106 or COMJ 1107 or COMJ 1108 or ENGL 1200

## COMJ 4222 - Freedom of Speech

**Credit Hours:** 3

Examines the history and current conceptions of free speech in the United States, and challenges students to think critically about the meaning of free and responsible communication. Topics include free speech in interpersonal, organizational, mediated, intercultural and international contexts, and considering issues of ethics and appropriateness.

**Prerequisite:** COMJ 1010 **or** COMJ 1101 **or** COMJ 1102 **or** COMJ 1103 **or** COMJ 1104 **or** COMJ 1105 **or** COMJ 1106 **or** COMJ 1107 **or** COMJ 1108 **or** COMJ 2201 **or** ENGL 1100

## COMJ 4414 - Advanced Journalistic Writing

**Credit Hours:** 3

Intensive study and practice of reporting and writing articles employing one or more journalistic techniques such as longform writing, immersion journalism, literary journalism, investigative reporting, data journalism, and digital storytelling. Areas of emphasis will vary with each semester.

**Prerequisite:** COMJ 2404

## COMJ 4609 - Advanced Video

**Credit Hours:** 3

Expands student use of industry standard field production techniques for digital video and audio content. Topics include all aspects of production, from the most basic single person to more sophisticated multi-person productions. Students will produce a variety of professional quality content.

## COMJ 4625 - Sports Digital Audio and Video Production

**Credit Hours:** 3

Focuses on live coverage of sporting events and the production of video based sports documentary materials. After successfully completing this course, students will; learn the process of producing media coverage of live sporting events, produce live coverage of a sporting event as a control room staff member, produce live coverage of a sporting event as a camera person, and shoot and edit part of a post-production of sports documentary materials. Specific topics include mobile broadcast solutions, directing and technical directing, camera techniques, graphics, slow motion, microphone placement and polar patterns, storytelling and video editing.

## COMJ 4629 - Sports Production

**Credit Hours:** 3

Develops skills necessary to produce sport related content and provide media coverage of live sporting events. Topics include outside broadcasts, in-venue coverage and post-production of sport documentary materials. Students will work as a production team to broadcast live sports and create pre-recorded content.

## COMJ 4803 - Current Practices in Social Media

**Credit Hours:** 3

Study beyond the basics to investigate the most current state of social media in global society. Topics include current platforms and trends, international social media and the dark side of social media. Students will discover current best practices and social media marketing techniques.

**Prerequisite:** ENGL 1200

## COMJ 4826 - Advanced Topics in PR & Strategic Communication

**Credit Hours:** 3

Addresses current trends and topics in public relations and strategic communication. Course content will change each semester subject to faculty availability and interest, but may include topics such as media relations, social media,

international public relations, and ethical issues in public relations and strategic communication.

**Prerequisite:** COMJ 3826

## COMJ 4846 - Writing for Public Relations & Strategic Communication

**Credit Hours:** 3

Exploration of the field currently defined as the deliberate, planned, and sustained effort to establish and maintain mutual understandings between any organization and its public. Topics include writing for advertising, features, press releases, news, events and more. Student will produce written work using controlled problems.

**General Education Attribute**

- Competency-Intensive Writing

## COMJ 4866 - Strategic Communication Campaigns

**Credit Hours:** 3

Provides theory and skills to create an integrated strategic campaign for a product, company, person or service. Topics include research, strategic planning, tactics and evaluation in creating and managing strategic communication campaigns. Students will study and analyze existing campaigns and develop their own client ready campaign.

**Prerequisite:** COMJ 1106 or COMJ 3826

## COMJ 4920 - Communication & Journalism Practicum

**Credit Hours:** 3 OR 6

Provides the students with pre-professional development experiences through participation in workshops, trainings, and co-curricular activities designed to promote the effective practice of communication skills critical to success as a professional. Students will record their activities and create a portfolio showcasing their experience.

**Prerequisite:** Sophomore Standing
**General Education Attribute**

- Competency-Keystone Experience

## COMJ 4950 - Communication & Journalism Internship

**Credit Hours:** 6

Provides advanced students with an on-the-job work/educational experience. Topics will vary by experience. Students will apply theoretical knowledge and skills learned in the classroom to the work environment.

**Prerequisite:** Junior Standing
**General Education Attribute**

- Competency-Keystone Experience

## COMJ 4997 - Communication Abroad

**Credit Hours:** 3

Examines communication and culture related to a specific geographic region. Topics include preparing for international travel, cross cultural communication competence, and negotiating communication in and between groups representing different cultural experiences. Students will travel as a group to the geographic region they are studying.

**Prerequisite:** COMJ 1010 **or** COMJ 1101 **or** COMJ 1102 **or** COMJ 1103 **or** COMJ 1104 **or** COMJ 1105 **or** COMJ 1106 **or** COMJ 1107 **or** COMJ 1108 **or** COMJ 2201 **or** ENGL 1100

## CRJ 1000 - Intro to Criminal Justice

**Credit Hours:** 3

The course covers the nature, scope and impact of crime in the United States; independent and interdependent operations and procedures of police, courts and corrections; and introductory theories of crime and delinquency. The course introduces the justice model in a systematic way whereby students delve into the numerous components of the justice system, including law enforcement, legal and judicial process and correctional operations. Career opportunities will be fully covered throughout the course.

**General Education Attribute**

- Discoveries-Social Sciences

## CRJ 1040 - Intro to Security Systems

**Credit Hours:** 3

The various dimensions of security include physical, personal, and operational measures. Security professionals must not only prevent unauthorized access to equipment, installations, material, and documents; and safeguard against espionage, sabotage, damage, and theft, but protect VIPs from kidnapping and assassination and employees from discussing operational plans from the workplace. All public, private, corporate, and government agencies face new and complex security challenges across the full spectrum of operations. Globalization and new security threats challenge security operations, and could include the control of populations, information dominance, multinational and inter-agency connectivity, anti-terrorism or counter terrorism, target hardening, VIP protection and the use of other physical-security assets as a versatile force multiplier. This course will prepare the security and justice professional to operate in any environment that requires a need for complex coordination and security measures.

## CRJ 1050 - Intro to Forensic Science

**Credit Hours:** 3

Forensic science applies scientific principles and techniques to the field of criminal justice. This introductory survey course is designed to expose students to the broad scope of forensic science. Special attention is paid to the collection, preservation, and analysis of physical evidence in criminal investigations across various scientific disciplines, as well as the introduction and presentation of evidence in a court of law. Topics discussed include: (a) the history of criminalistics; (b) crime scene documentation and investigative practices; c) the properties, collection, and categorization of physical evidence; e.g. fingerprints, bodily fluids (serology), DNA, hair, soil, plants, fiber, tool marks, firearms and projectiles (ballistics); (d) the analysis of documents, voice, and digital evidence; (e) biometric identification systems; (f) scientific instruments used in crime labs; (g) forensic evidence in judicial proceedings; and, (h) careers in the field of forensic science.

## CRJ 1100 - Introduction to Criminology

**Credit Hours:** 3

Examines historical and contemporary attempts to explain the origins of criminal behavior and society's reaction to it from a variety of perspectives. Provides students with an understanding of how these theories have influenced the present criminal justice systems.

## CRJ 2100 - Policing and Society

**Credit Hours:** 3

An introduction to the law enforcement system in America, which is the gateway to the criminal justice process, this course covers topics such as the historical foundations of police processes, occupational roles and tasks of law enforcement, and the nature and designs of typical, as well as innovative, police systems. Perennial problems of policing, particularly as it relates to community interaction, are also essential components of the course.

## CRJ 2110 - Principles Homeland Security

**Credit Hours:** 3

Students will gain an understanding of homeland security by analyzing the various security principles and policies that establish a foundation upon which to organize U.S. security efforts as a nation. Students will study how the national strategy aligns and focuses homeland security functions within critical areas such as: (1) intelligence and warning, border and transportation security, domestic terrorism; (2) protecting critical infrastructure and defending against catastrophic terrorism; and (3) emergency preparedness and consequence management. The first area focuses primarily on preventing terrorist attacks, the second area on reducing the nation's vulnerabilities, and the third on minimizing the damage and recovery from the aftermath of terrorist attacks.

## CRJ 2150 - Victimology

**Credit Hours:** 3

This course will examine issues surrounding the central character in a criminal act, the victim. Contents are designed to develop an understanding of what it means to be victimized, including the physical, psychological and economic impact of crime upon victims, their families and society in general. Special consideration will be given to specific victim populations (i.e., survivors of homicides, sexual assault and family violence), secondary victimization by the criminal system, victim assistance program, and future trends in this field. A full review of how the American justice system has responded to the needs of victims is part of the course content and includes a look at victim testimony at sentencing and parole and probation hearings, victim notification, Megan's Law, victim advisory and protection services, and other means in which the judicial system assures victim participation during the adjudicative phase.

## CRJ 2200 - Correctional Systems

**Credit Hours:** 3

Course examines the management, structure and organizational design of correctional institutions. Correctional planning, construction, program evaluation and community interaction will be considered, and improvement strategies for correctional operations will be debated and critiqued. The course provides a broad overview of the correctional system which incarcerates and confines, treats and reclaims criminal personalities, and protects and serves the state and the community by removing threats to the social order.

## CRJ 2300 - Criminal Investigation

**Credit Hours:** 3

This course exposes students to the fundamentals of the forensic investigative process and the range of skills necessary for the successful performance and management of investigations, including evidence gathering, collection and analysis, witness assessment, field techniques, and linkage between investigations.

**General Education Attribute**

- Competency-Applied Methodologies

## CRJ 2650 - Report Writing for CJ Profs

**Credit Hours:** 3

This course examines the characteristics and importance of good report writing within the criminal justice system. Reports used in law enforcement and security, the courts, and corrections are explained and discussed. Elements of composition, required substance, proper and improper conclusions, and descriptions of persons and property are explained. Practice in writing reports is emphasized and proficiency must be demonstrated.

## CRJ 3080 - Organized Crime

**Credit Hours:** 3

This course covers the historical, criminological/theoretical, legal, investigative, and juridical aspects of domestic and transnational organized crime. It includes traditional organized crime such as La Cosa Nostra, as well emerging nontraditional associations such as outlaw motorcycle groups and relationships with terrorist organizations. Studies will blend the scholarship surrounding organized crime with practical, contemporary investigative tools used to combat associated criminal activity such as racketeering, narcotics and dangerous drugs, syndicated gambling, and public corruption.

## CRJ 3090 - White Collar Crime

**Credit Hours:** 3

This course considers crimes committed by corporations as well as white-collar criminals: how such crimes are defined; who commits or is victimized by them; which moral, ethical, legal and social contexts promote them; and how society responds. Procedural and policy considerations in the investigation and enforcement of relevant statutes will also be covered, including the concept of legal privilege, the role of the grand jury and other pretrial processes, evidentiary questions, litigation strategies, and potential sanctions and other punishments.

## CRJ 3380 - Executive Protection

**Credit Hours:** 3

Assassinations and kidnapping of political and corporate leadership has increased significantly in the past century. Terrorists and extremists groups, rogue states, drug cartels, transnational criminal groups, to local criminals and extremists working alone, have found an effective strategy to influence polities and societies. This course will prepare the security and justice studies student to operate and develop security policy in any environment that requires complex coordination and security measures needed to protect executive leadership at all levels, to include their personal and organizational assets, and their families. This course will examine the theories of executive protection (security), analyze assassination and kidnapping case studies on the corporate, national, and international levels, determine security failures that have led to the assassination or kidnapping, and develop security policy to prevent such attacks.

## CRJ 3400 - Juvenile Justice

**Credit Hours:** 3

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.

## CRJ 3410 - Legal Liability for CJ Profs

**Credit Hours:** 3

This required course will provide insight into both civil and criminal legal liability issues facing criminal justice practitioners. Specific and current legal topics for those working in the key areas of the criminal justice system will be examined. Federal civil rights actions, tort actions, and criminal sanctions, against law enforcement, corrections, and court system personnel will be examined in detail.

**Prerequisite:** CRJ 3750

## CRJ 3450 - Probation and Parole

**Credit Hours:** 3

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.

## CRJ 3650 - Mock Trial Concepts

**Credit Hours:** 3

Courtroom procedures used in criminal and civil trial courts are studied as students examine the courtroom environment through guided reading and critical evaluation of a mock trial case study. Students are expected to participate in simulated mock trial proceedings in the classroom with an emphasis on the roles of law enforcement, attorneys, prosecutors, forensics, and expert witnesses in the trial process. This course requires both independent work product and team collaboration. It is recommended for students pursuing careers in legal fields, law enforcement, and forensics.

## CRJ 3700 - Special Populations in CJ

**Credit Hours:** 3

This required course provides a detailed look at various special populations that have been impacted and continue to be impacted by the American Criminal Justice System. Some groups to be examined include various racial and ethnic groups, the elderly, females, juveniles, the mentally ill, and the mentally disabled.

**Prerequisite:** CRJ 1000

## CRJ 3740 - Court Systems

**Credit Hours:** 3

This course examines American federal and state criminal court systems. Students analyze court procedures that uphold the rights and liberties of both the accused and victims. Emphasis is placed on criminal court processes, jurisdiction, and the roles of criminal justice practitioners within the courts.

**General Education Attribute**

- Discoveries-Social Sciences

## CRJ 3750 - Substantive Criminal Law

**Credit Hours:** 3

An introduction to substantive criminal law that reviews the social, philosophical and legal foundations of criminal codification, the course also covers the historical development of criminal law in the U.S. Other subject matter includes parties to crimes, including principals/accessories, criminal capacity, criminal elements (e.g., mensrea and actusreus), and the specific crimes against person, property and public order. Lastly, the course captures criminal law from the defendant's perspective by reviewing the accused's mental states, potential defenses and uses of mitigation.

## CRJ 3760 - Criminal Procedure

**Credit Hours:** 3

Criminal Procedure is the study of the criminal justice process including the law of arrests, search and seizure; the making of bail; adjudication; pretrial and post-trial activities; and the nature of plea bargaining. Substantial emphasis is given to the constitutional protections afforded through the Bill of Rights, particularly the 4th, 5th, 6th, 8th and 14th. This course deals extensively with case law applications of these principles and the role of judge and jurist in the crafting of criminal process standards. This is a writing intensive course.

**Prerequisite:** CRJ 1000

## CRJ 3800 - Crime Scene Imaging

**Credit Hours:** 3

This course is designed to expose students to the crime scene imaging process while learning traditional film, video and digital imaging techniques. Techniques and methods of crime scene imaging focus on practical exercises as well as general viewports of crime scene documentation. Topics include the fundamentals of photographing scenes from general to specific utilizing the overall, middle range and close-up "three-step" method. Crime scene imaging techniques, both basic and advanced, will be discussed and practiced while photographing mock crime scenes. The advanced technique of crime scene imaging includes the use of digital cameras; the digital darkroom; crime scene panorama; creation of court charts; and the enhancement and analysis of latent prints, footwear, tire impressions, questioned documents, security video image enhancement and restoration, etc

## CRJ 3840 - Problems in Policing

**Credit Hours:** 3

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.

## CRJ 3850 - Crime and the Media

**Credit Hours:** 3

This course will analyze media violence and its potential influence on various audiences. Specific variables will be examined in relation to aggression and consequently, violence. Violence will be examined within different media contexts - including news, film, television, pornography, advertising and Internet. The daily repetition of media violence will also be examined as it promotes the normalization and legitimization of violent behaviors. This course will also examine violence and aggression in relation to its historical, cultural, and contemporary influences and sources.

## CRJ 3970 - Law and Evidence

**Credit Hours:** 3

This course is a comprehensive review of evidentiary principles and reveals how judges and trial lawyers actually think about evidentiary rules - particularly the Federal Rules of Evidence. It will show how evidentiary issues arise before and during trial. The course will logically track the stages of a trial, from the opening statement(s) through direct examination, cross examination and closing arguments. Students will be required to advocate their respective case utilizing the evidentiary principles in a real criminal court environment and must use due diligence in preparing their respective roles.

**Prerequisite:** CRJ 1000

## CRJ 3990 - Special Topics in CJ

**Credit Hours:** 3

Focused examinations of an emerging and dynamic problem or issue are in the study and practice of criminal justice. Special subject matter not ordinarily covered in the existing curricula can be presented by interested faculty. Examples include but are not limited to: alternative punishment schemes, euthanasia and mercy killing, civil disobedience and the rule of law, minorities in the justice system, affirmative action policy, and police use of force and women in criminal justice.

## CRJ 4050 - Cyber Security

**Credit Hours:** 3

Many aspects of our lives rely on the Internet and computers, including digital media communications (email, cell phones, texting, social media), government records, financial information, personal medical record. How are the data and the computer systems on which that data resides kept safe? The increasing volume and sophistication of cyber security threats including cyber terrorism, targeting phishing scams, identity theft, and other online vulnerabilities-demand that we remain vigilant about securing our homeland, computer systems and personal information. Cyber security is an emerging area within the criminal justice/homeland security discipline. This course is designed to expose students to legal and technical aspects of cyber security. Students are able to learn and apply their knowledge and skills to identify and address the risks and damages associated with, digital fraud and cyber crimes, including computer crime, cyber terrorism, identity theft, cyber hacking and cyber virus and malicious code.

## CRJ 4100 - Multiculturalism and the Criminal Justice System

**Credit Hours:** 3

Students examine unique issues raised by race, ethnicity, and gender when analyzed in relationship to crime and the criminal justice system.

**General Education Attribute**

- Competency-Intercultural Fluency

## CRJ 4200 - Leadership and Ethics in Criminal Justice

**Credit Hours:** 3

This course is a survey of ethical issues for practitioners within the criminal justice system and the principles and theories of effective leadership. Topics include: styles of leadership, the leadership framework, ethics of decision-making, and the ethical dilemmas that those working in criminal justice.

**General Education Attribute**

- Competency-Ethical Reasoning

## CRJ 4250 - Admin & Mgt of CJ Orgs

**Credit Hours:** 3

This required course provides the student with a comprehensive understanding of various topics related to the administration and management of our nation's formal criminal justice organizations. Organizational and managerial theories along with specific and current issues/topics relevant to the daily operations of each branch of the criminal justice system will be examined and explored.

**Prerequisite:** CRJ 1000

## CRJ 4280 - Criminal Intelligence Analysis

**Credit Hours:** 3

This course will focus on the intelligence function and its use in crime analysis. It will introduce students to analytical techniques and solutions to everyday law enforcement crime analysis problems. Special attention will be given to understanding crime patterns and trends. Cases related to terrorism, organized crimes, white-collar crimes and street crimes will be analyzed and discussed. Intelligence methods of data collection and analysis will be explored and applied to crime analysis.

## CRJ 4290 - Terrorism

**Credit Hours:** 3

This course examines current terrorism, its origins and ideological bases, with particular attention to its relation to political institutions and the criminal justice process. Specific attention is given methods and means of the terrorist, motivations and modus operandi trends and predictability, and law enforcement's multifaceted reactions to its many devious forms. Legislative efforts to curb the scourge of terrorism are also highlighted.

## CRJ 4300 - Advanced Criminological Theory

**Credit Hours:** 3

This course focuses on the study of crimes, criminals, and the causes of criminal behavior. Students explore how classical, biological, psychological, sociological, economic, and political theories of crime explain criminal behavior, as well as the impact of these theories on the criminal justice system.

**Prerequisite:** CRJ 1000 and CRJ 1100
**General Education Attribute**

- Competency-Intensive Writing

## CRJ 4310 - Analysis of Violent Crime

**Credit Hours:** 3

An-upper-level, interdisciplinary course that examines violent crime in accordance with the specific aspects of behavioral analysis and law, specific aspects of behavioral analysis and law specific course content will examine typologies of crime, organized/disorganized offenders and behaviorally based crime scene characteristics (including crime scene staging). A particular emphasis will be on the psychopathology of crime, pedophilia, serial killers, human sacrifice rituals and victim logy, and how these factors affect or are affected by criminal motivation, modus operandi and signature aspects of violent crime.

## CRJ 4400 - Research Methods in Criminal Justice and Criminology

**Credit Hours:** 3

This course introduces students to the fundamental concepts and research methods used in criminal justice/criminology. Students learn about sampling, reliability and validity, causation, measurement, design, data collection strategies, analysis of quantitative and qualitative data, and ethical considerations.

**Prerequisite:** CRJ 1000
**General Education Attribute**

- Competency-Quantitative Application
- Competency-Information Literacy

## CRJ 4850 - Forensic Law

**Credit Hours:** 3

An interdisciplinary course covering law, criminal justice, and science and technological issues in the evidentiary arena. Coverage in the course provides a broad 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.

**Prerequisite:** CRJ 3750 and CRJ 3760

## CRJ 4870 - Computer Forensics

**Credit Hours:** 3

This course is designed to expose students to legal and technical aspects of computer forensics. The methods of the collection, preservation, analysis and presentation of digital evidence will be presented to properly conduct a computer forensics investigation. The focus of this course will be on how law enforcement obtains electronic evidence, maintaining the evidentiary chain, as well as the legal aspects of the search and seizures of computers and related materials.

## CRJ 4880 - Cyber Crime investigations

**Credit Hours:** 3

As computers become more common in businesses and households, it is inevitable that the information or evidence an investigator seeks will be stored in those computers or will involve use of the Internet. Data networks now in place allow us to transmit information to and from virtually any location on Earth in a timely and efficient manner. But what has this tremendous enhancement in communications technology brought us? Another opportunity for criminal activity to take place. Who are the criminals in cyberspace? Understanding cybercrime requires an understanding of the technology that is being used to commit the criminal acts. The investigation of cybercrimes requires highly specialized skills. This course is designed to expose students to legal and technical aspects of cybercrime investigation. The guidelines of the collection, preservation, analysis and presentation of digital evidence will be presented to properly conduct a cybercrime investigation. The focus of this course will be on how law enforcement investigate a cybercrime and obtain electronic evidence, maintaining the evidentiary chain, as well as the legal aspects of the search and seizures of computers, smart phones and related digital devices.

## CRJ 4900 - Seminar in Criminal Justice Studies

**Credit Hours:** 3

This capstone course for criminal justice students focuses on application of information learned from different courses, with an emphasis on criminal law, legal issues, crime theory, juvenile justice, law enforcement, corrections, ethics, forensic science, and research methods.

**Prerequisite:** CRJ 1000
**General Education Attribute**

- Competency-Intensive Writing
- Competency-Keystone Experience

## CRJ 4950 - Criminal Justice Internship

**Credit Hours:** 0 TO 12

An on-site, experiential learning experience students work at a variety of justice agencies for academic credit is the central aim of the internship program. Intern locations have included government agencies, police departments, prisons, federal and state law enforcement, private security firms, judicial clerkships, legal offices, and legal research concerns. Interns must complete a self-evaluation, perform a series of exercises and assignments, author a log diary and a paper outlining the internship experience, work 45 hours per internship credit, and present an acceptable recommendation from the internship supervisor upon completion of the experience.

**Prerequisite:** CRJ 1000

## CSD 1010 - Introduction to Communication Disorders

**Credit Hours:** 3

Introduces students to communication disorders. Encompasses the problems humans may have in speech, language, and hearing. Focuses on their causes, their impacts on people, methods for their evaluation and management. Includes an overview of cultural effects on communication and an orientation to the professions of speech pathology and audiology.

## CSD 1500 - Speech & Language Development

**Credit Hours:** 3

Introduces students to normal language and speech development in children. Provides theoretical and practical frames of reference for students entering child-centered professions.  Addresses foundations of language and speech acquisition, developmental processes normal speech and language, and means of facilitating normal communicative abilities.

## CSD 1800 - Intro to ASL and Other Communication Methods

**Credit Hours:** 3

Covers a comprehensive review of the theories of manual communication, including an introduction to the major manual communication systems. Students learn to sign and finger spell for use in communicating with and rehabilitation of the deaf and hard of hearing.

## CSD 2100 - Introduction to Audiology

**Credit Hours:** 3

This course investigates the nature of hearing disorders and the audiological, medical, social, psychological, and educational implications. It examines basic evaluation procedures and methods of (re)habilitation for individuals with hearing loss. It emphasizes hearing's impact on speech and language.

## CSD 2700 - Phonetics

**Credit Hours:** 3

Introduction to the study of the physical aspects of speech. Focuses on production, perception, and transcription of the English phonemes using the International Phonetic Alphabet (IPA) as well as the acoustic and articulatory properties of each sound.

## CSD 3000 - Anatomy and Physiology of Speech and Hearing

**Credit Hours:** 3

Study of the anatomy and physiology of the speech and hearing mechanisms.

## CSD 3100 - Speech Science

**Credit Hours:** 3

Analyzes models of the speech mechanism. Emphasizes normal aspects of the physiology and acoustics of speech production.

## CSD 3200 - Child Language Disorders

**Credit Hours:** 3

Provides students with an understanding of language disorders in children, etiological factors associated with them, diagnostic and evaluative techniques, and therapeutic methodologies.

**Prerequisite:** CSD 1500

## CSD 3300 - Speech and Fluency Disorders

**Credit Hours:** 3

This course examines normal and disordered development of phonology and articulation skills. It presents various philosophies of articulation and phonological remediation as well as an overview of fluency and stuttering interventions.

**Prerequisite:** CSD 2700

## CSD 3400 - Aural Rehabilitation

**Credit Hours:** 3

A comprehensive study of auditory rehabilitation, emphasizing auditory training, speech reading, speech training, and speech listening devices.

**Prerequisite:** CSD 2100

## CSD 3500 - Adult Language Disorders

**Credit Hours:** 3

This course places primary emphasis on several of the major speech and language disorders in adults related to aphasia, dysarthria, apraxia, traumatic brain injury, and dementia. The student will begin to understand, and/or apply evidenced-based information to form therapeutic strategies related to cognition and communication.

## CSD 3600 - Communication for Individuals with Hearing Loss

**Credit Hours:** 3

This course will discuss language and communication for individuals who are D/deaf or hard of hearing. Students will learn the multiple communication options (oral versus sign system) available for individuals with limited to no hearing, the influence of culture on the communication preference and implications for language and literacy development. Current research on outcome of each modality will be discussed.

## CSD 4000 - Assessment and Treatment in Communication Disorders

**Credit Hours:** 3

The student learns to select, administer, score, and interpret basic speech and language tests, conduct clinical interviews, and write diagnostic reports based on the results. A major focus is on basic human communication processes including (a) anatomical and physiological bases, (b) the physical and psychophysical bases, and (c) linguistic and psycholinguistic aspects. A major theme in this class is to learn about intervention strategies, materials, and resources used with individuals with communication and swallowing disorders.

## CSD 4100 - Neuroanatomy for the SLP

**Credit Hours:** 3

This course introduces students to the neuroanatomy and physiology underlying speech and language. It emphasizes an understanding of the nervous system from a neurobiological perspective. Behavioral and communicative disturbances resulting from disease, defect, or injury are discussed.

## CSD 4200 - Clinical Observation / Experience

**Credit Hours:** 3

This course establishes clinical observational skills and introduces students to clinical processes and procedures in the context of best practices in audiology and speech-language pathology. Students gain exposure to the clinical context through focused video and face-to-face observation.

## CSD 4300 - Information Literacy in CSD

**Credit Hours:** 3

This course offers the opportunity for intensive study and practice of the various types of writing skills expected of educators and health care professionals.  Areas covered in this course include: research papers, diagnostic report writing, informational letter writing, progress notes, summary reports, treatment plans, IEPs, and behavioral goals.

**General Education Attribute**

- Competency-Intensive Writing

## CSD 4400 - Special Populations in Speech-Language Pathology

**Credit Hours:** 3

This course provides an overview of cleft lip and palate, cerebral palsy, traumatic brain injury, cranio-facial and other syndromes, and autism in children and adults. Emphasis will be placed on the identification of and differentiation between the various disorders. Attention is given to speech and language development in children with these disorders, to the nature of the speech and language disorders they may exhibit, and to the differential diagnosis and clinical management by speech-language pathologists in conjunction with specialists from other disciplines.

## CSD 4700 - Communication Disorders Across Cultures

**Credit Hours:** 3

This course examines the background, values/beliefs, and language issues of culturally and linguistically diverse

populations. Specifically, Black, Latino, Native American, and Asian minorities are targeted to aid in distinguishing language differences from disorders.

## CSD 4800 - Hearing Science

**Credit Hours:** 3

A basic analysis of how sound is generated and measured. In addition, the manner in which the human auditory system encodes sound information and subsequently extracts meaning from it will be investigated.

## DANC 1310 - Foundations of Dance Technique

**Credit Hours:** 3

Foundations of Dance Technique is designed to provide accessibility to the world of dance for all students, novice or pre-professional. As this course is intended for students with little/no dance training, the class will use lecture, discussion, and studio work to introduce ballet, jazz, and tap, their history, and their aesthetics. The lecture and discussion will help the student recognize and articulate key terminology and criteria for aesthetic judgment in this form of expression. The studio work, including barre exercises and center and traveling sequences, will be performed in small groups as well as individually in order to help the student develop creativity in expressing themselves and a kinesthetic awareness for self-evaluation.

## DANC 1320 - Ballet I

**Credit Hours:** 3

Introductory instruction in the basic techniques applicable to ballet as practiced in western Europe and in the United States is covered. Basic techniques include barre exercises, port de bras and center practice with jumps, beats and turns.

## DANC 1330 - Jazz I

**Credit Hours:** 3

This is an introductory, entry level jazz technique class emphasizing American jazz dance style. The focus of instruction and performance is on developing flexibility, isolation techniques, as well as jazz jumps, kicks and turns necessary for most forms of jazz dance. This course is a 3 credit course and is required for dance minors.

## DANC 1340 - Tap I

**Credit Hours:** 1 TO 3

This course emphasizes instruction in the basic tap techniques practiced classically and in modern day. Basic techniques include a center warm ups for feet, floor progressions with tap technique and center practice encompassing rhythm and timing elements.

## DANC 2320 - Ballet 2

**Credit Hours:** 3

Ballet II is a second level course designed for the development of strength and fluidity through an extension of techniques demonstrated in specialized study and drill. Emphasis is placed on quicker retention of complex

combinations. Further emphasis is placed on center floor work to develop the students artistry, technique, and physical ability in the dance form.

## DANC 2600 - Modern Dance

**Credit Hours:** 3

Modern dance is an expressive form of movement which serves to enhance individual creativity and exploration. The class will emphasize creative problem solving through movement and modern dance technique. The development of movement quality, as well as the use of force, time and energy, will be explored while learning the rich history of modern dance.

## DANC 3010 - Theatre Dance I

**Credit Hours:** 3

Introductory, entry-level instruction in the basic elements of period movement/style used in acting and musical theater, as well as social/ballroom, jazz and tap dance, will be presented in this course. Student presentations of these various styles and dance forms used in musical theater will be provided by the instructor and evaluated for credit.

## DANC 3020 - Theatre Dance II

**Credit Hours:** 3

This course will help the dancer develop specific movement skill and style in the area of musical theater. Emphasis will be place on the basic techniques of American modern, jazz and tap forms including those used by Agnes DeMille and Jerome Robbins (American modern), Bob Fosse and Michael Bennett (jazz), as well as Gene Kelly and Gregory Hines (tap).

## DGMT 1000 - Foundations of Print Media

**Credit Hours:** 3

This course offers students an opportunity to understand the practical applications of electronic file preparation as it relates to print production. It covers image design, file conversion, image carrier preparation, image transfer and finishing techniques. Two lecture-hours and three laboratory-hours per week.

## DGMT 1800 - Foundations of Digital Media

**Credit Hours:** 3

This course focuses on the fundamental concepts of digital media technology and typical components including hardware, software, peripheral devices, conventional photography/scanned images, digital photography, bit-mapped and vector based image creation and editing, web pages, video, animation, 3D images, and audio. The application of digital media in business, marketing, education, entertainment and training will be explored. Practical hands-on assignments will be used to reinforce learning. Two-lecture hours and three laboratory-hours per week.

**General Education Attribute**

- Foundations-Tech Literacy

## DGMT 2000 - Print Media Production Processes

**Credit Hours:** 3

This course offers additional experiences in the practical application of digital printing. The student is introduced to the use of digital media as an extension of print media for communications and marketing purposes. The integration and implementation of new printing and imaging technologies that affects day-to-day communication is explained. Practical experiences are gained in digital printing reproduction through laboratory and computer based activities. Two-lecture hours and three laboratory-hours per week.

**Prerequisite:** DGMT 1000

## DGMT 2200 - Digital Photography

**Credit Hours:** 3

This course emphasizes techniques involved in still photography utilizing a digital camera. It covers the basic aspects of digital camera operation, photographic composition, lighting, photo retouching, tonal correction, and digital output. Practical experiences are gained in the digital manipulation of images through computer-based activities. Studio format.

## DGMT 2250 - Digital Page Layout

**Credit Hours:** 3

This course provides an in-depth study into the page layout - the arrangement of text and images on both printed and digital pages - as a primary tool used by graphic designers to communicate messages in a compelling and memorable way. The emergence of new media, from the Web to interactive eBooks, smartphones, and the iPad, has fundamentally changed the nature of page layout. While fitting static content on a finite page used to be a primary challenge for print layouts, today the task demands that designers incorporate scrolling Web pages, interactivity, sound, animation, movies, slide shows, and other elements that produce multiple dimensions and unlimited depth for a single page.

## DGMT 2400 - Vector Based Graphics

**Credit Hours:** 3

The world we live in is filled with all types of visual images whether it be electronically through TVs, computers, or mobile devices, or also through print in advertisements, vehicle wraps, and signage. This course focuses on the creation of artwork using vector-based graphics software typically used in the print and digital media industry. Students will learn how to create, edit, and output vector-based graphics and their integration with other software such as Photoshop and web applications. Studio format.

## DGMT 2500 - Digital Imaging

**Credit Hours:** 3

The advanced study of the practical applications of digital editing through means of computer applications. This course emphasizes techniques involved in advanced picture taking, color imaging, and digital image manipulation by means of a computer. It will focus on developing the necessary skills to prepare images for a variety of output methods. Studio format.

## DGMT 3020 - Commercial Print Techniques

**Credit Hours:** 3

An in-depth study of commercial printing applications focusing on the lithographic process incorporating line and halftone reproduction of graphic elements. Assigned projects require students to gain an understanding of the operations of a lithographic press through hands on activities and simulator exercises to reinforce lecture presentations. Production workflow is analyzed and evaluated through class projects. Substrates and inks are studied to show the effect on specific projects. Two-lecture hours and three laboratory-hours per week.

**Prerequisite:** DGMT 2000

## DGMT 3120 - Spec Graphics Print Techniques

**Credit Hours:** 3

This course defines and analyzes the process of screen printing, pad transfer printing, printed electronics and other specialty printing processes. It is an introduction to the various specialty printing applications. Student designed activities are supported by exercises that provide quality and control for the printing process. Emphasis of the course is centered on establishing repeatability of the printing process by controlling variables; digital design and imaging; single and multiple color image design, conversion and transfer; manual and semi-automatic presswork; printing applications of simple and complex close register line images. Two-lecture hours and three laboratory-hours per week.

**Prerequisite:** DGMT 1000 and DGMT 2000

## DGMT 3200 - Digital Video

**Credit Hours:** 3

This course explores digital video from the inception of an idea to the delivery of the finished video. Students will develop and use their understanding of video concepts, storytelling, camera use, video editing, and exporting to create videos for the Internet, multimedia presentations and video broadcasts. Source footage comes from photos, previously shot footage, or footage shot using the University's equipment or the student's camera and is edited on cross platform systems using commercial video editing software. Two-lecture hours and three laboratory-hours per week.

**Prerequisite:** DGMT 1800

## DGMT 3300 - Package Printing Processes

**Credit Hours:** 3

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-lecture hours and three laboratory-hours per week.

**Prerequisite:** DGMT 1000 and DGMT 2000

## DGMT 3310 - Web Publishing

**Credit Hours:** 3

This course examines web publishing and what makes an accomplished web designer. Students will design, develop,

evaluate, and validate web pages that include HTML language syntax and incorporate elements such as animations, sounds, and video. Students will learn in depth HTML syntax and apply CSS to a webpages layout and style.

**Prerequisite:** DGMT 1800

## DGMT 3400 - 3D Computer Animation

**Credit Hours:** 3

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.

**Prerequisite:** DGMT 1800

## DGMT 3420 - Cost AnalysisÂ Â Digital Media

**Credit Hours:** 3

A critical examination of the operations involved in the production of commercially printed products for the purpose of determining costs of the operations. The procedures necessary to assemble this information to produce estimates of typical printing matter and digital media elements are discussed. The identification and study of cost centers as they relate to the hourly costs and ultimately to the selling price are examined. Students are required to prepare a number of cost estimates for the course.

**Prerequisite:** DGMT 1000 and DGMT 2000 and DGMT 3020 and MATH 1220

## DGMT 3500 - Motion Graphics

**Credit Hours:** 0 TO 3

In recent years there's been an explosion of opportunities in the industry of motion graphics; they appear in just about every form of popular media today, whether it's online media, network television, video on your cell phone, iPod, DVD, video games. In this course students will gain knowledge and skills in color theory, composition, typography in relation to the motion. These skills will blend with skills traditionally covered in other disciplines like film, visual effects and animation. Two-lecture hours and three laboratory-hours per week.

## DGMT 4060 - Digital Workflow & Print Technology

**Credit Hours:** 0 TO 3

This course will focus on the components and terminology of color reproduction and workflow technology as a basis for understanding applications in the field of digital printing. Through a series of research, laboratory and computer-based activities, the student will experience the interaction between software applications, image preparation techniques, and various computer peripherals used to support digital printing and color imaging. Variable data printing and multi-channel applications are investigated. Two lecture-hours and three laboratory-hours per week.

**Prerequisite:** DGMT 1000 and DGMT 2000 and DGMT 2250 and DGMT 2500

## DGMT 4450 - Digital Media Project Planning

**Credit Hours:** 3

This course focuses on the application of production management and operations concepts and techniques related to the field of digital media. The course emphasizes: production planning; scheduling; inventory control; purchasing; equipment investment; plant layout; organizational structure; cost analysis and quality control.

**Prerequisite:** DGMT 1000 and DGMT 2000 and DGMT 3020 and DGMT 3420 and MATH 1220
**General Education Attribute**

- Competency-Intensive Writing

## DGMT 4850 - DMT Senior Seminar

**Credit Hours:** 3

This is an all-encompassing seminar-type course designed to provide seniors in Digital Media Technology with opportunities to enhance their knowledge base through collaborative and individual work. Each student is also required to do a major research paper or project on a particular problem or technology relating to the digital media industry.

**General Education Attribute**

- Competency-Intensive Writing

## DGMT 4950 - Digital Media Technology Internship

**Credit Hours:** 3

The Digital Media Technology internship allows students to gain practical employment experience and to build upon the fundamental knowledge and skills developed in earlier courses. Student interns will expand their basic knowledge and skills through research efforts, problem solving, and practical applications.

**General Education Attribute**

- Competency-Keystone Experience

## ECEE 1001 - K-4 Field Experience

**Credit Hours:** 3

This course is designed to provide students with practical experiences in a K-4 classroom. Pennsylvania Department of Education Field competencies, Level 3, provide the objectives of this course. Students are required to complete these competencies with 30-45 hours of observation and teaching under the guidance and observation of a mentor teacher in K-4 elementary classroom. Current teaching technology and strategies to meet the needs of children in grades K-4 will be researched, observed and discussed. Students will complete a mini-action research project, in which they assess learners in a K-4 classroom to identify areas of need, plan and implement developmentally appropriate interventions, and use age appropriate assessments to determine impact on student learning. University classroom seminars and field classroom teaching experiences are combined to give students an opportunity to discover their aptitude and interest in working with K-4 school children.

## ECEE 1002 - PreK-4 Field Experience

**Credit Hours:** 3

This course is designed to provide candidates with practical experiences in two settings: An early childcare center (e.g.,

daycare, Headstart, nursery school, or Prek setting), as well as a K-4 early 6 elementary classroom. Pennsylvania Department of Education Field competencies, Level 3, provide the objectives of this course. Students are required to complete these competencies with 30-45 hours of observation and teaching under the guidance and observation of mentor teachers in the two Prek-4 settings. Current teaching technology and strategies to meet the needs of children in preschool and early elementary school settings will be researched, observed and discussed. Developmentally appropriate, best-practices for teaching young children are emphasized in the following areas: Planning and preparation, classroom environment, instructional delivery, assessment, and meeting the needs of diverse learners. Students will complete a mini-action research project, in which they assess learners to identify areas of need, plan and implement developmentally appropriate interventions, and use age-appropriate assessments to determine impact on student learning. University classroom seminars and field classroom teaching experiences are combined to give candidates an opportunity to discover their aptitude and interest in working with Pre-K-4 school children.

## ECEE 1003 - Introduction to Early Childhood Education

**Credit Hours:** 3

This course examines the historical and contemporary perspectives of early childhood education (Pre-K through 4th grade). It addresses developmentally appropriate practices, diverse populations, models of early childhood education, and lesson planning for diverse populations. Students also learn to plan for inclusive learning environments and apply models of child guidance through observation and analysis. This course includes 10 hours of observation for Level I field experiences. Students who have taken EELE 275 or CECH 413 may not take ECEE 1003 for credit. School of Education Clearances required.

## ECEE 1004 - Differentiated Reading Instruction for Grades 1-4

**Credit Hours:** 3

This course presents candidates with an understanding of how to help students who are experiencing difficulties in achieving readings success and enhance programs for advanced students. Candidates will become knowledgeable of differentiated instruction, a variety of assessments, evidence-based instructional practices, and programs for intervention.

## ECEE 1005 - Building Partnerships and Clinical Experiences PreK/K

**Credit Hours:** 3

This clinical experience with related seminars prepares students to work with young children and their families in a variety of preschool and kindergarten settings. Seminar content focuses on pedagogy, family influence, diversity and community partnerships. Students are responsible for the assessment, planning, instruction and classroom management of children under the supervision of a certified teacher. A minimum of 75 clinical hours of Level II field experience is required.

## ECEE 1006 - Classroom Guidance Clinical Experience Grades 1-4

**Credit Hours:** 3

This clinical experience with related seminars prepares students to work with young children in a variety of settings in grades one through four. Seminar content focuses on pedagogy, diversity and appropriate guidance techniques. Students are responsible for the assessment, planning, instruction and classroom management of children under the supervision of a certified teacher. A minimum of 75 clinical hours of stage-three field experience is required.

## ECEE 1007 - Teaching Technology Integrated in Early Childhood Classroom

**Credit Hours:** 3

This course will prepare students to effectively integrate technology into the PreK-4 classroom. Students will examine the expectations of the 21st century learner as well as design and assess 21st century learning. In addition, students will examine various technology tools for classroom use. Successful completion of this course will allow students to apply for STEM endorsement through the Pennsylvania Department of Education.

## ECEE 1008 - Observation: Constructing ECH Knowledge Base

**Credit Hours:** 3

Young children from birth to age nine are cared for and educated in diverse early childhood settings. Gives undergraduate students experience in using effective methods for observing young children's development, environments, interactions, and adaptations while constructing a wide early childhood knowledge base. Emphasizes developmentally appropriate practices and legal and ethical responsibilities. Directs students' participation with children of different age groups in a variety of early childhood settings through field-based/case study approaches. Includes one hour of class meetings with two-hour field placement per week.

## ECEE 1009 - Assessment & Planning: Using ECH Knowledge Base

**Credit Hours:** 3

Young children from birth to age nine are cared for and educated in diverse early childhood settings. Gives undergraduate students experience in using effective methods for observing, assessing, and documenting young children's development for the purpose of planning appropriate programs, environments, interactions, and adaptations. Emphasizes developmentally appropriate practices and legal and ethical responsibilities. Directs students' participation with children of different age groups in a variety of early childhood settings through field-based/case study approaches. Field experience assignments are designed for the student to use various types of assessments with young children.

## ECEE 1010 - Technology for Early Childhood Educators

**Credit Hours:** 3

This course is designed to facilitate future early childhood educators with the knowledge skills, and dispositions for integrating technology into their classroom instruction and for using technology to improve professional productivity. Students will explore the relationship among ISTE (International Society for Technology in Education) standards, NAEYC (National Association for the Education of Young Children) standards, and PA Learning standards for Early Childhood and those PA Academic Standards related to PreK-6 learners and the appropriate and effective uses of contemporary educational technology. These concepts will be applied to the development of instructional materials that can be used for assessing learning and promoting achievement for all students in grades PreK-6.

## ECEE 1011 - ECH/Elementary 1-6 Field Experience

**Credit Hours:** 1

Professional practicum that requires the teacher candidate to plan, teach, and assess developmentally, culturally appropriate curriculum for first through sixth grade students and engage family community members in the student's learning. Field experience integrates the application of instructional strategies, content knowledge, classroom management, family and community engagement, ethical conduct standards, and other professional knowledge and

competencies in first, second, third, fourth, fifth, and sixth grade classrooms. During the field experience, teacher candidate will become familiar with the field site community resources and demographic, collaborate with mentor teacher to prepare and implement learning experiences that align with national and state standards, and assess children's learning.

## ECEE 1012 - Infant-Kindergarten Field Experience

**Credit Hours:** 1

Professional practicum that requires the teacher candidate to plan, teach, and assess developmentally, culturally appropriate curriculum for infants, toddlers, preschoolers, and kindergarteners and engage family and community members in the children's learning. Field experience integrates the application of instructional strategies, content knowledge, classroom management, family and community engagement, ethical conduct standards, and other professional knowledge and competencies in infant toddler, preschool, and kindergarten settings. During this field experience, teacher candidate will collaborate with mentor teacher to prepare and implement learning experiences that align with national and state standards, assess children's learning and engage families and community in the children's learning.

## ECEE 1100 - Teaching Children's Literature

**Credit Hours:** 3

Through reflection of current issues and trends, this course provides a knowledge base of children's books, authors, and illustrators, including all genres of traditional and contemporary literature. Students develop effective strategies through active involvement in literary experiences that integrate children's literature into the curriculum.

**General Education Attribute**

- Discoveries-Art/Humanities

## ECEE 1200 - Child Development and Learning

**Credit Hours:** 3

This course is designed to provide a strong foundation of child development and learning and developmental theory. Focuses on the cognitive, social-emotional, ecological-systems, and physical-motor dimensions of human growth and changes (pre-birth through eight years of age). Emphasizes influences on human growth and change with respect to cognition, individual difference, personality, growth, abilities, and interests. Examines developmental theory, developmental milestones and their relation to the continuum of the PA learning standards for early childhood. Explores cross-cultural and multiethnic perspectives with respect to holistic development of children; involvement with the observation of individuals at various levels of development. Offered each semester.

## ECEE 1210 - Developmentally Appropriate Practices in PreK

**Credit Hours:** 3

Teacher candidates will become competent in NAEYC and PDE standards, applying their knowledge, skills, and dispositions as they design instruction based on characteristics of the age group, 0-5. They will plan early learning environments, explore materials and approaches to care and curriculum.

## ECEE 2300 - Family & Community Collaborative Partnerships

**Credit Hours:** 3

An exploration of the knowledge, dispositions, and skills required of professionals in order to respond to diverse family systems and needs. Emphasis is placed on: developing collaborative partnerships, effective communication, mobilizing community resources, ethical and research-based practices, and advocating for culturally, linguistically, developmentally, and socioeconomically diverse individuals and families.

**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Ethical Reasoning

## ECEE 2320 - Early Childhood and Elementary Education Learning Environments

**Credit Hours:** 3

This course prepares teacher candidates to design a classroom learning environment that addresses social , economic, and cultural diversity of children and their implications on planning and learning. Emphasis is placed on creating lesson plans and selection of appropriate resources and materials.

## ECEE 2340 - Creative Arts for Early Childhood Educators

**Credit Hours:** 3

This course presents the rationale and value of integrating the arts into the classroom curriculum. Students examine the nature of creativity and the elements of creative arts. This course teaches methods of creating assessment based instruction to promote artistic activities as well as adapting activities for special needs and ELL students.

## ECEE 2400 - Emergent Literacy and Language

**Credit Hours:** 3

Course examines language as the basis of all learning and prepares students to become facilitators of early and emergent language and literacy learning from infancy through kindergarten. Experiential opportunities allow students to apply this knowledge as they design language and literacy activities and assessments for children in pre-K/K settings.

## ECEE 2410 - Pre-K STEAM

**Credit Hours:** 3

The teacher candidate is introduced to how science, technology, engineering, creative arts, and mathematics (STEAM) skills develop in children between infancy and age 5 and how to support and assess this development. The candidate will research, plan, and lead small group STEAM activities with children in pre K settings. These activities will be planned according to the Project Approach, based on the interests of the young children as well as the National STEM and Creative Arts Standards, NAEYC Standards and PA Early Learning Standards. The Project Approach involves 3 phases: Discovery, Investigation, and Conclusion; candidates will gain experience in using this cross-curricular approach to contextualize STEAM concepts and to create meaningful learning experiences for their young students. Additionally, this course views children as individuals who are socially and culturally situated, and as such identity and culture will be valued and included as part of the instructional planning, activities, and assessment.

## ECEE 2420 - Culturally and Developmentally Responsive Teaching in PreK

**Credit Hours:** 3

Focuses on social studies skills and dispositions for young children. The course is based upon NAEYC and NCSS standards, including NAEYC's Advancing Equity in Early Childhood Education Position Statement, and includes some field work which positions candidates to lead young learners to take informed action to address community problems.

## ECEE 2430 - Observation & Assessment

**Credit Hours:** 3

This course identifies appropriate assessment strategies used to evaluate cognitive, physical, and psychosocial development of children, birth through age 7, and considers implications for curriculum planning. It explores the use of systematic observations, documentation and other effective assessment strategies.

## ECEE 2440 - Motor Development and Learning

**Credit Hours:** 3

This course provides the future Pre-k to Grade 4 classroom teacher with knowledge and skills in health and physical education curriculum planning, promoting child wellness, and the importance of motor skill and fitness skill development. Emphasis is placed on the role of diverse families, adaptation for special needs, and healthy adult role models.

**General Education Attribute**

- Wellness & Personal Health
- Competency-Intensive Writing

## ECEE 3500 - Curr & Inst K-4

**Credit Hours:** 3

This course is designed to provide teacher candidates with the knowledge, skills, and dispositions necessary to create developmentally appropriate instruction and assessment activities for children in K through grade 4 classrooms. Topics covered include K through grade 4 curriculum models, developmentally appropriate practices, lesson planning, writing objectives, constructivist instructional strategies and assessment of student learning. Through class discussions, practice sessions, role-playing and microteaching, the teacher candidates will learn how to plan for and utilize strategies based on research in effective teaching, Pennsylvania Department of Education Academic Standards and standards set forth by the National Association for the Education of Young Children.

## ECEE 3600 - Components of Reading and Writing Instruction

**Credit Hours:** 3

This course develops and applies students' theoretical understandings of the processes of literacy learning from grades K-4. Focuses on the instruction and assessment of: reading comprehension, vocabulary, fluency, and writing. Aligns with PDE Core Standards.

**CoRequisite:** ECEE 3610

**General Education Attribute**

- Competency-Information Literacy

## ECEE 3610 - Phonics and Structured Language Instruction

**Credit Hours:** 3

Study of effective theories and principles for teaching phonological awareness, phonics, and English language structure in grades K-4. Application of best practice, evidence-based instructional plans, methods and resources that align with PA Core Standards. Focuses on diagnostic methods for assessing reading progress.

**CoRequisite:** ECEE 3600

## ECEE 3620 - Assessment K-4

**Credit Hours:** 3

This course investigates the nature and scope of assessment practices used in classrooms with primary-age children. Guiding principles and discussions of assessment types provide a framework for the development of effective practices. Students learn to use data as an informative source in planning and teaching. Attention is given to the collection and interpretation of data for instruction, grouping and administrative purposes.

## ECEE 3630 - Leadership and Advocacy in Childhood Education

**Credit Hours:** 3

This course develops teacher leaders who advocate for all students across diverse populations in grades PreK-4. Candidates will examine current issues and trends related to children, families, schools, and communities.

## ECEE 3700 - Teaching Mathematics in Grades K-4

**Credit Hours:** 3

This course develops and applies students' knowledge and skills necessary to teach mathematics to children from grades K-4. This course emphasizes the PDE mathematics standards and NCTM domains through developmentally appropriate instructional methods using a variety of teaching tools/manipulatives.

**General Education Attribute**

- Competency-Quantitative Application

## ECEE 3710 - Teaching Science in Grades K-4

**Credit Hours:** 3

This course develops and applies students' knowledge and skills necessary to teach science to children from grades K-4. This course emphasizes the PDE science standards and Next Generation Science Standards (NGSS) through developmentally appropriate instructional methods using the scientific process and inquiry-based learning.

**General Education Attribute**

- Competency-Applied Methodologies

## ECEE 3720 - Teaching Social Studies in Grades K - 4

**Credit Hours:** 3

Develops and applies students' knowledge and skills necessary to teach social studies in grades K-4. This course emphasizes the PDE social studies and NCSS standards through developmentally appropriate instructional methods for the constructivist classroom with a focus on current trends, issues, and the status of elementary social studies.

## ECEE 3730 - Content Area Literacy

**Credit Hours:** 3

This course is designed to provide teacher candidates with practical experiences in a K-8 classroom. Pennsylvania Department of Education Field Competencies, Level 3, provide the objectives of this course. Teacher candidates are required to complete the field competencies with 30-45 hours of observation and teaching under the guidance and observation of a mentor teacher in a K-8 classroom. Teacher candidates will gain insights into the different ways in which literacy enables learning across the curriculum and will explore how to integrate literacy instruction into the content areas. Candidates will gain an understanding of language and literacy development and will examine the literacy needs and experiences of linguistically, culturally, and economically diverse students. Candidates will develop a diverse toolkit of instructional and assessment practices that can be used in a variety of classroom contexts to support literacy across the disciplines. Course content will help students in conceptualizing, designing, and implementing content specific literacy instruction. Candidates will complete a mini-action research based project in which learners in a K-8 classroom will be assessed to identify areas of need associated with a specific content area; then candidates will plan and implement developmentally appropriate lessons, using age-appropriate assessments to determine the overall impact on student learning. University classroom seminars and field classroom teaching experiences are combined to give students an opportunity to discover their aptitude and interest in working with K-8 school children across the content areas.

## ECEE 3740 - Integrated STEM

**Credit Hours:** 3

This course is designed to provide the candidate with an understanding of integrated STEM education as well as effective instructional strategies for teaching STEM in K-12 classrooms. The course provides an introduction to the fundamentals of STEM disciplines and the strategies used to implement integrative STEM education. Candidates will review basic fundamental concepts of STEM disciplines (science, mathematics, engineering, and technology), effective STEM pedagogy and teaching strategies, integrative STEM learning, and innovative problem-based instruction utilizing the engineering and design process. Candidates will participate in hands-on laboratory and research-based activities as they engage in engineering design challenges intended to provide candidates with an opportunity to work individually and in collaborative groups to utilize skills of scientific inquiry and problem-solving to design, test, analyze, and evaluate STEM-related processes and products. Candidates will utilize the design process, computational thinking, critical thinking, and problem solving to engage in design challenges and will then communicate the results of the engineering and design process through a variety of formats (i.e., lab reports, multimedia presentations, design briefs, etc.).

## ECET 1110 - Electrical Circuits I

**Credit Hours:** 4

Circuits I is an introductory course into DC and AC circuit analysis suitable for entry level engineering technology students and technology students. The course focus is developing a basic understanding of voltage, current resistance and reactance in basic circuits. Topics include resistance, voltage, current, series, parallel and series-parallel circuits. Three lecture-hours and three laboratory-hours per week.

**Prerequisite:** ENGT 1100 and MATH 1220 or MATH 1230 or MATH 1410 or MATH 2410 or MATH 2420

## ECET 2160 - Electrical Circuits II

**Credit Hours:** 4

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. Three lecture-hours and three laboratory-hours per week.

**Prerequisite:** ECET 1110
**General Education Attribute**

- Competency-Applied Methodologies

## ECET 2210 - Linear Electronics I

**Credit Hours:** 4

A study of solid state semiconductor devices including diodes and transistors, and their application in electronic circuits. Topics include diode and transistor structure and characteristics, design parameters for electronic circuit application, typical power conditioning circuits, and typical amplifier circuits. The laboratory component reinforces course content by applying scientific calculator and circuit analysis/simulation software skills to the derivation and analysis of circuit experiments. Three lecture-hours and three laboratory-hours per week.

**Prerequisite:** ECET 2160

## ECET 2215 - Introduction to Instrumentation

**Credit Hours:** 3

An introduction to the techniques of designing electronic instruments to measure physical quantities with the aid of transducers. Topics include analog and digital signal conditioning circuits, electronic filters, and various electronic sensors. Circuits will be designed and tested from mathematical models in order to transfer signals to either an analog or a digital format. Two lecture-hours and three laboratory-hours per week.

**Prerequisite:** ECET 2160

## ECET 2535 - Digital Electronics Design

**Credit Hours:** 4

This is a first course in digital electronics dealing with the theory and practice of modern electronic computer circuitry. Major units of the course include logic gates, integrated circuits, latches, counters, shift registers, arithmetic circuits and memory elements. Laboratory exercises reinforce the theoretical concepts by providing hands-on experience with digital integrated circuits, logic system simulation software, and digital troubleshooting equipment. Three lecture-hours and three laboratory-hours per week.

**Prerequisite:** MATH 1220

## ECET 2570 - Intro to Microprocessor Design

**Credit Hours:** 4

This course introduces the microprocessor from both the hardware and software viewpoints. It covers the stored program concept, addressing modes, the instruction set, bus operation and machine language implementation of software algorithms. Laboratory exercises are based on a microprocessor evaluation system and/or simulator to provide hands-on experience with course topics. Three lecture-hours and three laboratory-hours per week.

**Prerequisite:** ECET 2535

## ECET 3110 - Engineering Analysis Methods

**Credit Hours:** 3

Introduction to matrix theory, classical first and second order transient analysis, active filter design and basic Z- and Fourier-transforms.

**Prerequisite:** ECET 3265 **and** CMAC 1240 **and** ECET 3120

## ECET 3120 - Network Analysis

**Credit Hours:** 4

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. Three lecture-hours and three laboratory-hours per week.

**Prerequisite:** ECET 3265

## ECET 3265 - Linear Electronics II

**Credit Hours:** 4

This course is an introduction to the function of solid state devices. The emphasis is placed on the internal structure, function and limitations of linear devices such as diodes, transistors, power amplifiers, operational amplifiers and oscillators. Three lecture-hours and three laboratory-hours per week.

**Prerequisite:** ECET 2210

## ECET 3325 - Introduction to Electric Power

**Credit Hours:** 4

A study of three-phase circuits, transformers, DC machines, polyphase AC machines and single-phase AC machines. Three lecture-hours and three laboratory-hours per week.

**Prerequisite:** ECET 2160

## ECET 3535 - Microprocessor Interfacing

**Credit Hours:** 4

This course deals with advanced concepts in the programming and the interfacing of microprocessors/microcontrollers to the outside world as demonstrated by a variety of application examples. It covers the advanced architecture of modern processors and the many I/O peripherals now commonly found on-board the device. Detailed studies of computer I/O and interrupt techniques as applied to analog-to-digital, digital-to-analog, timers, parallel and serial interfaces are included. Laboratory activities provide the student with experience in developing the hardware and software required to incorporate microprocessors into systems that solve real-world interfacing problems. Three lecture-hours and three laboratory-hours per week.

**Prerequisite:** ECET 2570

## ECET 3550 - Technical Computing Using Java

**Credit Hours:** 3

This course enables the student to acquire a thorough understanding of the Java language and its application in solving engineering and real world problems. Both Java programs and Applets will be studied. Emphasis is placed on efficient software development using structured programming techniques. Students are required to design, write, test, and run programs using an appropriate version of Java.

**Prerequisite:** MATH 2410

## ECET 3560 - Microprocessor Engineering

**Credit Hours:** 4

This course examines the product development cycle of a typical microcontroller-based product. Methods of hardware and software development as well as their integration and debugging are studied. The student will design and implement a major term project utilizing theses concepts plus various laboratory development tools as well as produce written documentation on the project, including both requirements/specification and final reports. Also included is a survey of recent developments in microcontroller technology. Three lecture-hours and three laboratory-hours per week.

**Prerequisite:** ECET 3535
**General Education Attribute**

- Competency-Intensive Writing

## ECET 4210 - Instrumentation Design I

**Credit Hours:** 4

A computer-based graphical programming environment for instrumentation design, control and testing. Mathematical models will be developed to design applications. The course offers students concepts of current industry trends in instrumentation, testing and control. A course project is developed to implement a practical instrumentation system. Three lecture-hours and three laboratory-hours per week.

**Prerequisite:** ECET 3110 and ECET 3120

## ECET 4220 - Instrumentation Design II

**Credit Hours:** 4

A microprocessor-based instrumentation design course utilizing linear, digital and optoelectronic devices. Software solutions to input/output problems will be considered along with software solutions to nonlinear transducer data.

**Prerequisite:** ECET 4210

## ECET 4235 - Power System Analysis

**Credit Hours:** 4

A concise study of classic and modern topics related to the operation of power systems. Subjects covered in this course include analysis of steady state balanced 3-phase systems, transmission lines, power flow, system protection and controls. The laboratory component is mostly software based. Simulations of basic to advanced configurations will help the students investigate all the basic theoretical concepts.

**Prerequisite:** ECET 3325

## ECET 4326 - Power System Management

**Credit Hours:** 3

A study of various topics related to generation, transmission, distribution, and use of electric energy. The course references traditional (fossil fuels, hydro, nuclear) as well as renewable energy sources and covers subjects in power station management and electric energy market structure.

**Prerequisite:** ECET 3325

## ECET 4327 - Industrial Applications of Power Electronics

**Credit Hours:** 4

A study of AC-DC, DC-AC, DC-DC and AC-AC converters for typical residential, commercial, industrial and power utility applications, such as HVDC transmission, AC/DC motor drives, static VAR compensation and power quality control. Three lecture-hours and three laboratory-hours per week

**Prerequisite:** ECET 2210 and ECET 3325

## ECET 4410 - Automatic Control Systems

**Credit Hours:** 4

This course covers theory and practice of control systems with emphasis on classical control theory and an introduction to the fundamentals of modern control. Students will analyze, design and synthesize continuous feedback control systems based on root locus, frequency response and state space methods. Students will become familiar with the analytical techniques and will be exposed extensively to the use of computers for analysis and design of control systems. Various control strategies will be discussed. Three lecture-hours and three laboratory-hours per week

**Prerequisite:** ECET 3325

## ECET 4430 - RF Communications

**Credit Hours:** 4

Communication systems principles, including AM/FM modulation, AM/FM demodulation, transmitters, receivers,

antennas, transmission lines, digital techniques and protocols. Three lecture-hours and three laboratory-hours per week

**Prerequisite:** ECET 3110 and ECET 3120

## ECET 4460 - Digital Signal Processing

**Credit Hours:** 4

Introduction to linear systems, digital filters and the Z-Transforms, and the Fast Fourier Transform. Fundamentals of Shannon's sampling theory and the interfacing of analog signals to microprocessor based systems for digital signal processing.

**Prerequisite:** ECET 3110 and ECET 3120

## ECET 4640 - Computer Networking

**Credit Hours:** 4

This course involves the electronic hardware of networking systems such as those used to connect heterogeneous computers. Major topics include locality, topologies, media standards, Internet working devices and protocols. Hands-on application of network theory is provided via a laboratory-style term project involving a 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. Three lecture-hours and three laboratory-hours per week.

**Prerequisite:** CMSC 1240

## ECET 4900 - Senior Project Proposal

**Credit Hours:** 1

This senior course provides the student with an opportunity to integrate several concepts of different areas of the program and it allows him/her to pursue specialized interests. The student will submit a written proposal for a project. After approval of the project the student will be assigned a faculty advisor. Minimum requirements for the proposal are submission of a functional specification and time schedule for completion. Two lecture-hours and three laboratory-hours per week.

**General Education Attribute**

- Competency-Ethical Reasoning
- Competency-Information Literacy

## ECET 4910 - Senior Project

**Credit Hours:** 3

Employs the design, construction and analysis of an electronic device or instrument. Depending on the complexity of the project, total construction may not be required. With approval from the adviser, group projects may also be involved. Three hours of lecture.

**General Education Attribute**

- Competency-Intensive Writing

- Competency-Keystone Experience

## ECET 4950 - Electrical and Computer Engineering Technology Internship

**Credit Hours:** 1 TO 4

Student interns work with an industrial, corporate or governmental organization that most nearly approximates their goals for mechatronics engineering technology employment. The intent of the internship is to provide students with practical work experience solving real-world problems in a dynamic environment, building upon skills gained through the curriculum, to yield enhanced job opportunities upon graduation. Working with the Internship Center, advisor and department chairperson approval are required before course enrollment.

**Prerequisite:** Junior level standing

## ECON 1000 - Elements of Economics

**Credit Hours:** 3

This course provides an introduction to the fundamental methods and concepts of economics, including the basic elements of microeconomics and macroeconomics. The course emphasizes the application of economic analysis to relevant issues.

## ECON 1300 - Consumer Economics

**Credit Hours:** 3

This course introduces the fundamental methods and concepts of economics and applies them to issues relevant to households and consumers. Topics include budgeting, advertising, fraud, government regulation, banking and trade.

## ECON 2100 - Principles of Microeconomics

**Credit Hours:** 3

This course focuses on explaining the economic choices made by individuals, households and firms. Topics to be covered will include consumer choice, supply and demand and markets, production and costs, economic efficiency, and market structure.

**General Education Attribute**

- Discoveries-Social Sciences

## ECON 2200 - Principles of Macroeconomics

**Credit Hours:** 3

An introduction to the study of the economy as a whole, including the determination of national income, inflation and unemployment, and economic growth. Simple models to study the macroeconomy will be introduced and used to study key variables. Emphasis is placed on the roles of monetary and fiscal policy in the conduct of macroeconomic policy.

**Prerequisite:** ECON 2100
**General Education Attribute**

- Discoveries-Social Sciences

## ECON 3000 - Contemporary Economic Problems

**Credit Hours:** 3

This course studies some of the most significant contemporary economic questions facing the American society. Examples of such topics include: the role of government in the economy, inflation and deflation, federal budget deficits, poverty, environmental economic issues, and the economics of health care.

**Prerequisite:** ECON 2100 and ECON 2200

## ECON 3100 - Intermediate Microeconomics

**Credit Hours:** 3

This course develops the analytical skills required for dealing with problems of economic behavior and resource allocation. Topics include utility theory, demand and consumer behavior, the theory of cost and production, pricing in various market structures, the role of risk and uncertainty, and strategic behavior.

**Prerequisite:** ECON 2100

## ECON 3110 - Managerial Economics

**Credit Hours:** 3

This course focuses on the application of economic analysis to the formulation and solutions of business problems in the areas of decision making and planning. Topics discussed include: demand analysis, elasticity, production, competition, cost, pricing strategies, and profits.

**Prerequisite:** ECON 2100

## ECON 3200 - Intermediate Macroeconomics

**Credit Hours:** 3

This course includes an analysis of macroeconomic theory and policy with emphasis on aggregate income, employment, economic growth, and the general price level. A particular emphasis will be placed on the key features of modern macroeconomic theory and the conduct of fiscal and monetary policy.

**Prerequisite:** ECON 2200

## ECON 3250 - Money and Banking

**Credit Hours:** 3

This course provides the theoretical concepts and institutional background necessary for an understanding of the role of money in a market economy. Topics include the nature of money, financial markets, commercial banks, the Federal Reserve System, monetary theory and monetary policy.

**Prerequisite:** ECON 2200

## ECON 3310 - Health Economics

**Credit Hours:** 3

This course explores the application of economic principles and models to various topics in the areas of healthcare, insurance, health policy and individual choice in the health domain.

**Prerequisite:** ECON 2100

## ECON 3320 - Financial Economics

**Credit Hours:** 3

This course analyzes financial markets, valuation of assets, risks, and diversification. Economic tools and concepts will be developed to analyze financial assets and markets, and the varied roles of key financial market participants.

**Prerequisite:** ECON 2100 and ECON 2200

## ECON 3330 - Labor Economics

**Credit Hours:** 3

Applies theory of the market to labor. Stresses the evolution of labor law, collective bargaining, labor unions, and government policy.

**Prerequisite:** ECON 2100 and ECON 2200

## ECON 3395 - International Diplomacy: Analysis and Practicum

**Credit Hours:** 3

This course explores the role and mechanisms of diplomacy through the study of international organizations and participation in model simulations. Students examine the background, operation, and challenges of the United Nations and other organizations and prep for conferences in New York and elsewhere.

## ECON 3510 - Public Finance

**Credit Hours:** 3

This course studies the role of the federal, state and local governments in the economy. Topics include the role of government in society and markets, tax theory and policy, government expenditures, public debt management, public goods, externalities, cost-benefit analysis, income redistribution, and public choice theory.

**Prerequisite:** ECON 2100 and ECON 2200

## ECON 3520 - Urban Economics

**Credit Hours:** 3

Introduces subnational economics. Includes elementary trade theory, location theory, systems of cities, land use changes, and the employment and income generating activities of cities. Emphasizes the economics of housing, transportation, poverty, discrimination, and public sector activity.

**Prerequisite:** ECON 2100 and ECON 2200

## ECON 3600 - International Economics

**Credit Hours:** 3

Rigorous exploration of the economic basis for international trade and finance. The role and mechanism of international trade, trade barriers, exchange rates, balance of payments, international capital flows and institutions designed to facilitate international exchange are examined through the application of intermediate-level economic theory.

**Prerequisite:** ECON 2100 and ECON 2200

## ECON 3610 - Globalization and Chinaâ€™s Economic and Business Development

**Credit Hours:** 3

This course takes a critical look at globalization and its impact on China - U.S. economic and business development. Students will learn about China's economy, business models, and development under a globalization framework. The course seeks to enhance a student's ability to analyze China's globalized economy and businesses.

**Prerequisite:** ECON 2100 and ECON 2200

## ECON 3620 - Comparative Economic Systems

**Credit Hours:** 3

Analyzes alternative patterns of economic control, planning, and market structure. Compares and evaluates experiences under capitalism, socialism, and mixed economics

**Prerequisite:** ECON 2100 and ECON 2200

## ECON 3650 - International Development

**Credit Hours:** 3

Surveys development models, development policies, and problems of development in developing countries. Identifies major economic questions relevant to less-developed economies and showing how economic analysis can be used to further understanding of the obstacles to development and formulating appropriate policies.

**Prerequisite:** ECON 2100 and ECON 2200

## ECON 3900 - Independent Study Economics

**Credit Hours:** 1 TO 4

Individual readings in a specified area of economics, and/or the completion of a research project under the guidance of a faculty member.

**Prerequisite:** ECON 2100 and ECON 2200

## ECON 4010 - History of Economic Thought

**Credit Hours:** 3

Examines development of economic ideas from ancient times to the present. Emphasizes the period from Adam Smith onward. Considers the economic and political environment in which ideas emerged as well as the leading economists advancing or defending the ideas.

**Prerequisite:** ECON 2100 and ECON 2200

## ECON 4100 - Games and Behavior

**Credit Hours:** 3

Game theory studies how individuals make decisions when aware that their actions affect others and each decision maker takes this "strategic effect" into account. This course introduces game theory and its applications from a variety of disciplines. Consideration is given to both empirical and experimental tests and behavioral implications.

**Prerequisite:** ECON 2100 or ECON 1000 and MATH 1220
**General Education Attribute**

- Competency-Intensive Writing

## ECON 4520 - Forensic Economics and Data Analysis

**Credit Hours:** 3

Forensic Economics applies economic analysis to the determination of damages and/or proof of liability in litigation. Topics include the role of economists in litigation; growth rates and discounting; valuation; gross earnings measurement; application of statistical and behavioral tools to evaluate evidence of wrongdoing; and ethics.

**Prerequisite:** ACC 2000 or ECON 1000 or ECON 2100

## ECON 4600 - Global Economic Perspectives

**Credit Hours:** 3

Focuses on the global economy in an era of shifting borders, restructuring economies, and regional realignments. Emphasizes the strategic implications for businesses of globalization, analyzing policy options regarding international economic issues and on collecting and interpreting international data.

**Prerequisite:** ECON 2100 and ECON 2200
**General Education Attribute**

- Competency-Intensive Writing
- Competency-Keystone Experience

## ECON 4810 - Applied Econometrics

**Credit Hours:** 3

Explores the formulation, estimation and testing of empirical models in economics and the social sciences, focusing on the use of multiple regression analysis in the estimation and testing of causal relationships. The class involves both

lectures and hands on practice/labs. A significant part of the course is an independent research project.

**Prerequisite:** QBA 2000 or STAT 2000 or STAT 2010 or STAT 2020
**General Education Attribute**

- Competency-Intensive Writing

## ECON 4820 - Economic Forecasting

**Credit Hours:** 3

This course will introduce forecasting and time series analysis, focusing on regression-based forecasting models, autoregressive and moving average methods (Box-Jenkins ARIMA), and GARCH models. A hands-on approach to learning is utilized.

**Prerequisite:** QBA 2000 or STAT 2000 or STAT 2010 or STAT 2020

## ECON 4950 - Economics Internship

**Credit Hours:** 1 TO 12

The student is placed with a business firm, bank, government agency or nonprofit organization performing economics-related tasks. The internship experience offers a practical training ground for students that supplements academic training by permitting them to apply the theories, concepts and techniques learned through coursework.

**General Education Attribute**

- Competency-Keystone Experience

## ED 1100 - Introduction to Middle/Secondary Education

**Credit Hours:** 3

An entry-level course for prospective teachers designed to begin their professional development. Different instructional activities will allow the student to become proficient in the theories of modern secondary education instructional development, basic history and philosophy of secondary education and of pedagogy in general.

## ED 1350 - Current Topics and Issues in Education

**Credit Hours:** 3

This course introduces students to significant issues and topics within the field of education. These topics include educational legislation, school performance, teaching, funding, and trends. Additionally, students will analyze and discuss the future of education, educational policies, and classrooms.

## ED 1750 - Educational Psychology

**Credit Hours:** 3

Educational Psychology introduces, from the educational perspective, psychological components associated with teaching and learning from PK-12. These include such topics as critical constructivism, developmental psychology, social psychology, moral development, and the selection, administration and evaluation of psychological tests.

**General Education Attribute**

- Discoveries-Social Sciences

## ED 2200 - School Law and Ethics

**Credit Hours:** 3

A basic grounding in school law is fundamental to a comprehensive, well-rounded teacher education program.This course will focus on the study of legal and ethical issues as related to practical problems of teachers. This course also seeks to sharpen the pre-service teacher's analytical skills, as a problem-solving pedagogical approach is utilized.

## ED 2333 - Technology in Teaching and Learning

**Credit Hours:** 3

This course is designed to provide the learner with fundamental knowledge, skills and conceptual understanding for applying technology in any educational setting. The course focuses on current technologies and how to effectively incorporate them into the various components of instruction and training.

**General Education Attribute**

- Foundations-Tech Literacy

## ED 2500 - Multicultural Education and Intercultural Competence

**Credit Hours:** 3

This course is designed to help candidates examine how race, ethnicity, and culture influence students' experiences in school, foster an understanding and respect for persons from diverse backgrounds, building cultural competence, and implements a multicultural approach to teaching.

## ED 3100 - Strategies

**Credit Hours:** 3

This course will allow the secondary education major to explore and develop many instructional strategies and methodologies that are accepted as valid. Instructional activities will allow the student to become proficient in the theories of modern secondary education instructional development, basic history and philosophy of secondary education and of pedagogy in general. Students will participate in observation at selected field sites, grades 7 /12. Students will continue development of their professional portfolio.

## ED 3101 - Teaching of English

**Credit Hours:** 3

This course is designed to provide insight into the teaching of general English, writing, literature, public speaking, communication, media and theater in grades 7 through 12. Students become aware of and use the resources and methods of instruction for teaching English and Communications at the secondary level.

## ED 3102 - Teaching of Mathematics

**Credit Hours:** 3

This course is designed to provide insight into the teaching of general mathematics, algebra, geometry, probability, and statistics in grades 7 through 12. Students become aware of and use the resources and methods of instruction for teaching mathematics at the secondary level.

## ED 3103 - Teaching of Social Studies

**Credit Hours:** 3

This course is designed to provide insight into the teaching of general social studies, history, political science, geography, economics, anthropology, psychology, and world cultures in grades 7 through 12. Students become aware of and use the resources and methods of instruction for teaching social studies at the secondary level.

## ED 3104 - Teaching of Science

**Credit Hours:** 3

This course is designed to provide insight into the teaching of Biology, Chemistry, Earth and Space Science, and Physics in grades 7 through 12. Students become aware of and use the resources and methods of instruction for teaching science at the secondary level.

## ED 3300 - Learning Environments

**Credit Hours:** 3

This course will allow the Secondary Education teacher education candidate to explore different instructional methodologies and classroom management plans, from the physical set-up of the classroom, classroom rules to procedures for dealing with problem students in your classroom. It includes issues related to adolescent development and school safety.

## ED 3600 - Constructivism in the 21st Century

**Credit Hours:** 3

The purpose of this course is to help the teacher candidates learn how to effectively analyze, select, and integrate current educational technologies into the design, implementation and assessment of learning experiences to engage a diverse student population. The course includes collaboration with teachers in a field experience setting to develop applications for technology for learning.

## ED 3610 - Content Area Literacy

**Credit Hours:** 3

The purpose of this course is to help the prospective teachers of the secondary education academic subject areas develop an understanding and appreciation of the necessary reading skills needed by their students. Methods of establishing awareness of general reading needs as well as the special skills unique to their subject area will be stressed.

## ED 3615 - Data Driven Inquiry in STEM Education

**Credit Hours:** 3

This course provides future teachers and community educators with strategies for facilitating scientific and technological inquiry experiences in science, math, technology and engineering education. Course activities provide indepth experiences with the collection & analysis of scientific data developing it into evidence useful in decision-making.

## ED 3700 - ELL Foundations

**Credit Hours:** 3

This course examines research-based English Language Learner (ELL) teaching and learning methods in K-12 mainstream classrooms. The major theories of second language acquisition will be reviewed and their implications for the second language classroom will be discussed. The primary goals of this course are (a) to familiarize teacher candidates with major theoretical issues and research-based methods in second language learning in formal and informal situations; (b) to provide teacher candidates with opportunities to develop communication strategies that will support their students learning; (c) to assist teacher candidates in becoming skillful at making appropriate teaching decisions that will nurture language learning among culturally and linguistically diverse students, in order to promote and increase academic achievement in the classrooms.

**Prerequisite:** ED 1100 or CSD 4400 or ECEE 1003

## ED 4100 - Assessments

**Credit Hours:** 3

Part of this course is designed to provide insight into the design, implementation, and analysis of assessment instruments used in 7-12 education. The second part of this course is to allow the secondary education candidate to become aware of, and to gain experience in, the contemporary interventions that teachers use to prevent, minimize, or eliminate negative behaviors in the classroom.

## ED 4240 - Student Teaching

**Credit Hours:** 6

This capstone experience of the teacher education program engages candidates in a semester-long clinical experience in classroom(s) with increasing levels of responsibility for planning, classroom environment, instructional delivery including diverse learners, and assessment while maintaining high levels of professionalism.

## ED 4250 - Student Teaching

**Credit Hours:** 6

This capstone experience of the teacher education program engages candidates in a semester-long clinical experience in classroom(s) with increasing levels of responsibility for planning, classroom environment, instructional delivery including diverse learners, and assessment while maintaining high levels of professionalism.

## EDHH 1000 - American Sign Language and Deaf Culture I

**Credit Hours:** 3

A cultural view of deafness instead of a disabilty view is the foundation of this full immersion language course. Basic sign lexicon and syntax structure of American Sign Language (ASL) is the foundation. Each unit focuses on Deaf culture, history, values, social norms and how the language impacts the Deaf community.

**General Education Attribute**

- Competency-Intercultural Fluency

## EDHH 1200 - Introduction to Deaf Education

**Credit Hours:** 3

This course provides an overview of the many responsibilities, roles, service options and competencies needed to educate children from birth to grade 12 who have a hearing loss. Historical views, foundational concepts and instructional environments are viewed from each level of hearing loss and age/grade range. Professional organizations and journals are introduced to support best research based practices in d/Deaf education.

**Prerequisite:** Education Majors or permission of instructor

## EDHH 2000 - American Sign Language and Deaf Culture II

**Credit Hours:** 3

This course is a continuation of American Sign Language and Deaf Culture I . As such, it will enable students to increase their ASL conversational skills, providing a significantly deeper experience with d/Deaf adults and the community. Course instruction is primarily in ASL with no spoken English. Deaf Community clinic hours are required.

**Prerequisite:** EDHH 1000
**General Education Attribute**

- Competency-Intercultural Fluency

## EDHH 3000 - Language and Literacy for Deaf/Hard of Hearing

**Credit Hours:** 3

This course provides participants with language and literacy instruction and practice specifically adapted towards the needs of Deaf/Hard of hearing children. Language delays for children with hearing loss lead to extensive delays in reading and writing. Preservice teachers will design opportunities to increase overall language use regardless of modality and create direct literacy instruction aligned with language needs for children birth to grade 12 to be used in various settings. Best practices in literacy instruction and literacy pedagogy and dual language learning theories support a balanced reading and writing curriculum for children with limited auditory access. Literacy and writing curriculums as well as multi-modality strategies for children with hearing loss will also be discussed.

**Prerequisite:** EDHH 1200 and EDHH 1000 and EDHH 2000

## ENGL 1100 - Introduction to College Composition

**Credit Hours:** 3

Offers practice for students in exploring the processes of composition in various genres. Introduces composing strategies with an emphasis on developing and structuring ideas for specific audiences and purposes, recognizing and editing grammatical and mechanical errors, providing constructive peer feedback, and revising.

## ENGL 1200 - College Composition

**Credit Hours:** 3

Emphasizes the practice and process of composition with a focus on research, inquiry, and exploration of the genres of argument, analysis, and narrative. Offers the strategies, structures, and conventions for composing in a variety of modalities and provides foundational skills for evaluating, summarizing, and synthesizing academic sources.

**General Education Attribute**

- Foundations-Written Communication

## ENGL 1300 - Introduction to Literature

**Credit Hours:** 3

This course provides an overview of three major literary forms (drama, poetry, and prose fiction) with particular emphasis on their fundamental formal elements and conventions. Readings illustrate these elements and conventions, as well as afford students the opportunity to discuss, appreciate, analyze and write about literature.

## ENGL 1301 - Introduction to Fiction

**Credit Hours:** 3

The course introduces students to the study of fiction, with an emphasis on genre, literary analysis, critical thinking, and appreciation of various styles and traditions. The course also introduces a range of critical perspectives, such as those involving social, cultural, and historical contexts.

## ENGL 1302 - Introduction to Poetry

**Credit Hours:** 3

This course introduces students to the art of poetry, with an emphasis upon genre, literary analysis, and with an appreciation of the forms, rhythms, and traditions that distinguish poetry from all other forms of discourse. Examining poetry from a wide range of authors, cultures, and contexts, students will enrich their understanding of the art.

## ENGL 1303 - Introduction to Drama

**Credit Hours:** 3

Introduces students to the basic elements of drama and focuses on readings selected from works from the Greek Classical period to the Modern Age. Course also introduces students to the structures and strategies playwrights use to create different experiences for their readers.

## ENGL 1900 - Introduction to English Studies

**Credit Hours:** 3

This course provides students with an overview of English as a discipline, including the interplay between the subdisciplines. Students will become familiar with various approaches to interpreting narrative and non-narrative literary and cultural texts, and develop strategies for writing and research within and across the subdisciplines.

## ENGL 2000 - Language, Literacy, and Society

**Credit Hours:** 3

This course provides an overview of how we acquire and use language to symbolically represent fundamental dimensions of social behavior and interaction. Students will analyze language use in different contexts and how both language and literacy affect a wide range of personal, social, and cultural encounters.

**Prerequisite:** ENGL 1900
**General Education Attribute**

- Competency-Applied Methodologies

## ENGL 2200 - Reading and Writing

**Credit Hours:** 3

The focus of the course will vary in subject matter and interest. Its aim is to invite students to explore through writing the nature, characteristics, issues and concerns of a particular area of interest. Students will examine the subject in popular culture, current and world events, and in their personal lives through various genres.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 2205 - Writing in the Genres

**Credit Hours:** 3

This course focuses on the rhetorical practices, skills, and language conventions needed to effectively design and compose texts in a specific genre or related genres defined by the instructor each term. This course emphasizes a collaborative, process-based approach to writing, which requires revision and the development of a course portfolio.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 2210 - Writing in the Health and Human Services Professions

**Credit Hours:** 3

The course focuses on the conventional forms of writing within the health and human sciences professions, including reports, educational materials, and public health campaigns. Students will synthesize information to create documents, including visual or multimedia texts, that respond to the needs of specific audiences.

**Prerequisite:** ENGL 1200

## ENGL 2220 - Writing for the Community

**Credit Hours:** 3

This course engages students in collaborative work within the community to research and write documents, including

visual or multimedia texts, that meet the needs of community agencies or organizations identified by the instructor. Students create content such as interviews or spotlighted events, resource guides, etc. for print/web publication.

**Prerequisite:** ENGL 1200

## ENGL 2230 - Writing and the Natural Sciences

**Credit Hours:** 3

This course focuses on the rhetorical practices, skills, and language conventions needed to effectively communicate scientific knowledge and research and to participate in scientific conversations. Students will learn how to appropriately communicate based on their audience, purpose, and context in a variety of digital and print genres.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## ENGL 2240 - Writing and the Social Sciences

**Credit Hours:** 3

Demonstrating historical, medical, and sociological contexts, this writing-intensive course assists in the study of psychology. In addition to analyzing texts from the mental health canon, students will research brain and brain disease-related medical terminology and learn how to decipher medical terms.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## ENGL 2250 - Visual Rhetoric, Writing, and Design

**Credit Hours:** 3

Students examine the relationship between words and images and the effects they have on the interpretation of visual texts. Assignments ask students to create a visual argument by combining images, sound and text to create a variety of projects.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 2260 - Writing Argument and Persuasion

**Credit Hours:** 3

Offers advanced practice in analyzing and creating argumentative and persuasive texts, both written and visual. Students will analyze, write about, and produce written and visual arguments and persuasive texts in popular, political, legal, and academic fields. Includes readings, writing, research, and presentations.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 2270 - Digital Storytelling

**Credit Hours:** 3

Primarily a workshop course, students will analyze and discuss theoretical and practical texts (broadly conceived) and experiment with a variety of tools to create and publish multiple digital stories.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 2280 - Writing for Business

**Credit Hours:** 3

This course focuses on the rhetorical practices, skills, and language conventions needed to effectively design and compose texts in business. This includes researched-based proposals, visual texts and reports (infographics), and visual/oral presentations. This course emphasizes a collaborative and process-based approach to writing.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 2300 - Topics in Literature

**Credit Hours:** 3

This course will center on a specific topic of and the way in which literature deals with the context of its creation and/or the culture in which it is created. It might include such topics as Native American Literature or the Literature of Work.

**General Education Attribute**

- Discoveries-Art/Humanities

## ENGL 2310 - American Literature Survey I

**Credit Hours:** 3

American Literature I surveys authors and works from pre-Columbian Native America to the American Civil War, studying writers, genres, and narrative forms that have contributed to America's diverse literary and cultural history.

**General Education Attribute**

- Discoveries-Art/Humanities
- Competency-Intercultural Fluency

## ENGL 2315 - American Literature Survey II

**Credit Hours:** 3

This course studies literary developments in America from the American Civil War to the present, with emphases on major writers and their contribution to changing concepts of literary form, genre, and content.

**Prerequisite:** ENGL 1200

## ENGL 2320 - British Literature Survey I

**Credit Hours:** 3

British Literature Survey I focuses on the literature of the English-speaking peoples of the British Isles and Commonwealth from the origins of written English through the neo-classical period. Includes instruction in the major authors, genres, cultural context, and criticism of the period from 450 to 1785.

**General Education Attribute**

- Discoveries-Art/Humanities

## ENGL 2325 - British Literature Survey II

**Credit Hours:** 3

This course studies literary developments in Great Britain from 1800 to the present with emphases on major writers and their contribution to cultural contexts, and changing concepts of literary form, genre, and content.

**Prerequisite:** ENGL 1200

## ENGL 2330 - World Literature Survey I

**Credit Hours:** 3

World Literature Survey I examines classic literary texts from the beginning of literary civilizations through the 17th Century. In close readings of myths, epics, lyric poems, novels, and plays, students will traverse cultural and linguistic boundaries and explore the political, socio-cultural, and religious origins of world masterpieces.

**General Education Attribute**

- Discoveries-Art/Humanities
- Competency-Intercultural Fluency

## ENGL 2335 - World Literature Survey II

**Credit Hours:** 3

Representative literary works from various periods and cultures after the year 1600 are examined to familiarize students with a variety of literary traditions and how they probe tensions, conflicts, and connections within and across societies and cultures. Most works are read in translation.

**Prerequisite:** ENGL 1200

## ENGL 2340 - Survey of African American Literature

**Credit Hours:** 3

This course introduces students to literary texts by African Americans and their significant literary contributions to America's diverse cultural history. The course also studies the thematic and narrative discourse of African American Literature from its beginnings in the African oral tradition to the Harlem Renaissance to the present.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intercultural Fluency

## ENGL 2350 - Literature and Sexualities

**Credit Hours:** 3

Focuses on literary texts that address, reflect on, and construct a wide range of sexual identities. The course is particularly designed to introduce students to literary works from various genres, time periods, and cultures, with major emphasis on LGBT (lesbian, gay, bisexual, and transgendered) identities.

**Prerequisite:** ENGL 1200

## ENGL 2360 - Literature and the Environment

**Credit Hours:** 3

Literature and the Environment explores the vital relationship between literature and environmental values and examines how the earth's land and seascapes shape human attitudes toward non-human nature and, conversely, how human attitudes have shaped non-human nature.

**Prerequisite:** ENGL 1200

## ENGL 2370 - Literature by Women

**Credit Hours:** 3

This course examines literature written by women across cultures and time periods. A thematic exploration of literature by women allows a cross-genre exploration of texts as well. The course may focus on poetry, novels, and short stories, as well as critical articles and/or excerpts of articles/books written by contemporary feminist theorists.

## ENGL 2380 - Introduction to Shakespeare

**Credit Hours:** 3

This course provides an introduction to Shakespeare's plays and poetry through an examination of his language, the cultural contexts of his time, and contemporary and modern instances of reception and performance.

**Prerequisite:** ENGL 1200

## ENGL 2400 - Introduction to Creative Writing

**Credit Hours:** 3

This course provides an introduction to the writing of poetry, fiction, nonfiction, and drama. Students will generate and revise rough drafts in each genre; learn the formal similarities and differences among them; read and discuss exemplary poems, prose, and plays; and further develop critical thinking and writing skills.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 2500 - Introduction to Film Studies

**Credit Hours:** 3

This course offers an exploration of how movies create meaning, audiences, and how they mirror and create the cultures of which they are a part. Readings of classic and popular film texts will form the foundation of the exploration.

## ENGL 2600 - Introduction to Linguistics

**Credit Hours:** 3

This course examines the several areas of language study: history of the language, phonology and morphology, grammars (traditional and modern), and contemporary American usage, dialects, lexicography and semantics.

## ENGL 2610 - Traditional Grammar

**Credit Hours:** 3

Provides an intensive study of English grammar and problems in usage. Emphasizes differences between prescriptive and descriptive approaches to usage, and between traditional and generative approaches to grammar

## ENGL 3000 - Reading in the 21st Century

**Credit Hours:** 3

This course focuses on the skill of reading texts in the 21st century. Students will explore the diverse ways of critical reading and how these shape critical thinking, creativity, and problem-solving. Students will read both traditional and new media texts to examine how functional and critical perspectives shape generations of readers.

**Prerequisite:** ENGL 2000
**General Education Attribute**

- Competency-Information Literacy

## ENGL 3200 - Advanced Topics in Writing Studies

**Credit Hours:** 3

This course closely examines the ways in which texts serve to construct and sustain discourse communities such as academic disciplines, community organizations, civic enterprises, and others.

**Prerequisite:** ENGL 1200 and (ENGL 2200 or ENGL 2205 or ENGL 2210 or ENGL 2230 or ENGL 2240 or ENGL 2250 or ENGL 2260 or ENGL 2280)
**General Education Attribute**

- Competency-Applied Methodologies
- Competency-Intensive Writing

## ENGL 3210 - Studies in Professional Writing

**Credit Hours:** 3

Emphasizes rhetorical analysis and examination of new and emerging topics and genres confronting professional writers in today's fast-paced, digital world. Repeatable once for credit with a different topic.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 3220 - Grant and Proposal Writing

**Credit Hours:** 3

Introduces students to the fundamentals of writing grants and proposals, with a particular emphasis on the processes of research, writing, and collaboration needed to prepare a successful grant or proposal submission. Students will work with a university or community partner identified by the instructor to complete a grant application.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 3230 - Technical Writing

**Credit Hours:** 3

A study of exposition adapted to the needs of students in the sciences and engineering, using analytical written presentations, correspondence, technical reports, and scientific papers.

**Prerequisite:** ENGL 1200

## ENGL 3240 - Workplace Writing

**Credit Hours:** 3

This course provides strategies for composing professional memos, letters, emails, text messages, analyses of figures and tables, fliers, brochures, web pages, and formal reports that integrate clear document design, effective audience analysis, and a style that is tactful, diplomatic, and graceful.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 3250 - Research Writing

**Credit Hours:** 3

For majors in all disciplines. Students choose and research a topic of interest within their discipline and learn how to conduct research, write a review of literature, create and analyze questionnaires, interpret data, and present findings.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## ENGL 3300 - Advanced Studies in Literature, Culture, and Context

**Credit Hours:** 3

This course offers a focused path into the literature of a specific culture. It will focus on the artistic productions of writers in a variety of genres and forms that will help students understand the aesthetic and cultural issues of this time and place..

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 3301 - Literature and Medicine

**Credit Hours:** 3

Explores the broad range of literature that expresses the human experiences of illness, wellness, healing, and dying from the perspectives of patients, caregivers, and health care practitioners, emphasizing historical and social contexts and the diversity of these experiences, with consideration of scientific and technological advances over time.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Intensive Writing

## ENGL 3302 - Literature and Aging

**Credit Hours:** 3

Explores the broad range of literature that expresses the human experiences of aging and depicts the aging and aged, with a focus on aging in relationship to identity, love, intimacy, family, and community and on the concerns of independence/dependence, loneliness/alienation, friendship, ageism, death, and bereavement.

**Prerequisite:** ENGL 1200

## ENGL 3303 - Literature and Disabilities

**Credit Hours:** 3

Explores the broad range of literature that expresses the human experiences of disability and ability. The course, informed by disability studies, will emphasize social and historical contexts and represent the diversity of these experiences, especially in terms of race/ethnicity, class, age, gender expression, and sexual expression.

**Prerequisite:** ENGL 1200

## ENGL 3310 - Advanced Studies in Literature, Diversity, Equity, and Inclusion

**Credit Hours:** 3

This course offers a path into the issues of literature and diverse cultures. Students will read and analyze texts that demonstrate issues regarding diversity, equity, and inclusion. Students will develop an understanding of how the literature plays a role in the comprehension and critique of these issues.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Intensive Writing

## ENGL 3320 - Advanced Studies in Literary Forms and Genres

**Credit Hours:** 3

This course offers a focused path into a specific topic in Literary Forms and Genres. Students will read and analyze specific texts that demonstrate the history and aesthetic of the selected literary form. Students will develop an understanding of how the literary form developed and how it adapted to specific cultures and eras.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 3321 - Literature of Young Adults

**Credit Hours:** 3

Literature for Young Adults is a reading intensive course, intended for people who plan to teach in secondary English settings, and for those discerning readers who are interested in young adult literature as a significant genre worthy of serious study.

**Prerequisite:** ENGL 1200

## ENGL 3380 - Topics in Shakespeare

**Credit Hours:** 3

This course provides an in depth study of one or more aspects of Shakespeare's plays and / or poetry. Topics may include, but are not limited to, specific theoretical approaches, performance and / or film studies, genre, or an intensive study of a selection of plays / poems.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 3400 - Studies in Poetry Writing

**Credit Hours:** 3

Students enrolled in this course compile a portfolio of original poetry; analyze the work of contemporary and canonical practitioners of the form; reacquaint themselves with the power of oral recitation; undertake a practical study of poetic form and rhetoric; and critique the work-in-progress of their peers.

**Prerequisite:** ENGL 2400
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 3410 - Studies in Fiction Writing

**Credit Hours:** 3

Students in this course compose original fiction, analyze the work of contemporary and canonical practitioners of the form, and critique the work-in progress of their colleagues peers.

**Prerequisite:** ENGL 2400
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 3420 - Studies in Nonfiction Writing

**Credit Hours:** 3

This course will acquaint students with history of the nonfiction genre and the work of contemporary nonfiction writers and will require students to draft, revise, and edit several nonfiction prose pieces.

**Prerequisite:** ENGL 2400
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 3430 - Studies in Screenwriting

**Credit Hours:** 3

This is a workshop-based practicum in screenwriting. In this course, students examine the format, genres, and traditions of screenwriting; discover how screenplays come to life on the screen; create their own treatments and scripts; offer written critiques of peers' screenplays, and learn how to market their completed work.

**Prerequisite:** ENGL 2400
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 3440 - Studies in Drama Writing

**Credit Hours:** 3

Students enrolled in this course will study the major components of dramatic writing for theatre, including action, character, and dialogue; will read and analyze the work of contemporary and canonical practitioners; and will critique the in-progress work of their peers .

**Prerequisite:** ENGL 2400
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 3450 - Studies in Graphic Novel Writing

**Credit Hours:** 3

Students in this course will develop a broad understanding of the history and conventions of the graphic novel; apply to their work in this genre techniques of character development, plot structure, point of view, and voice common to all storytelling genres; and script several graphic narratives, each at least standard comic-book length.

**Prerequisite:** ENGL 2400
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 3600 - Topics in Linguistics

**Credit Hours:** 3

Focuses on a contemporary topic in linguistics such as historical linguistics, comparative linguistics, socio linguistics, second language acquisition, semantics, dialectology, endangered languages, linguistic anthropology, etc.

**Prerequisite:** ENGL 1200 and (ENGL 2600 or ENGL 2610)

## ENGL 3610 - History of the English Language

**Credit Hours:** 3

This course studies the English language from Anglo-Saxon times through early modern English, with emphasis on the diachronic development of grammatical and lexical patterns. Students will examine the historical effects of migration, invasion, language contact, and technology that influenced specific changes in English.

**Prerequisite:** ENGL 1200

## ENGL 3700 - Applied Literacy Studies

**Credit Hours:** 3

Introduces students to the theories and practices of a variety of literacy activities, primarily focusing on reading and writing practices, but extending to the theories of literate practices across disciplines and modes. Applies these theories to service-learning projects that engage students with learners of all ages.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 3900 - Independent Study

**Credit Hours:** 1 TO 6

Permits students to explore an area of special interest in the English language or its literature. Students must develop a plan of study, secure the approval of a member of the English faculty willing to supervise the project, and submit the plan to the department chair. Maximum credits--six.

**Prerequisite:** Junior or senior standing.

## ENGL 4000 - Publishing Workshop

**Credit Hours:** 3

This keystone experience for the English BA includes publication of a journal of literary and/or scholarly work. The course builds on the skills and knowledge acquired in the program's concentrations and in English Studies, generally.

**Prerequisite:** ENGL 3000
**General Education Attribute**

- Competency-Keystone Experience

## ENGL 4200 - Writing, Editing & Style

**Credit Hours:** 3

Students will become adept at revising and editing the writing of others. Students will develop proficiency in addressing copy editing, style, tone, purpose and audience. In addition, students will explore the relationship between writers and editors and the process of drafting and revision.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 4300 - Advanced Studies in Topics and Authors

**Credit Hours:** 3

This course presents no more than three authors from the literary canon or a single topic that plays a significant role in the creation of literature across eras and cultures. The subject matter will revolve depending on the interest and work of the instructor. It will also move the students toward professional writing in the field of literature.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intensive Writing
- Competency-Keystone Experience

## ENGL 4310 - Literary Theory: Criticism

**Credit Hours:** 3

An introduction to the theories comprising major schools in literary criticism, this course provides practice in applying these theories to literary analyses.

## ENGL 4400 - Studies in Advanced Creative Writing

**Credit Hours:** 3

Studies in Advanced Creative Writing is a workshop-based practicum for experienced creative writing students. Students will write an extensive creative project in the genre(s) of their choice and provide written critiques of workshop participants. A public reading of student literature provides students practice in presenting their work.

**Prerequisite:** ENGL 3400 or ENGL 3410 or ENGL 3420 or ENGL 3440 or ENGL 3450
**General Education Attribute**

- Competency-Intensive Writing
- Competency-Keystone Experience

## ENGL 4700 - Composition Processes and Practices

**Credit Hours:** 3

Provides a systematic study of theory and practice in the teaching of composition, conducted through workshop methods. Requires extensive writing and a major written project.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intensive Writing

## ENGL 4950 - English Internship

**Credit Hours:** 3 TO 15

B.A. English majors gain on-site experience in the forms of writing done in professional and business settings.

**Prerequisite:** Junior Standing and permission of Department Chair.

## ENGT 1100 - Introduction to Engineering Technology

**Credit Hours:** 3

This course introduces engineering technology fields such as computer, electrical, industrial, mechanical, mechatronics and robotics and their relation in sharing a common set of foundation concepts and skills. Through hands-on projects, student will be introduced to problem-solving using technology and modern software tools used in engineering. Two lecture-hours and three laboratory-hours per week.

**General Education Attribute**

- Foundations-Tech Literacy

## ENP 3020 - Entrepreneurship II: Small Business Management

**Credit Hours:** 3

This course focuses on the characteristics of an entrepreneur and framework to develop and lead a successful entrepreneurial business. The impact of emotional intelligence in the workplace and sources of entrepreneurial finance are discussed. Students will learn how to develop and manage the human capital in the workplace.

## ENP 4200 - Innovation Management

**Credit Hours:** 3

In this course, students learn how to identify strategic opportunities in which new innovations in technologies and business practices can be successfully implemented and how to do so. We focus on the practices and procedures by which both managers and entrepreneurs can manage innovation effectively. Through an in-depth grounding in the innovation and strategy literature, students learn the specific steps and processes needed to accomplish this goal. Through case study analysis of both successful and unsuccessful innovation management in a variety of industries, students learn the critical skills needed to profitably manage innovation. These are valuable skills which students can apply in their own current or future professional or career endeavors.

## EVPM 2350 - Special Event Management in Recreation Settings

**Credit Hours:** 3

This course provides a philosophical and theoretical understanding of the impact that events and festivals have had on society. This course equips students to pursue careers in the field of festivals and events through the investigation of various aspects of planning, promoting, financing, and managing special events in recreation settings.

## EVPM 3300 - Meetings, Events, and Convention Operations

**Credit Hours:** 3

This course will introduce the principles and practices of event planning and management. Students will apply core business concepts t event planning, production, and evaluation. The content will assume a broad approach covering a range of event types, scales, and scopes with a focus on the commercial events sector.

## EVPM 4120 - Recreation Program Planning and Evaluation

**Credit Hours:** 3

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.

**Prerequisite:** RECR 1650

## EVPM 4950 - Internship for the Department of Management and Marketing Programs

**Credit Hours:** 1 TO 12

Students are placed with an organization for a practical training experience to supplement academic learning. Through coursework, students apply the theories, concepts, and techniques learned for further career readiness and success.

**General Education Attribute**

- Competency-Keystone Experience

## EXSC 1100 - Introduction to Fitness

**Credit Hours:** 3

This course is an introductory overview of fitness and the fitness industry. Students will be exposed to current practices within the fitness industry. Students will also gain an understanding of wellness and the wellness lifestyle. This course serves as a prerequisite for all courses within the curriculum.

## EXSC 1125 - Fundamentals of Speed Training

**Credit Hours:** 3

This course is designed to provide students content related to the ever-growing specialization in speed training. Students will be exposed to content from the National Association of Speed and Explosion (NASE), and at the close of the course will be prepared to sit for their certification to become a Speed and Explosion Specialist. All aspects of speed training will be explored, including mechanics, training, and program design. The course will provide an entry-level understanding of biomechanics and exercise physiology as they pertain to improving athletic performance. Additionally, practical applications will be presented pertaining to proper warm up procedures, drills and exercises and sample programs that can be immediately applied upon completion of the course.

## EXSC 1281 - Adapted Phy Ed

**Credit Hours:** 1

Modified or corrective physical education course for those who by reason of illness or disability are unable to participate in the more vigorous forms of physical education activities. On demand.

## EXSC 1285 - Phys Fit And Cond

**Credit Hours:** 1

Enables students to develop a fitness and conditioning program to fit their individual needs through knowledge gained in areas such as nutrition, use of conditioning equipment, weight control, and fitness tests.

## EXSC 1286 - Phys Fit Thru Stren Trng

**Credit Hours:** 1

Covers all basic weight lifting techniques and modern principles for developing and improving an aerobic fitness for both male and female students.

## EXSC 1310 - Applied Human Anatomy and Physiology for Exercise and Wellness I

**Credit Hours:** 3

The first of a two-course sequence involving the study of the structure and function of the human body. This course surveys the integumentary, endocrine, cardiovascular, lymphatic, immune, respiratory, digestive, reproductive, and urinary systems. Emphasis will be placed on the effect of exercise and fitness on each system and human wellness.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## EXSC 1315 - Applied Human Anatomy and Physiology for Exercise and Wellness II

**Credit Hours:** 3

The second of a two-course sequence involving the study of normal structure and function of the human body. This course surveys the skeletal, muscular, and nervous systems. Particular attention will be focused on human movement and the integration of these systems into exercise and wellness activities.

**Prerequisite:** EXSC 1310 or HLSC 1100
**General Education Attribute**

- Discoveries-Natural Science & Technology

## EXSC 1316 - Lifeguarding

**Credit Hours:** 3

This course meets the standards of the American Red Cross for life guarding. It has the three distinct components required for ARC lifeguards: first aid, CPR, and responding to water emergencies. Successful completion of each component can result in certification by the American Red Cross.

**Prerequisite:** Swimming skills pre-test by instructor.

## EXSC 1332 - Health & Fitness Promotion in the Workplace

**Credit Hours:** 3

This course provides the foundation necessary to manage, plan, implement, and evaluate health, wellness, and fitness promotion programs in a variety of business and industrial work places. Specific areas of concentration include rationale for and benefits of worksite health promotion programs, conducting needs assessments, writing program goals and objectives, facilitating employees' health behavior change, cultivating a healthy work environment, financial considerations in program planning, promoting/marketing programs, and evaluating programs.

## EXSC 1840 - Technology Integration in Health and Fitness

**Credit Hours:** 3

This course provides students with a practical understanding of essential technologies enhancing productivity in personal and professional settings. Special emphasis will be placed on utilizing technology for measuring human movement, assessing fitness, managing data, and communicating professionally.

**General Education Attribute**

- Foundations-Tech Literacy

## EXSC 2150 - Current Topics and Strategies for Youth Fitness

**Credit Hours:** 3

This course will focus on developing the skills that will benefit individuals who are ages 6-18 by providing knowledge and skills necessary to promote and maintain fitness. Students will be exposed to topics that impact this population, including skill development, long-term impact of the sedentary lifestyle and the development of a healthy lifestyle. Special emphasis will be placed on specific training regimens, current fitness trends for todays youth, and program development.

## EXSC 2253 - Nutrition for Healthy Living

**Credit Hours:** 3

Teaches about the different food groups and their roles in the human body, the type of chemical reactions during metabolism, the way the body makes and stores energy, and eating habits role in weight control.

## EXSC 2260 - Sports Nutrition

**Credit Hours:** 3

Introduces students to the basic elements of sports nutrition. This course presents the scientific basis of roles played by carbohydrates, fat, protein, water, and key vitamins and minerals as they relate to physical exercise. The course will present information on diets during training, timing and composition of pre- and post-competition meals.

**General Education Attribute**

- Wellness & Personal Health

## EXSC 2272 - Acute Care of Athletic Injuries

**Credit Hours:** 3

The course focuses on the knowledge and skills necessary for the first person(s) on the scene of an emergency. Whether medical or trauma in nature, upon successful completion of this course, students will have the knowledge and skills to adequately asses and care for a wide variety of illnesses and injuries until advanced level responders arrive. Prerequisite: Admission to professional phase of ATE Program. Offered fall, annually.

## EXSC 2286 - Cardiovascular and Resistance Training Techniques

**Credit Hours:** 3

Students will explore the various methods of cardiovascular and resistance training. Appropriate training progression and safety will be emphasized. Topics include training for muscular strength, muscular endurance, and power. Students will learn how to train both the aerobic and anaerobic athlete.

## EXSC 2322 - Principles of Fitness Instruction

**Credit Hours:** 3

This course provides knowledge and skills involved in fitness instruction. Students are introduced to a variety of concepts related to resistance training instruction, aerobic exercise instruction, flexibility training, and related fitness activities. Students will be introduced to requisite principles and skills leading to fitness instructor certification.

## EXSC 2323 - Introduction to Strength and Conditioning

**Credit Hours:** 3

This course provides basic knowledge in the area of strength and conditioning, especially as it relates to athletic populations. Students are introduced to a variety of concepts related to strength and conditioning programs for a variety of athletes at different time points in regard to the competitive season.

## EXSC 2341 - Stress Management

**Credit Hours:** 3

This course assists students in acquiring a background of scientific knowledge related to stress and stress management. It emphasizes topics commonly addressed in school health settings and in community, corporate, and/or medical settings in anticipation of a health promotion career. Specific areas of concentration include stress psychophysiology, stress and illness/disease, common sources of stress, stress intervention methods, stress management techniques, stress through the life cycle, and stress issues specific to college students. Students will gain stress management knowledge and skills to utilize in their careers as health professionals, as well as in their own lives.

## EXSC 2349 - Weight Management

**Credit Hours:** 3

This course assists students in acquiring a background of scientific knowledge related to weight and weight management. It emphasizes topics commonly addressed in a variety of professional settings and in community health, corporate health, and/or medical settings. Specific areas of concentration include nutrition, exercise, weight-related illness, dieting, stress, health behavior change, and healthy weight management practices. Students will gain weight management knowledge and skills to utilize in their careers as health and wellness professionals, as well as in their own lives.

## EXSC 2365 - Health Emergencies

**Credit Hours:** 3

This course emphasizes decision making in first aid care and the provision of emergency assistance. Satisfactory completion of this course may lead to certification in Red Cross First Aid and CPR.

## EXSC 3100 - Business Aspects of Fitness

**Credit Hours:** 3

A comprehensive discussion of the pragmatic approach to conducting business in the fitness industry. The course focuses on key elements within the business structure, including marketing, facility management, accounting, budgeting, change management and the creation of additional profit centers. Additionally, students will identify key partners in running a successful business.

**Prerequisite:** EXSC 1100

## EXSC 3105 - Motivation in Wellness & Fitness

**Credit Hours:** 3

The art of motivating people to begin and/or maintain physical activity and a healthy lifestyle is a challenging style that fitness professionals must develop. This course is designed to allow students to implement strategies to motivate clients to begin and/or maintain wellness and fitness lifestyles. Motivational concepts like creating habits, setting goals, creating self confidence through positive self talk and attitude, and creating an encouraging fitness environment are all discussed.

## EXSC 3125 - Integrated Personal Fitness Training

**Credit Hours:** 3

A comprehensive view of personal fitness training with a focus on assessment and developing customized fitness programs. The course will orient the student to the basics of the revolutionary exercise programming strategies of the Optimum Performance Training model.

## EXSC 3135 - Integrated Personal Fitness Program Design

**Credit Hours:** 3

This course will introduce the revolutionary exercise programming strategies of the Optimum Performance Training model specifically for the fitness and wellness professional. The student will receive a detailed insight into designing safe and effective exercise programs for any personal training client. This course is linked to EXSC 3125.

## EXSC 3150 - Fitness for Special Populations

**Credit Hours:** 3

An in-depth analysis of the fitness needs of individuals from special populations. Particular attention will be placed on legislative initiatives and their effect on fitness professionals and the individuals with special needs whom they serve.

## EXSC 3180 - Wellness and Fitness for the Aging Population

**Credit Hours:** 3

This course will focus on developing the skills that will assist individuals who are aging by providing knowledge and skills necessary to promote and maintain fitness. Students will be exposed to special topics impacting this population. Special emphasis will be placed on adapting activities and strategies for leading groups.

## EXSC 3201 - Emergency Medical Responder/Clinical

**Credit Hours:** 6

Within the Bachelor of Science Integrative Studies Degree with a concentration in Health Promotion and Wellness, the Emergency Medical Responder/Clinical course will facilitate transference of a block of 6 credits for completion of the coursework obtained for the successful completion of a state-approved Emergency Medical Responder (EMR) course that meets or exceeds the National Emergency Medical Services Education Standards for the Emergency Medical Responder.

## EXSC 3214 - C P R

**Credit Hours:** 1

Required for the Athletic Coaching Program. Follows the recommendations and guidelines of the American Red Cross. Students earn an American Red Cross CPR Certificate upon successful completion of the course.

## EXSC 3217 - First Aid and Safety

**Credit Hours:** 2

Explores responsibilities and duties of the teacher in the development and teaching of programs in first aid and safety that are related to the student's school and community. Includes the American Red Cross Standard First Aid Course.

## EXSC 3220 - Health Promotion

**Credit Hours:** 3

This course provides the foundation necessary to manage, plan, implement, and evaluate health, wellness, and fitness promotion programs in a variety of settings. Additional areas of concentration include conducting needs assessments, writing program goals and objectives, facilitating health behavior change, financial considerations in program planning, promoting/marketing programs, and evaluating programs.

## EXSC 3223 - Tch Hlth & Wellness Elem Sch

**Credit Hours:** 3

Required of all students majoring in elementary education. This class will focus on strategies for promoting the health of children both in and outside the educational setting. Students will learn the importance of both promoting a healthy lifestyle within the young and the importance of advocating for a healthy environment in which all children and adults may flourish. Students will plan learning activities that will enhance the health knowledge, skills, attitudes and experience of young children. Included are labs and field experiences in an elementary school setting. Each semester.

## EXSC 3232 - Nutrition and Fitness for Women

**Credit Hours:** 3

This course provides students with foundational knowledge about the unique female energy, nutrition and fitness issues compared to their male counterparts. The student will become familiar with the most common nutrition issues including the required energy to meet the demands of sport, activities of daily living, and reproduction while choosing the appropriate foods to support physical activity, building and repair of bone and muscle and overall health. Students will create meal plans, reflect on the influence of various forms of media on female body composition and nutrition choices and formulate meal plans that foster a healthy female gut microbiome. Offered spring, annually.

## EXSC 3233 - Fitness for Wellness

**Credit Hours:** 3

Provides students with knowledge, skills, and strategies in stress management and health-related fitness. Stresses skills in psychophysiological regulation, exercise, and nutrition design. Emphasizes adherence issues of recognition, identification, and remediation. Offered: annually, Fall.

## EXSC 3234 - Food, Fitness, Weight Management

**Credit Hours:** 3

Provides students with knowledge, skills, and strategies in diet management, both qualitatively and quantitatively. Emphasizes skills in personal dietary design and assessment. Also covers dietary needs and problems of special populations. Stresses skills in psycho-physiological regulation, exercise, and nutrition design.

## EXSC 3240 - Nutrition Education

**Credit Hours:** 3

An overview of nutrition education that explores the settings in which nutrition education is carried out, introduces nutrition students to learning theory, and reviews techniques and resources for teaching nutrition. Students learn to assess the needs of different learner groups and select and evaluate appropriate nutrition education materials.

## EXSC 3286 - Principles of Exercise Training

**Credit Hours:** 3

Physiological basis of long-term exercise training with special consideration of the body's morphologic and physiologic adaptation to specific forms of training. Various training and conditioning methods are examined.

## EXSC 3314 - Kinesiology

**Credit Hours:** 3

The purpose of this course is to study human movement and the physical and physiological principles upon which it depends. It analyzes human motion as based on anatomic, physiologic, and mechanical principles. This course includes laboratory experiences in selected topics.

**Prerequisite:** EXSC 1310 or HLSC 1200
**General Education Attribute**

- Competency-Quantitative Application
- Competency-Intensive Writing

## EXSC 3333 - Personal Training

**Credit Hours:** 3

In this course, students will put into practice principles of fitness assessment and exercise prescription with one or more adult clients. Students will collect health history information, conduct fitness and knowledge assessments, prescribe individualized exercise plans, supervise exercise sessions, and conduct follow-up fitness assessments. Students will adhere to national standards and guidelines for all testing procedures and exercise recommendations.

## EXSC 3350 - Exercise Physiology

**Credit Hours:** 3

The course will explore the physiological responses and phenomena which are elicited by exercise. Opportunity for use of scientific instrumentation and practical application of exercise physiology principles to teaching, training and coaching situations will be provided through laboratory experiences.

**Prerequisite:** EXSC 1315 or HLSC 1200
**General Education Attribute**

- Competency-Applied Methodologies

## EXSC 3355 - Community Health Education

**Credit Hours:** 3

This course provides students with an overview of community health education principles and practices. Areas of focus include the framework for corm health, an assessment of current and projected leading causes of death, an analysis of health status of under served and special populations, community health priorities, and environmental health issues.

## EXSC 3360 - Adpt Physical Education

**Credit Hours:** 3

This course provides the knowledge and skills necessary to teach students with disabilities physical education in an inclusive environment. Assessment, planning, instructional techniques and specific sport adaptations for acquisition of psychomotor skills are emphasized. Field experiences working directly with special populations in physical education will be required.

## EXSC 3364 - Health Method

**Credit Hours:** 3

This course provides curriculum plans and strategies for effective health instruction. It presents and models principles of interactive instruction and classroom management through a variety of teaching experiences.

## EXSC 3365 - Exercise Testing and Prescription

**Credit Hours:** 3

This course examines graded exercise testing for a variety of populations using laboratory and field tests. It also addresses the prescription of individual exercise programs based on appropriate screening and test results. The importance of safe testing and prescribing exercise to the general population, as well as special populations, will be emphasized.

**Prerequisite:** EXSC 2322 or HLPE 2220 or EXSC 3350 or HLPE 3500

## EXSC 4101 - Leadership Concepts and Actions in Wellness and Fitness

**Credit Hours:** 3

Leadership is always an action, and sometimes a position. This course will guide students to learn about leadership styles, concepts and actions. Building upon the leadership concepts presented, students will be challenged to identify and further develop personal leadership traits, philosophy, vision and skills. Students will be asked to reflect on different leadership scenarios including ethical, conflict resolution, and team building situations found within the fitness and wellness industry.

## EXSC 4105 - Wellness Seminar I

**Credit Hours:** 3

This course examines current trends in wellness and prevention across the spectrum and throughout the lifespan. Traditional and nontraditional approaches are considered.

## EXSC 4110 - Wellness and Human Performance Capstone

**Credit Hours:** 3

This course is designed as a capstone for students in the Wellness and Human Performance concentration. A major focus of the course will be the continued adoption and adaptation of the wellness lifestyle. Students will be required to complete a community/service learning project as a culminating activity in the course/program.

**Prerequisite:** EXSC 3100
**General Education Attribute**

- Competency-Keystone Experience

## EXSC 4120 - Trends and Issues in Fitness

**Credit Hours:** 3

An analysis of professional fitness trends as well as preventative care health issues from historical, contemporary and futuristic viewpoints with implications for professional fitness practice in the health and wellness delivery system.

## EXSC 4125 - Evaluating Research in Fitness and Wellness

**Credit Hours:** 3

This course is designed to teach students to become knowledgeable consumers of research in order to keep current as a professional in the fitness and wellness industry. Emphasis is placed on developing library research skills and critically analyzing research. Students construct an annotated bibliography as a culminating activity in the course.

**Prerequisite:** EXSC 3100
**General Education Attribute**

- Competency-Intensive Writing

## EXSC 4130 - Applications in Fitness and Wellness Research

**Credit Hours:** 3

The student will blend the compiled information from their coursework and apply it to complete the objectives as noted below. Continued emphasis is placed on developing library research skills, critically analyzing research, and becoming a knowledgeable consumer of research to stay current.

**Prerequisite:** EXSC 4125
**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## EXSC 4200 - Special Topics

**Credit Hours:** 3

Formal course offered each academic year to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

## EXSC 4202 - Nutrition and Fitness Seminar 2

**Credit Hours:** 3

Students will learn how to prepare for interviews and write resumes. The various opportunities within the profession and related fields will be reviewed. Additional requirements for jobs or graduate school applications will be discussed.

## EXSC 4206 - Athletic Injury: Prevention, Recogntion, Evaluation

**Credit Hours:** 3

Presents the latest information on prevention, recognition, and evaluation of athletic injuries. Students learn to coordinate appropriate emergency care as well as establish a professional working relationship with the qualified medical personnel who assist an injured athlete's recovery. Students earn an American Red Cross AED/CPR certification upon successful completion of the course.

## EXSC 4207 - Physical Foundations of Coaching

**Credit Hours:** 3

Study of the basic scientific principles of physiology and how they can be applied to conditioning programs for the athlete. Covers all phases of physical training, along with evaluation of modern training devices. Spring, annually.

## EXSC 4208 - Principles and Problems of Athletic Coaching

**Credit Hours:** 3

A study of modern techniques and practices used in the organizational procedure of athletic programs. Covers major problem areas such as practice and game organization, purchase and care of equipment, budget and finances, public relations, legal liability, drug abuse, and sports psychology. Analyzes modern trends and issues in athletics as well as various philosophical views of athletics as a part of the educational curriculum. Fall, annually.

## EXSC 4210 - Nutrition II

**Credit Hours:** 3

A study of vitamin and mineral requirements; the utilization of nutrients in the body; and the application of nutritional principles.

## EXSC 4225 - Nutrition Assessment and Counseling

**Credit Hours:** 3

Students will learn the current methods used to perform nutrition screenings and assessments. Counseling techniques, when and how to refer clientele to a specialist and other components of medical nutrition therapy will also be emphasized.

## EXSC 4226 - Life Cycle and Community Nutrition and Fitness

**Credit Hours:** 3

Special problems in nutrition, including needs during the different stages of life, current research, international

nutrition, public health aspects, laws, dissemination of information, and nutrition quackery. Also, special issues related to fitness, including needs during the different stages of life. Current research will be discussed.

## EXSC 4227 - Medical Nutrition Therapy

**Credit Hours:** 3

This course will introduce students to the nutrition and dietary principles for pathological conditions.

## EXSC 4228 - Coaching Techniques

**Credit Hours:** 3

The course is designed for the potential athletic coach. The physical growth and development characteristics of the athlete will be studied, as well as those factors important to athletic productivity. These include philosophy, eligibility, conditioning, psychology and motivation, skill development, practice and game organization, and responsible team membership.

**Prerequisite:** Two (2) seasons of high school athletic team membership, or; one (1) season of intercollegiate athletic team membership, or; certification as a high school official, or; permission of the instructor.

## EXSC 4229 - Behavioral & Educational Strategies for Nutrition & Fitness

**Credit Hours:** 3

This course will cover the socioeconomic, cultural, and psychological factors on food and fitness choices. Issues such as timing and types of questions to ask, how to provide effective feedback, and how to facilitate robust action planning will be discussed.

## EXSC 4231 - Fitness Assessment and Prescription

**Credit Hours:** 3

Application of scientific principles of exercise physiology to the measurement and evaluation of healthy individuals. Techniques of exercise testing commonly used in corporate and adult fitness settings. Training methods for improvement in exercise capacity and good health. Designing exercise programs for individuals and groups.

## EXSC 4300 - Current Issues in Health

**Credit Hours:** 3

This course provides a foundation for the planning,development, and evaluation of health programs. Italso examines professional development, grantsman-ship, and computer use within various health education settings.

## EXSC 4305 - Health & Physical Education Field Experience

**Credit Hours:** 3

This K-12 field experience includes teaching/learning experiences in both health and physical education academic areas under the immediate supervision and direction of public school cooperating teachers. It considers all aspects of school organization and administration with focus primarily on classroom planning toward effective teaching/learning.

## EXSC 4306 - Worksite Field Experience

**Credit Hours:** 3

This course provides students with essential links between classroom information and pre-professional experiences in the areas of health promotion, sport and recreation administration, and human performance. Students will be introduced to organizational missions, public relations, program planning and implementation, event management, fitness assessment and instruction, individual client work, and other experiences related to these professions.

## EXSC 4309 - Kinesiological Foundations Coach

**Credit Hours:** 3

Helps coaches increase their understanding of basic scientific information concerning athletic movement by utilizing the conceptual approach. Examins three main areas of study: applied anatomy, the production of motion, and application. Applies scientific principles to athletic skills to aid in the coaching and teaching of skills. Spring, annually.

## EXSC 4310 - Motor Learning & Development

**Credit Hours:** 3

Provides understanding of motor development and motor learning and how motor activities enhance the total development of young children. Emphasizes the design and implementation of open-ended, developmentally appropriate movement activities to stimulate problem solving and to be the cornerstone of an integrated curriculum. Additional focus is on the assessment of motor development and motor learning environments. Field experience provides an opportunity to apply this knowledge to children from infancy through kindergarten.

## EXSC 4370 - Research in Human Performance

**Credit Hours:** 3

This course provides a foundation to the scientific method, research methods, and data collection and analysis in Human Performance. Students will be introduced to the research process including: review of the literature, hypothesis testing, conducting a pilot study, and writing a research abstract.

**Prerequisite:** STAT 2020

## EXSC 4490 - Internship in Exercise Science

**Credit Hours:** 3

In-depth, structured, practical experience in a formalized program dealing with fitness and health enhancement of individuals. Experiences in existing clinical or corporate programs are intergrated with academic preparation through regular seminar meetings on campus. The minimal on-site hourly requirement is 90 hours but varies according to the nature of the site's program.

## EXSC 4500 - Exercise Physiology II

**Credit Hours:** 3

This course provides advanced knowledge in the area of exercise physiology and its applications to fitness testing,

exercise, and human performance. In addition to building advanced understanding of theory of exercise, emphasis is placed on development of proficiency in fitness testing and exercise prescription.

## EXSC 4650 - Advanced Exercise Physiology

**Credit Hours:** 3

This course provides advanced knowledge in the area of exercise physiology and its applications to fitness testing, exercise, and human performance. In addition to building advanced understanding of theory of exercise, emphasis is placed on development of proficiency in fitness testing and exercise prescription.

## EXSC 4951 - Exercise Science Internship

**Credit Hours:** 9

This course is designed as a culminating experience for students desiring a clinical internship. Students will be assigned to an internship site based on their individual needs and preferences. Students will work with professionals in various fitness and wellness arena facilities as well as selected non-traditional sites.

## EXSC 4952 - Internship in Nutrition and Fitness

**Credit Hours:** 3

In-depth, structured, practical experience in a formalized program dealing with fitness and health enhancement of individuals. Experiences in existing clinical or corporate programs are integrated with academic preparation through regular seminar meetings on campus.

**General Education Attribute**

- Competency-Keystone Experience

## EXSC 4953 - Internship in Exercise Science

**Credit Hours:** 1 TO 15

This course provides a structural, on-the-job supervised field experience in a health/fitness environment. Students apply concepts and skills learned in the classroom setting to real situations. The learning experiences are jointly supervised and evaluated by a professional staff member at the worksite and a faculty member within the Exercise, Health, and Sports Science Department.

**Prerequisite:** Completed program requirements and approval of the Exercise, Health, and Sports Science Department chairperson.

## FINA 1100 - Finance & Personal Financial Planning Professions

**Credit Hours:** 3

Focuses on the history, seminal scholars, business models, professional certifications, education, career opportunities, and professional skills associated with the finance profession and personal financial planning profession.

## FINA 3000 - Financial Management

**Credit Hours:** 3

Explores financial principles and practices necessary to manage the enterprise. Emphasizes the tools and techniques used for financial analysis and planning, valuation, financing, and investment decisions. Encompasses time value of money, risk and returns, valuation methods, calculation of cost of capital, and capital budgeting.

**Prerequisite:** ACC 2000

## FINA 3100 - Advanced Financial Management

**Credit Hours:** 3

An intensive study of capital budgeting, capital structure, working capital management, leasing vs. buying, distribution in shareholders, mergers, bankruptcy, multinational finance and analysis of cases relating to financial decisions of firms.

**Prerequisite:** FINA 3000

## FINA 3200 - Financial Institutions & Markets

**Credit Hours:** 3

Description and analysis of major financial institutions and money and capital markets. Determination and structure of interest rates, derivative security markets, major sources of uses of funds by major financial institutions and impact of government regulations are discussed.

## FINA 3400 - Entrepreneurial FinanceÂ

**Credit Hours:** 3

This course addresses the financial aspects of entrepreneurship: the financial managerial skills and various financing strategies. Compare to well-established corporations, early stage ventures face higher level of operational uncertainty and greater financing difficulty. In this course, students are introduced to the financial analytical skills that are most needed for new entrepreneurial ventures, such as financial ratio analysis, cash management, and financial statement projection. They will also get to know various funding sources, for example: venture capital, crowdfunding (part of FinTech ecosystem), alternative financing etc.

## FINA 3450 - Introduction to Fintech

**Credit Hours:** 3

Advancements in technology play an increasingly influential role in all aspects of the field of finance, enabling new and existing players to disrupt entire business models across all sectors of the industry. Financial technology, also known as fintech, is an industry sector composed of companies that use technology to make financial services more efficient. Examples include crypto currencies like Bitcoin, blockchain based clearing houses, and mobile phone based payment systems. The Financial Technology sector is booming as financial firms, investors, consultants, entrepreneurs, and other potential employers alike ask questions including: What are the main innovations? How mature is the technology? Who are the key players? What is driving growth in this sector? This course provides insights into this financial technology revolution, and its many opportunities for disruption, innovation, and career advancement and employment.

## FINA 3500 - Risk Management

**Credit Hours:** 3

Provide a broad coverage of various aspects of risk management used in financial industry. For each type of risk, it addresses its concept, usage, risk measurements, and its basic quantitative and/or qualitative skills. Topics include risk management industry, theories and measurement, types of risk, instruments used in risk, and regulations.

## FINA 3550 - Fundamentals of Insurance

**Credit Hours:** 3

A study of the concept of risk management and the several methods for handling risks. Emphasizes insurance as transfer method. Discusses fundamental principles of insurance, insurance as a contract, and the insurance policy, including property and liability coverage, life and health, and social insurance.

## FINA 3600 - International Finance

**Credit Hours:** 3

Covers the fundamental economic and financial issues faced by multinational corporations. Discusses the history of international monetary system, the structure and use of balance of payments, foreign exchange theories. Explores hedging tools such as currency futures and options and arbitrage opportunities in currency markets.

## FINA 4000 - Investments

**Credit Hours:** 3

Emphasizes the investment environment, investment process, investment products and securities. Explores the decision-making procedures for acquiring and disposing of financial instruments in competitive financial markets. Examines the relationship of risk and expected return in the context of achieving stated investment goals.

**Prerequisite:** FINA 3000

## FINA 4100 - Portfolio Management

**Credit Hours:** 3

Examines modern portfolio theory and its application to investment strategies; study of options and future markets; investigation of market efficiency.

**Prerequisite:** FINA 3000

## FINA 4200 - Securities Industry Essential Exam Preparation

**Credit Hours:** 3

Discusses various investment instruments accessible to investors, prepares students to pass Securities Industry Essential Exam, the entry level test and the prerequisite of licensing tests in financial industry. Encompasses securities markets, investment products, investment strategies, laws and regulations, and theories.

**Prerequisite:** FINA 3000
**General Education Attribute**

- Competency-Keystone Experience

## FINA 4250 - Series 7 Exam PrepÂ

**Credit Hours:** 3

This course provides students with the qualifications necessary in General Securities Representative Qualification Exam (Series 7 Exam), in order to make different types of trades with all types of general securities, excluding commodities and futures. The exam is administered by the Financial Industry Regulatory Authority (FINRA). It is the most commonly required registration in the U.S. financial securities industry. The course covers equity, debt, mutual funds, variable insurance products, limited partnerships and derivative securities, operations of the primary and secondary markets, securities analysis, and the rules and regulations that govern business conduct in financial securities industry. This class will get students ready to take the Series 7 exam once they are hired by a financial company.

## FINA 4950 - Finance Internship

**Credit Hours:** 0 TO 12

The student is placed with a business firm, bank, government agency or nonprofit organization performing finance-related tasks. The internship experience offers a practical training ground for students that supplements academic training by permitting them to apply the theories, concepts and techniques learned through coursework.

**General Education Attribute**

- Competency-Keystone Experience

## FREN 1001 - Elementary French I

**Credit Hours:** 3

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.

**General Education Attribute**

- Discoveries-Art/Humanities

## FREN 1002 - French Two

**Credit Hours:** 3

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.

**Prerequisite:** FREN 1001
**General Education Attribute**

- Competency-Intercultural Fluency

## FREN 2001 - French Three

**Credit Hours:** 3

A continuation of FREN 1002 - French Two.

**Prerequisite:** FREN 1002
**General Education Attribute**

- Competency-Intercultural Fluency

## FREN 3001 - French Four

**Credit Hours:** 3

A continuation of FREN 2001 - French Three.

**Prerequisite:** FREN 2001
**General Education Attribute**

- Competency-Intercultural Fluency

## FREN 3440 - The Age of French Realism

**Credit Hours:** 3

This course surveys the evolution of French culture during the Age of Realism; including the Franco-Prussian War, positivism & its aftermath. This period encompasses the dictatorship of Napoleon III, a monarchy marked by material success among the middle class & by disappointment & pessimism among thinkers, writers, & artists. Taught in English.

**General Education Attribute**

- Competency-Intercultural Fluency

## FREN 3450 - The Birth of Modern French Culture in the Arts 1900-World

**Credit Hours:** 3

This course surveys the evolution of French culture from 1900, the time of the Belle Epoque, 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. Taught in English.

**General Education Attribute**

- Competency-Intercultural Fluency

## FREN 3470 - Francophone Africa

**Credit Hours:** 3

This course examines Francophone Africa from literary, socio-political, and artistic perspectives. The focus is on representative works illustrating the African traditions and identity embodied in the concept of "Négritude." It also looks closely at French colonization in Africa & the transition from Pre- to Post- Independence. Taught in English.

**General Education Attribute**

- Competency-Intercultural Fluency

## FREN 3480 - Francophone Canada

**Credit Hours:** 3

This course examines Francophone Canada from literary, socio-political, & artistic perspectives. The focus is on representative works illustrating the French-Canadian language & culture. It also looks closely at the Quebec separatist movement and the Quiet Revolution, a period of intense socio-political & cultural change. Taught in English.

**General Education Attribute**

- Competency-Intercultural Fluency

## FWSC 4420 - Principles of Wildlife Management

**Credit Hours:** 3

This course will cover historical and current concepts in wildlife management. An emphasis will be placed on the new challenges that face wildlife managers in a variety of environmental settings. The course will include the economic and social context of scientific wildlife management for a variety wildlife species in a variety of habitats.

**Prerequisite:** BIOL 2248

## FWSC 4423 - Wildlife Management Techniques

**Credit Hours:** 0 TO 4

This course will cover selected techniques commonly used by wildlife biologists. Techniques used to encounter mammals, birds, reptiles and fish will be covered. Important techniques covered include aging and sexing of game species, habitat measurement and evaluation, population analysis, and analysis of food habits. The lecture portion will provide an introduction to those techniques while the lab portion will provide practical use and application of selected techniques.

**Prerequisite:** BIOL 2248

## FWSC 4424 - Fisheries Management

**Credit Hours:** 4

A combination of lectures, labs, and field trips will emphasize fisheries 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 will emphasize collection methods.

**Prerequisite:** BIOL 2248
**General Education Attribute**

- Competency-Intensive Writing

## FWSC 4425 - Aquaculture

**Credit Hours:** 3

This course is designed to provide students with an understanding of the philosophies and concepts of aquaculture. Topics to be covered include water treatment systems; recirculating and flow through aquaculture systems; integrated

aquaculture; finfish and shellfish aquaculture; fish health and disease; and the economics and politics of aquaculture.

**Prerequisite:** BIOL 2248

## FWSC 4435 - Natural Resource Law and Policy

**Credit Hours:** 3

This course will focus on the history of current federal laws, policies, and programs, and include discussions of the roles of various resource management agencies. The course will focus on related natural resources administration and policies in the United States but will include aspects of international law and policy as they affect North America's resources. The course will cover the historical context of U.S. natural resource policy including the history of land acquisition and disposition by the federal government and the creation of the public domain including the National Parks, National Forests, Wildlife Refuges, and Bureau of Land Management Lands.

**Prerequisite:** BIOL 2248

## FWSC 4492 - Animal Population Dynamics

**Credit Hours:** 4

This course is designed to provide students with an understanding of theoretical and applied aspects of animal population dynamics. Emphasis will be placed on principles and techniques used by fisheries and wildlife biologists to quantify and to predict populations of vertebrate animals.

**Prerequisite:** BIOL 2248

## FWSC 4950 - Applied Biological Methodology and Scientific Communication

**Credit Hours:** 4

Prepare students to design, conduct and evaluate research in the environmental and biological sciences. Focus is on the applied aspects of experimental design, sampling theory and designs, data collection, analysis (using statistical software) and info dissemination. Proposal, evaluation and presentation of biological research studies required.

## GEOG 1050 - People and the Planet: Geography in a Changing World

**Credit Hours:** 3

This introductory course uses geographic perspectives to examine the economic, political, cultural, and environmental aspects of the human experience. The course emphasizes the concept of place and spatial relationships in examining root causes and sustainable solutions to socially relevant issues, from local to global scales.

**General Education Attribute**

- Discoveries-Social Sciences

## GEOG 1078 - Current Questions in Science

**Credit Hours:** 3

The course will explore current and sometimes controversial topics in science. Topics will vary, and will be related to

the natural science discipline prefix including concepts in chemistry, physics, geology, meteorology and climate science, geography, and mathematics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## GEOG 1110 - World Geography

**Credit Hours:** 3

Diverse places from around the world are examined from both a regional geography perspective and through the lens of globalization. Principles of geographic study are emphasized, including physical geography, human geography, and geopolitics.

**General Education Attribute**

- Discoveries-Social Sciences
- Competency-Information Literacy

## GEOG 1112 - What is Where and Why?

**Credit Hours:** 3

This course focuses on critical thinking, inquiry, discussion, and writing to investigate spatial phenomena, its magnitude and reason for its location. Students will develop skills in mapping techniques as well as in research methodology with an emphasis on student engagement and learning through collaboration in group discussions & presentations.

## GEOG 1140 - Environmental Issues

**Credit Hours:** 3

This environmental geography course introduces the complex environmental issues that impact society, from local to global scales. Political, economic, and ethical decisions related to the environment are viewed in historical and modern context. Personal and structural solutions to current environmental issues are also addressed.

**General Education Attribute**

- Competency-Ethical Reasoning

## GEOG 1178 - Discovering Physical Sciences

**Credit Hours:** 3

The course will explore the basic principles of physical science which describe the world we live in and the universe that surrounds us. Topics will vary related to the physical science discipline prefix including concepts in chemistry, physics, geology, meteorology and climate science, geography, and mathematics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## GEOG 1278 - Discovering Environmental Sciences

**Credit Hours:** 3

The course will explore and apply scientific principles that describe and explain interesting current topics in the environmental sciences. Topics will be related to the environmental science discipline prefix including concepts in biology, meteorology and climate science, geology, geography, chemistry and physics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## GEOG 2130 - Physical Geography

**Credit Hours:** 3

Physical Geography is focused on the thin surface layer of Earth where land, air, and water meet. It is an interdisciplinary study of the distribution of physical phenomena and the processes that interact to generate geographical patterns at the surface of Earth. Interactions among atmosphere, lithosphere, hydrosphere, and biosphere are emphasized.

**Prerequisite:** GEOG 1110
**General Education Attribute**

- Competency-Information Literacy

## GEOG 2140 - Societal Issues

**Credit Hours:** 3

This introductory geography course analyzes the root causes and sustainable solutions to socially relevant issues and problems. Cultural, economic, political, and environmental aspects of these issues will be addressed, as will the diverse ways of living and thinking that are rooted in cultural, ethnic, racial, gender, and social differences.

## GEOG 2150 - Conservation of Natural Resources

**Credit Hours:** 3

This course emphasizes the nature and distribution of natural resources in their role as support systems for humans and their activities. Historic and contemporary approaches to conservation are examined. Topics considered include energy, soil, land use, water, wildlife, forestry, and conservation ethics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## GEOG 2210 - Geography of North America

**Credit Hours:** 3

Investigation of the North America region from a geographic perspective. Settlement patterns, agriculture, manufacturing, commerce, and transportation are discussed along with the physical, political, economic, and cultural factors that characterize North American landscapes.

## GEOG 2250 - Geography of Drugs

**Credit Hours:** 3

This course examines the international drug trade from the perspectives of historical, social, cultural, and economic geographies. The course will explore supply and demand relationships between the major world drug production regions and their consumers. Historical and contemporary trafficking relationships will be explored.

## GEOG 2410 - Planning the Human Environment

**Credit Hours:** 3

This course introduces students to the theory and practice of urban and regional planning and examines the means and ways of managing the use of land with respect to enhancing land use for the purposes of residential, commercial, industrial, agricultural and mixed land use development

**General Education Attribute**

- Competency-Intensive Writing

## GEOG 2420 - Demographic Analysis

**Credit Hours:** 3

Demography is the study of how and why populations change and the impact of population change on societies and the environment. A basic course that deals with demographic processes and the identification of population trends. Emphasis is placed on distribution patterns and environmental ramifications.

## GEOG 3320 - Sustainable Cities

**Credit Hours:** 3

The course concerns aspects of cities in the USA and around the world. It focuses on problems related to spatial distribution of cities. It explores patterns of movement and connection of cities across the globe. It explains the attributes that make towns and cities distinctive and provides an understanding of the interdependence of cities.

**Prerequisite:** GEOG 1110
**General Education Attribute**

- Competency-Applied Methodologies

## GEOG 3330 - Economic Geography

**Credit Hours:** 3

The course explores the production, exchange and the use of basic commodities of the world; the relationship between physical factors and economic conditions; and the patterns of major economic realities in the world. World trade, trade routes, economic landscape and problems of economic development are discussed.

## GEOG 3410 - Sustainable Development

**Credit Hours:** 3

This course focuses on the aspects of development that ecologists/environmentalists, economists, sociologists and political scientists think should be sustained when governments and the private sector set policies for economic growth.

The theory and application of sustainable development and sustainability are addressed in this course.

**Prerequisite:** GEOG 1110
**General Education Attribute**

- Competency-Applied Methodologies

## GEOG 3420 - Environmental Disasters Management and Mapping

**Credit Hours:** 3

This course examines the emergency management process in dealing with both natural and technological (human-induced) hazards with the assistance of mapping. These concepts will prepare the student for understanding how disaster events can be managed and losses from these events can be reduced through a spatial lens.

**General Education Attribute**

- Competency-Applied Methodologies

## GEOG 3550 - Field Natural History

**Credit Hours:** 3

Students In this course will learn skills and tools necessary to observe and study the physical and biological features of local environments. Basic environmental and ecological monitoring techniques will be emphasized. A significant portion of the course will take place outdoors.

**Prerequisite:** GEOG 2150

## GEOG 3900 - Independent Study in Geography

**Credit Hours:** 1 TO 3

This is a capstone course for students who are engaged in research with a faculty mentor in a geographic field of study. This course exposes students to the methods of both primary and library research, and includes the formulation of a research problem, literature searching and review, research design, execution, data analysis, and presentation.

**General Education Attribute**

- Competency-Keystone Experience

## GEOG 3990 - Seminar in Geography

**Credit Hours:** 1 TO 3

This advanced seminar focuses on current topics in physical geography, human geography, environmental studies, or geographic methods. Topics vary based on the interest of instructor and students. The course emphasizes critical review of literature through reading, writing, discussion, and presentation.

**General Education Attribute**

- Competency-Keystone Experience

## GEOG 4110 - Geography of Water Resources

**Credit Hours:** 3

Water is an essential component of most ecosystems and is a vital resource for human life. This advanced course will examine water resources from a geographic perspective, including the distribution of water resources from local to global scales, water quality issues, and water policy / management in the U.S. and internationally.

**Prerequisite:** GEOG 1140 or GEOG 2150 or GEOL 1500
**General Education Attribute**

- Competency-Intensive Writing

## GEOG 4120 - Biogeography

**Credit Hours:** 3

The course provides a historical background for the field of biogeography and the ecological foundations needed to understand the distribution and abundance of species and their changes over time. Topics include the study of the distribution and diversity of life, how species migrate, the importance of natural and human disturbances in ecosystems.

**Prerequisite:** GEOG 2150 or GEOG 2130

## GEOG 4130 - Forest Geography and Conservation

**Credit Hours:** 3

Examination of the global distribution of forested ecosystems and how they change over time. Emphasis is given to processes that control patterns of forest growth and change, especially forest dynamics and disturbance (both natural and human-mediated). Major US forest conservation issues will be addressed.

**Prerequisite:** GEOG 2150 or GEOG 2130

## GEOG 4410 - Environmental Planning

**Credit Hours:** 3

This course emphasizes the underlying spatial characteristics of the physical environment in order to facilitate and support sound decision-making with respect to sustainable land development. Stress is placed on land use, storm water management, transportation infrastructure, and land conservation. Students will collaborate on a planning project.

**General Education Attribute**

- Competency-Keystone Experience

## GEOG 4950 - Geography Internship

**Credit Hours:** 1 TO 15

The Geography Internship provides practical experience with an approved agency or facility involved in activities pertaining to geographic fields of study.

**General Education Attribute**

- Competency-Keystone Experience

## GEOL 1078 - Current Questions in Science

**Credit Hours:** 3

The course will explore current and sometimes controversial topics in science. Topics will vary, and will be related to the natural science discipline prefix including concepts in chemistry, physics, geology, meteorology and climate science, geography, and mathematics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## GEOL 1178 - Discovering Physical Sciences

**Credit Hours:** 3

The course will explore the basic principles of physical science which describe the world we live in and the universe that surrounds us. Topics will vary related to the physical science discipline prefix including concepts in chemistry, physics, geology, meteorology and climate science, geography, and mathematics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## GEOL 1250 - Stellar Astronomy

**Credit Hours:** 3

This is an introductory lecture course on the fundamentals of astronomy. An emphasis is placed on observing and understanding celestial objects in our solar system, galaxy and universe. Extensive use of a planetarium highlights the in person experience while the on-line offering uses a desktop planetarium such as stellarium.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## GEOL 1278 - Discovering Environmental Sciences

**Credit Hours:** 3

The course will explore and apply scientific principles that describe and explain interesting current topics in the environmental sciences. Topics will be related to the environmental science discipline prefix including concepts in biology, meteorology and climate science, geology, geography, chemistry and physics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## GEOL 1500 - Dynamic Earth

**Credit Hours:** 4

This course is a scientific study of Earth's geologic systems. The course includes the origin and identification of minerals and rocks, geologic time, examination of Earth systems, cycles and processes, and causes and consequences of geologic phenomena, especially those related to environmental issues, hazards, and resources.

**General Education Attribute**

- Discoveries-Natural Science & Technology
- Competency-Applied Methodologies

## GEOL 1600 - Ocean Science

**Credit Hours:** 3

This course examines the world ocean from an Earth System perspective, providing an overview of ocean science. Topics discussed include geological, physical, chemical and biological oceanography and the role oceans play in global atmospheric circulation and the Earth's climate system.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## GEOL 1700 - Geology of Our Nation's Parks

**Credit Hours:** 3

The iconic scenery preserved in our National Parks is frequently related to underlying geologic processes. This course explores the fundamental principles of geology and earth history using our National Parks as examples. Emphasis is placed on the role of plate tectonics in the geologic evolution and history of each park.

## GEOL 1900 - Digging for Dinosaurs

**Credit Hours:** 3

This introduction to Paleontology and the Fossil Record focuses on the geologic time scale and principles of evolution. Students learn basic taxonomy, cladistics, and taphonomy. The course will include structures and functions of fossil organisms with a special emphasis on the Late Paleozoic through Mesozoic life, highlighting Dinosaurs.

## GEOL 2010 - Principles of Earth History

**Credit Hours:** 4

This course studies scientific principles of the origin and evolution of the Earth, atmosphere, oceans, and life through time. It emphasizes concepts and methods employed to interpret the geologic record, including those related to the geologic time scale, rock-forming processes, plate tectonics, evolution, and the fossil and stratigraphic record.

**Prerequisite:** GEOL 1500

## GEOL 2500 - Volcanology

**Credit Hours:** 3

This course is a study of volcanic processes on Earth and the other terrestrial planets. Topics include a review of igneous materials and eruptive styles, eruption-triggering mechanisms, formation of lava and pyroclastic flow deposits, lahars, volcanic gas, volcanic hazards, and case studies of recent eruptions.

**Prerequisite:** GEOL 1500

## GEOL 2900 - Planetary Geology

**Credit Hours:** 3

The course is an introduction to geology and geochemistry of the Solar System, with an emphasis on the rocky planets. It includes space exploration and uses imagery and data to present the origins of the solar system, the geology of the planets, asteroids, and their satellites, and how this relates to human advancement and future discovery.

**Prerequisite:** GEOL 1500

## GEOL 3010 - Professional Development for Geologists

**Credit Hours:** 1

The course develops the students' understanding of career opportunities and expectations in Geology and the natural sciences. Students learn about the range of career tracks in Geological and Environmental industries, as well as Graduate school opportunities. They develop resumes, learn about networking and prepare for professional licensure.

**Prerequisite:** GEOL 2010

## GEOL 3030 - Hydrology

**Credit Hours:** 3

Hydrology is the science of water within a geologic systems framework. The course covers the hydrologic cycle, the occurrence and movement of atmospheric, surface, and ground waters. Conditions are explored quantitatively, assessing mass and energy balance, and qualitatively with respect to human interaction and influences.

**Prerequisite:** GEOL 1500

## GEOL 3100 - Applied Soil Science

**Credit Hours:** 3

This applied course presents soil science for student considering careers in the environmental and geotechnical sectors. Basic concepts include soil composition and genesis; physical, chemical, and biological properties; soil water; classification and mapping; conservation and management practices; fertility and productivity; and engineering.

**Prerequisite:** GEOL 1500

## GEOL 3200 - Geomorphology

**Credit Hours:** 3

This course introduces students to Earth surface features and their formative processes. A broad range of climatic and tectonic settings are explored, while the specific role of geomorphic systems are examined within the context of local to regional human interactions with the landscape.

**Prerequisite:** GEOL 1500

## GEOL 3250 - Quantitative Skills in Geology

**Credit Hours:** 3

This course seeks to develop students' discipline-specific quantitative skills. Topics related to science literacy and data analysis are framed in geologic context. Students will use mathematical concepts, along with computational and graphical techniques to analyze geologic systems to develop and communicate practical solutions.

**Prerequisite:** GEOL 1500 and MATH 1220 or MATH 1230 or MATH 1410 or MATH 2410
**General Education Attribute**

- Competency-Quantitative Application

## GEOL 3300 - Mineralogy

**Credit Hours:** 4

A study of the properties and occurrence of the minerals found within the Earth. Emphasis is placed on identification of minerals based on their physical properties, understanding the morphology and internal structure of crystals, and understanding the chemical and optical properties of minerals.

**Prerequisite:** GEOL 1500

## GEOL 3310 - Introduction to Mineralogy and Petrology

**Credit Hours:** 4

An overview of the fundamentals of mineralogy with application towards the study of igneous and metamorphic rocks. Emphasis is given to identification and classification systems and an understanding of formation processes and tectonic settings. Macroscopic, microscopic, and chemical analyses are applied using hand samples and thin sections.

**Prerequisite:** GEOL 1500

## GEOL 3350 - Earth and Energy Resources

**Credit Hours:** 3

This course is an overview of earth and energy resources. Students will study Earth-system processes that lead to the origin of these resources, learn methodologies of resource development and societal uses, and explore environmental impacts of resource industries and trends in historical and contemporary resource production and consumption.

**Prerequisite:** GEOL 1500
**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## GEOL 3400 - Igneous and Metamorphic Petrology

**Credit Hours:** 4

A study of igneous and metamorphic rocks. Special consideration is given to their formation processes, tectonic settings, methods of identification, and classification systems. Macroscopic, microscopic, and chemical analyses are emphasized using hand samples, thin sections, and other specialized analytical methods and data.

**Prerequisite:** GEOL 3300

## GEOL 3500 - Geochemistry

**Credit Hours:** 3

This course is designed for students pursuing environmental and geological careers. Participants will explore the relationships between natural chemical processes and environmental issues through focus on essential geochemical principles of thermodynamics and kinetics, aqueous geochemistry, acid-base chemistry, and groundwater redox conditions.

**General Education Attribute**

- Competency-Quantitative Application

## GEOL 3600 - Geophysics

**Credit Hours:** 3

This course covers the collection, processing, and interpretation of several types of geophysical data for both environmental and economic purposes. Emphasis is placed on the application of geophysical techniques to real world problems.

**Prerequisite:** GEOL 1500
**General Education Attribute**

- Competency-Applied Methodologies

## GEOL 3700 - Advanced Environmental Geology

**Credit Hours:** 3

The course deals with problems and issues associated with the interaction between the natural environment and mankind. Emphasis is placed on an in-depth study of an environmental problem or issue and technological solutions that address the issue. Basic engineering principles as applied to geological problems are considered.

**Prerequisite:** GEOL 1500
**General Education Attribute**

- Competency-Intensive Writing

## GEOL 3800 - Quaternary Geology

**Credit Hours:** 3

This course is focused on the geology of the Quaternary Period. Skills will be developed in describing, identifying, and mapping deposits. The distribution and timing of deposits will be examined within the context of the driving mechanisms behind those changes, to better understand future impacts on human populations.

**Prerequisite:** GEOL 2010

## GEOL 3900 - Independent Study in Geology

**Credit Hours:** 1 TO 3

This is a capstone course for students who are engaged in research with a faculty mentor in the Geosciences. This course exposes students to the methods of both primary and library research, and includes the formulation of a research problem, literature searching and review, research design, execution, data analysis, and presentation.

**General Education Attribute**

- Competency-Keystone Experience

## GEOL 3990 - Seminar in Geology

**Credit Hours:** 1 TO 3

In this advanced seminar, students will explore current research in geology. The course will cover selected topics based on the interest of instructor and students. The course emphasizes critical review of literature through reading, writing, discussion, and presentation.

**General Education Attribute**

- Competency-Keystone Experience

## GEOL 4000 - PASSHE Geology Field Course

**Credit Hours:** 6

The PASSHE Geology Field Experience permits students to apply their knowledge and skills to the investigation of Pennsylvania's geology. Students will collect and analyze field-based geologic and environmental data at select locations throughout Pennsylvania. Field-based modules are taught by experts from across the state system.

**Prerequisite:** GEOL 1500
**General Education Attribute**

- Competency-Keystone Experience

## GEOL 4030 - Groundwater Hydrology

**Credit Hours:** 3

This course is designed as a follow-up course to Hydrology. Students will study and apply the principles governing the movement and occurrence of water in the subsurface. Emphasis is placed on the physics and engineering principles as they relate to groundwater for water supplies as well as related to contamination issues.

**Prerequisite:** GEOL 3030
**General Education Attribute**

- Competency-Applied Methodologies

## GEOL 4100 - Field Methods in Geology

**Credit Hours:** 3

This course provides students with knowledge of geologic problems encountered in fieldwork and the techniques utilized to solve those problems. The student will gain experience with geologic and topographic maps, field description of rocks, and use of geologic instruments with emphasis towards techniques utilized in early career

applications.

**Prerequisite:** GEOL 2010

## GEOL 4200 - Sedimentology and Stratigraphy

**Credit Hours:** 4

A study of the origin, transport, and deposition of sediments and sedimentary rocks, their analysis by physical and chemical methods, and their interpretation as indicators of past events and ancient environments in the history of the Earth.

**Prerequisite:** GEOL 2010

## GEOL 4300 - Structural Geology

**Credit Hours:** 4

This course focuses on the products and processes of rock deformation. It examines the description, geometry, kinematics, mechanics, and tectonics of structures and involves the study of stress and strain, rheology, brittle and ductile deformation, non-tectonic structures, joints, faults, folds, foliations, lineations, and shear zones.

**Prerequisite:** GEOL 2010

## GEOL 4400 - Tectonics of North America

**Credit Hours:** 3

This course focuses on Plate Tectonic Theory and examines plate interactions and major geologic events, especially those related to the assembly of North America. It emphasizes concepts and methods used to interpret tectonic events and processes linked to the rock record, deformation, earth-system history, and hazard and resource distribution.

**Prerequisite:** GEOL 2010
**General Education Attribute**

- Competency-Intensive Writing

## GEOL 4500 - Invertebrate Paleontology

**Credit Hours:** 4

Paleontology is the study of life though time, and is based on the principles and methods of both biology and geology. Invertebrate paleontology concerns the fossil remains of all non-backboned organisms and also any of the remains of the activities of these organisms. Fossilization, evolution and classification are emphasized.

**Prerequisite:** GEOL 2010

## GEOL 4600 - Watershed Evaluation and Management

**Credit Hours:** 3

The course builds off environmental and land use principles of lower courses in hydrology and environmental science.

Focus is on delineation, mass balance, human impacts, and environmental health and water quality of watersheds. They learn regulatory principles and practical applications of water routing and sustainable land management practices.

**Prerequisite:** GEOL 3030
**General Education Attribute**

- Competency-Intensive Writing

## GEOL 4700 - Regional Geology Field Experience

**Credit Hours:** 3

This is a traveling course that explores the large-scale relationships of bedrock and surficial geology as well as climate, hydrologic, and environmental systems. The trips range from 10-21 days and travel to destinations including such places as the Great Lakes, New England, SE Coastal Plain, Desert Southwest, Rocky Mts, and the West Coast.

**Prerequisite:** GEOL 1500
**General Education Attribute**

- Competency-Keystone Experience

## GEOL 4750 - Computer Applications in Geosciences

**Credit Hours:** 3

This course introduces the principles of computer methods in Geology with an emphasis on industry-specific software. The course is designed to provide students the opportunity to apply computational analyses to the solution of Earth and Environmental Science problems including those related to geophysical, geospatial, and hydrologic investigation.

**Prerequisite:** GEOL 1500
**General Education Attribute**

- Competency-Applied Methodologies

## GEOL 4950 - Geology Internship

**Credit Hours:** 1 TO 15

The Geology Internship provides practical experience with an approved agency or facility involved in activities pertaining to geographic fields of study.

**General Education Attribute**

- Competency-Keystone Experience

## GERT 1000 - Introduction to Gerontology

**Credit Hours:** 3

An introduction to the field of aging for majors and non-majors. A general overview of the psychological, biological, cultural, sociological and behavioral aspects of aging.

## GERT 2000 - Aging in American Society

**Credit Hours:** 3

Social and cultural aspects of aging within the context of contemporary demographic and historical variables will be reviewed. Application of critical thinking skills will assess the impact of aging on the individual, the family, the workplace, the community, and the U.S. society. Theories about roles and adjustment later if life are examined.

## GERT 3000 - Aging Policies and Services

**Credit Hours:** 3

This course provides a review of the public policies that have the greatest influence on the lives of older persons. The major policies affecting older Americans are discussed in detail, including evolution of policies as an outgrowth of developments in society and the processes by which policies are introduced, debated, and established.

**Prerequisite:** GERT 1000 and GERT 2000

## GERT 3050 - Biology of Aging

**Credit Hours:** 3

This course is an introduction to the biological aspects of aging, both normal and pathological. Studied are age-related changes in the major systems as well as the major theories of biological aging. Students will apply scientific concepts, recognize data limitations, and explore the impact on society.

**Prerequisite:** GERT 1000 or GERT 2000

## GERT 3100 - Aging and the Family

**Credit Hours:** 3

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.

**Prerequisite:** GERT 1000 or GERT 2000

## GERT 3150 - Practicum in Gerontology

**Credit Hours:** 3

Exploration of the professional skills required to work in the field of gerontology and the positions available through working in such an agency under the joint supervision of a community partner and gerontology faculty member. This is an experiential learning course.

**Prerequisite:** GERT 1000 or GERT 2000
**General Education Attribute**

- Competency-Keystone Experience

## GERT 3300 - Dying, Death, and Bereavement

**Credit Hours:** 3

Introduction to and survey of the current issues, concepts, and research of the social and psychological aspects of dying, death, and bereavement.

**Prerequisite:** GERT 1000 or GERT 2000

## GERT 3800 - Wellness and Aging

**Credit Hours:** 3

This course examines age-related physical changes and examines ways in which individuals can have greater personal control over their individual aging process. By direction attention to significant lifestyle modifications and preventive health care strategies, the course also considers the psychological and social implications of healthy aging.

**Prerequisite:** GERT 1000 **or** GERT 2000
**General Education Attribute**

- Wellness & Personal Health

## GGIS 1078 - Current Questions in Science

**Credit Hours:** 3

The course will explore current and sometimes controversial topics in science. Topics will vary, and will be related to the natural science discipline prefix including concepts in chemistry, physics, geology, meteorology and climate science, geography, and mathematics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## GGIS 1178 - Discovering Physical Sciences

**Credit Hours:** 3

The course will explore the basic principles of physical science which describe the world we live in and the universe that surrounds us. Topics will vary related to the physical science discipline prefix including concepts in chemistry, physics, geology, meteorology and climate science, geography, and mathematics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## GGIS 1210 - Mapping our Environment

**Credit Hours:** 3

This course presents the basic knowledge required to work with digital maps. It is an introduction to the geo-technologies Geographic Information Systems (GIS), Global Positioning Systems (GPS), and Remote Sensing. The potential uses of those technologies in the areas such as environmental studies, marketing, and demographics are also presented

**General Education Attribute**

- Foundations-Tech Literacy

## GGIS 1278 - Discovering Environmental Sciences

**Credit Hours:** 3

The course will explore and apply scientific principles that describe and explain interesting current topics in the environmental sciences. Topics will be related to the environmental science discipline prefix including concepts in biology, meteorology and climate science, geology, geography, chemistry and physics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## GGIS 1510 - GeoBusiness

**Credit Hours:** 3

Spatial patterns associated with the location, distribution and consumption of goods and services are studied. Emphasis is placed on techniques for site selection, marketing and spatial analysis through the use of geotechnology.

## GGIS 2100 - Geographic Information Systems

**Credit Hours:** 3

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 the database.

## GGIS 2300 - Environmental Remote Sensing I

**Credit Hours:** 3

Explores aerial photographs and satellite images for geographic investigation of physical and cultural features of the landscape; as well as the application of remote sensing to topographic and planimetric map construction, agricultural and land use identification, landform study, and forestry.

## GGIS 2990 - Crime Mapping and Spatial Analysis

**Credit Hours:** 3

This course provides an analysis of different methods and techniques of representing spatial crime data through the use of various computer-based technologies. The students will examine crime at the national, state, and local level using geo - technology. Students will also learn some of the problems associated with spatial crime data.

**General Education Attribute**

- Competency-Applied Methodologies
- Competency-Information Literacy

## GGIS 3050 - Spatial Methods in Energy and Natural Resources

**Credit Hours:** 3

This course provides an analysis of different concepts and techniques used in representing land data through spatial technology. The students will examine land documents and input, edit and analyze them using geographic information systems. Students will also learn some of the pitfalls with land data including accuracy, etc.

**Prerequisite:** GEOG 1XXX or ATMS 1XXX or GGIS 1XXX
**General Education Attribute**

- Competency-Applied Methodologies

## GGIS 3110 - Geospatial Data Handling and Integration

**Credit Hours:** 3

This course concentrates on how geographic data can be compiled from different sources into a GIS project. Tasks include planning and designing a geographic database, data entry (digitization and attribute editing), working with and integrating GIS data from a variety of online sources, and manipulating metadata.

**Prerequisite:** GEOG 1112 or GGIS 1210 or GGIS 2100
**General Education Attribute**

- Competency-Applied Methodologies
- Competency-Information Literacy

## GGIS 3120 - Computer Cartography

**Credit Hours:** 3

This course introduces the art and science of mapmaking. It is designed to effectively communicate quantitative and qualitative geographic data. Map design, including composition, type and color use, scale, coordinate systems, and layout balance and visual hierarchy are taken into consideration depending on the purpose and the audience of the map.

**Prerequisite:** GEOG 1112 or GGIS 1210 or GGIS 2100
**General Education Attribute**

- Competency-Quantitative Application

## GGIS 3300 - Environmental Remote Sensing II

**Credit Hours:** 3

Examines concepts of remote sensing theory and practical uses of satellite imagery for interpreting and monitoring Earth's terrestrial and aquatic environments. ENVI software will be utilized for topics such as environmental hazard assessment, land use management, geology, agriculture, forestry, soil resources and oceanography.

## GGIS 4120 - Advanced Cartography

**Credit Hours:** 3

This advanced course builds on the skills acquired in Computer Cartography (GGIS 3120). Students will learn how to manipulate printshop-ready documents as well as advanced web map handling. Customization techniques are introduced to support students' creativity to professionally and effectively communicate with maps.

**Prerequisite:** GGIS 3120

## GGIS 4200 - Geospatial Analysis

**Credit Hours:** 3

This course introduces the use of basic quantitative methods in geography. Concepts and applications of spatial statistics, testing statistical significance, identifying patterns and analyzing relationships applied to geographic distributions.

**General Education Attribute**

- Competency-Quantitative Application
- Competency-Applied Methodologies

## GGIS 4210 - GIS Modeling and Programming

**Credit Hours:** 3

In this course, students will be working on solving spatial problems that use tools of vector as well as cell-based analysis methods. A special emphasis is given on automation techniques including scripting and modeling. The hands-on nature of this course will enable the students to work actively in real-life problem-solving situations.

**General Education Attribute**

- Competency-Applied Methodologies

## GGIS 4220 - Environmental Applications in GIS

**Credit Hours:** 3

This course is tailored to introduce Environmental Issues to students within a spatial framework, using Geographic Information Science. The course will cover the general concepts of GIS use and introduce the material in exercises to demonstrate practical applications of GIS for environmental problems.

## GGIS 4900 - Capstone in Geographic Information Technologies

**Credit Hours:** 3

This is a project-based course where students develop a research project with the emphasis of Geospatial Technologies. The hands-on nature of this course will enable the student to actively work on real-life problems and therefore promote work and time management skills, project development, report writing, and making professional presentations.

**General Education Attribute**

- Competency-Intensive Writing
- Competency-Keystone Experience

## HIST 1010 - US History to 1877

**Credit Hours:** 3

United States history from Pre-Columbian America to the age of modern industry: the colonial heritage, American

Revolution, the emergence of a new nation, westward expansion, Civil War and postwar Reconstruction.

**General Education Attribute**

- Discoveries-Art/Humanities

## HIST 1015 - US History since 1877

**Credit Hours:** 3

The emergence of modern United States; its achievements and its problems; prosperity and depression, war and social unrest, Reconstructon through the Vietnam era and beyond.

**General Education Attribute**

- Discoveries-Art/Humanities

## HIST 1510 - World History to 1500

**Credit Hours:** 3

This course examines the process and interplay of the major world cultures in their evolution. Civilizations include Indian, Muslem, East Asian (China, Korea, Japan), Slavic, Western European, Latin American, and African.

**General Education Attribute**

- Discoveries-Art/Humanities

## HIST 1515 - World History from 1500

**Credit Hours:** 3

This course examines significant factors influencing change in the world's major cultural areas; industrialization and urban conflict, the democratic revolution, and the rise of charasmatic leaders.

**General Education Attribute**

- Discoveries-Art/Humanities

## HIST 2010 - History of Pennsylvania

**Credit Hours:** 3

This course examines 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.

## HIST 2020 - Local History

**Credit Hours:** 3

This course in an introduction to the location, evaluation and significance of local history using an information literacy approach. It focuses on the methods of local history rather than the history of a particular local area. Specific topics are analyzed in order to get to know how to identify, locate, evaluate and analyze a variety of sources.

**General Education Attribute**

- Competency-Information Literacy

## HIST 2040 - History of Western Society to 1500

**Credit Hours:** 3

This course examines the history of Western society from its origins in the Near East to the Renaissance.

## HIST 2045 - History of Western Society since 1500

**Credit Hours:** 3

This course examines the history of Western society from the Enlightenment to the present.

## HIST 2060 - Colonial Latin American History

**Credit Hours:** 3

Explores the consequences of contact between the "old" world and the Americas. Course will emphasize the strategies and motives of the colonizer and the colonized, and the quest for identity in the Latin American context as well as the construction of truths, myths and legends in the context of European expansionism in the Americas.

## HIST 2065 - Modern Latin American History

**Credit Hours:** 3

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 counter terrorism.

## HIST 2990 - Historical Methods

**Credit Hours:** 3

This course acquaints students who are considering history as a major or minor field of study with basic historiography and historical methodology. Students receive a hands-on introduction to historical research and writing, and learn about various schools of history to prepare them for upper level history courses.

**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## HIST 3000 - Topics in US History

**Credit Hours:** 3

This class will explore United States history from a variety of perspectives each semester. The focus of the class will vary between different historical time periods and topics to give students a broad-based overview while focusing on specific historical events. The topic varies by semester and the course is repeatable.

**Prerequisite:** ENGL 1200

## HIST 3010 - African American History to 1877

**Credit Hours:** 3

The course explores the history of African Americans from their western African origins until Reconstruction in the United States. It begins with various African civilizations and trade relationships with Europeans, then surveys the middle passage and complexity of US slavery. The last portion of the course examines the Black quest for freedom.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intercultural Fluency

## HIST 3015 - African American History Since 1877

**Credit Hours:** 3

This course focuses on African Americans since 1877. It begins with Reconstruction then consistently examines African Americans' fight for civil and human rights. It explores 'agency' and contributions of African Americans to the world. The course uses frameworks to examine the Black experience such as gender, region, age, and political expression.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intercultural Fluency

## HIST 3019 - Readings in African American/Africana Studies

**Credit Hours:** 3

This course is reading intensive and examines the key scholarship within AAAS and throughout the Black experience. It examines the evolution of the discipline, key scholars, themes, ideas, debates, theoretical/methodological frameworks used by scholars of AAAS. Students will acquire the skills to critically engage on interdisciplinary scholarship.

**Prerequisite:** ENGL 1200

## HIST 3020 - Native American History to 1850

**Credit Hours:** 3

History of Native Americans to mid-19th Century. Focus on the major tribal groups that interacted with and impacted the course of American history. Examine various aspects of Indian life such as gender divisions, political expression, and social organization. recognize the contributions of native peoples in development of the American nation.

**General Education Attribute**

- Competency-Intercultural Fluency

## HIST 3025 - Native American History Since 1850

**Credit Hours:** 3

History of Native Americans from mid-19th Century to present correlating with US History. Examine various aspects of Indian life such as gender divisions, political expression, and social organization. Recognize the contributions of native peoples in development of the American nation.

## HIST 3030 - Women in U.S. History

**Credit Hours:** 3

A study of women's lives in the U.S. from the colonial era until the present, with a special emphasis on a diversity of women, including non-elite, 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.

**General Education Attribute**

- Competency-Intercultural Fluency

## HIST 3040 - Colonial America

**Credit Hours:** 3

This course explores the history of North America from the first contacts between indigenous peoples and Europeans to the end of the Seven Years' War in 1763.

**General Education Attribute**

- Competency-Intercultural Fluency

## HIST 3050 - Early American Republic

**Credit Hours:** 3

Examines the history of the US from the Constitution to the eve of the Civil War. This was a critical period of political formation, economic growth, and social development for Americans.

## HIST 3055 - Africa 1850 to the Present

**Credit Hours:** 3

Modern African History focuses on Sub-Saharan from the 18th century to the present. It is organized chronologically and thematically focusing on European conquest of Africa and the dynamics of colonialism and its socieconimic consequences. It examiness the rising tide of nationalism and the African liberation Movement after World War II.

**Prerequisite:** HIST 3019

## HIST 3060 - American Civil War & Reconstruction

**Credit Hours:** 3

This class examines the history of national crisis of civil war and evaluates how it shaped the nation by ending chattel slavery; shaping and changing both North and South in the process of forging a united government and society and redressing historic wrongs.

## HIST 3070 - United States in the Age of Reform

**Credit Hours:** 3

This course aims to discuss and understand the social, political, cultural, and economic developments in American Society from the end of the Civil War (1865) through the First World War, ending in 1920. Commonly called the Gilded Age, Reconstruction, the Progressive era, and more we will consolidate it as the "Age of Reform."

**General Education Attribute**

- Competency-Intercultural Fluency

## HIST 3080 - United States from 1912 to 1968

**Credit Hours:** 3

This course aims to discuss and understand the social, political, cultural, and economic developments in American Society from the 1920s through the 1960s. This era could be thought of as the peak of the "American Century," and we will explore all the ways in which America and the world was transformed in this time frame.

**General Education Attribute**

- Competency-Intercultural Fluency

## HIST 3090 - United States History Since 1968

**Credit Hours:** 3

This course aims to discuss and understand the political, economic, social, and cultural forces that shaped America from 1968 to the present. To gain an appreciation for this era, we will start in the late 1960s and trace the rise of what we might call the Modern United States.

**General Education Attribute**

- Competency-Intercultural Fluency

## HIST 3110 - Religious Persecution in U.S.

**Credit Hours:** 3

Religious tolerance and persecution have been recurring themes in U.S. history; religion has played a significant role in the development of American culture. This class will examine diverse groups who sought to practice their religion freely and how they suffered persecution; it will also explore the meaning of the First Amendment.

**General Education Attribute**

- Competency-Intercultural Fluency

## HIST 3130 - History of US 20th Century Foreign Policy

**Credit Hours:** 3

This course traces the political and social history of U.S. foreign affairs from the Spanish-Cuban-American war to the modern War on Terrorism. Readings consist of a mixture of primary and secondary readings. The course traces the evolution of US foreign policy and attempts to analyze the causes of this evolution.

**General Education Attribute**

- Competency-Intercultural Fluency

## HIST 3140 - History of the American Constitution

**Credit Hours:** 3

The origins and development of the American constitutional system, with special emphasis on those aspects of constitutional growth that relate closely to the fundamental rights, the structure of American government, and social order or conflicts.

## HIST 3400 - Topics in Global History

**Credit Hours:** 3

This class will explore Global history from a variety of perspectives each semester. The focus of the class will vary between different historical time periods and topics to give students a broad-based overview while focusing on specific historical events. The topic varies by semester and the course is repeatable.

**Prerequisite:** ENGL 1200

## HIST 3625 - History of Modern Britain

**Credit Hours:** 3

This course explores political, social, religious, cultural, and military developments in Britain and across her empire from the Victorian era to the modern era.

## HIST 3630 - Modern Canada: Confederation to Present

**Credit Hours:** 3

A history of Canada from Confederation to the present. This course uses politics, culture, and economics to discuss major issues in modern Canada's history including the political struggle for Confederation, the industrial era, immigration of the early 20th century, the World Wars, First Nations relations, and Canada's role within the world.

**General Education Attribute**

- Competency-Intercultural Fluency

## HIST 3700 - Topics in Historical Culture, Diversity, Inclusion

**Credit Hours:** 3

This class will explore history from a variety of cultural, diversity, and inclusion perspectives each semester. The focus of the class will vary between different historical time periods and topics to give students a broad-based overview while focusing on specific historical events. The topic varies by semester and the course is repeatable.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intercultural Fluency

## HIST 3830 - History of US Social Change

**Credit Hours:** 3

Many groups worked to change aspects of American society during our long history. Issues such as race, gender, class, and immigration drove the evolution of American society and shaped the current United States. This course will examine the historical development of major issues such as slavery, popular democracy, women's rights, and civil rights.

## HIST 3840 - Modern Global Women's History

**Credit Hours:** 3

This class will explores comparative women's history from a global perspective from 1300 to the present. Topics such as sexuality, marriage, beauty, and motherhood will be examined.

**General Education Attribute**

- Competency-Intercultural Fluency

## HIST 3850 - History of Sport

**Credit Hours:** 3

This course offers the history of sport in America as a legitimate subject for scholarly study. It presents sport as a pervasive facet of our popular culture, as a social institution, as an arena of human activity, as drama, even spectacle. The course emphasizes the history of sport as a study of cultural values and value conflict.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intercultural Fluency

## HIST 3860 - Beer, Whiskey and Wine: A History of Spirits

**Credit Hours:** 3

This course examines and analyzes the history of alcohol production, distribution, and consumption in selected parts of the world, with special attention being paid to its impact on the socio-cultural, political, and economic aspects of life in the United States.

## HIST 3890 - Race and Ethnicity in America

**Credit Hours:** 3

This course focuses on the changing ethnic make-up of the American population from colonial times to the twentieth century. We will consider who came to America and why, how people define their own ethnicity and the ethnicity of others, and how cultural diversity has shaped life in the United States.

## HIST 4000 - Advanced Topics in US History

**Credit Hours:** 3

This class will explore United States history from a variety of perspectives each semester. The focus of the class will vary between different historical time periods and topics to give students a broad-based overview while focusing on specific historical events. The topic varies by semester and the course is repeatable.

**Prerequisite:** HIST 2990

## HIST 4010 - Introduction to Public History

**Credit Hours:** 3

This course is an overview of the methods and arenas of public history. Ethical issues of historical power and representation are the focus of the course. Hands-on work with archives, preservation, etc allow students to understand the challenges and rewards of practicing history in a public setting.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Ethical Reasoning

## HIST 4020 - American Revolution

**Credit Hours:** 3

This course focuses on the era of the American Revolution, beginning with the later colonial period and continuing through to the ratification of the Constitution.

## HIST 4030 - Myths and Realities of the South Before the Civil War

**Credit Hours:** 3

A chronological and thematic history of the South from Spanish exploration and Jamestown's settlement through the secession crisis of 1860-1861, with an emphasis on the social, cultural, economic, and political aspects of southern life in the colonial and antebellum periods.

## HIST 4050 - Frontier to Front Line: History of the American West

**Credit Hours:** 3

The United States had a concept of "the west," or the frontier, through much of its history. From early ideas of the frontier as critical to Americanism, to the current front line battles playing out in the West over immigration, environment and resource extraction, the region played a powerful role in shaping a growing nation.

## HIST 4060 - Great Depression & WWII

**Credit Hours:** 3

The significance and lasting influence of the 1930-1945 period of United States history from the onset of the Great Depression through the close of World War II, with a focus on major changes to American society, culture, politics, economy, and law.

## HIST 4070 - U.S. at War 19th Century

**Credit Hours:** 3

This class examines the principal causes for U.S. wars in the 19th century and the lasting consequences of those engagements, including political, legal, social, cultural, and economic. The class focus will be changes to society, racial or gender discrimination, war opposition, media portrayals, and the wars' effect on foreign relations.

## HIST 4075 - U.S. at War 20th Century

**Credit Hours:** 3

This class examines the principal causes for U.S. wars in the 20th century and the lasting consequences of those engagements, including political, legal, social, cultural, and economic. The class focus will be changes to society, racial or gender discrimination, war opposition, media portrayals, and the wars' effect on foreign relations.

## HIST 4120 - US Civil Rights Movement

**Credit Hours:** 3

This course explores the modern Civil Rights Movement in the United States as a component of the larger Black Freedom Movement. In analyzing the Civil Rights Movements, students will gauge major organizations, events, theaters, national and local leaders. Important victories, legislation and legacies will also be explored.

**Prerequisite:** ENGL 1200

## HIST 4140 - History of Hip Hop

**Credit Hours:** 3

This class will explore the "evolution" and theoretical "foundations" of Hip Hop. Hip Hop has transcended racial and geographical boundaries and has become a "mode and model" cultural phenomenon that is evident in Europe, Africa, Asia, the Caribbean, Latin and South America.

**Prerequisite:** HIST 3019
**General Education Attribute**

- Competency-Intercultural Fluency

## HIST 4160 - American Labor History

**Credit Hours:** 3

This course examines the history of American working men and women from the colonial period to the present. It also explores the growth of the trade union movement and its socio-political and economic impact, and the nature of the work performed by labor and the way laboring people have lived.

## HIST 4400 - Advanced Topics in Global History

**Credit Hours:** 3

This class will explore Global history from a variety of perspectives each semester. The focus of the class will vary between different historical time periods and topics to give students a broad-based overview while focusing on specific historical events. The topic varies by semester and the course is repeatable.

**Prerequisite:** ENGL 1200

## HIST 4560 - History of Law

**Credit Hours:** 3

This course traces the origins of Western law from ancient civilizations through Greece, the Roman Twelve Tables, Justinian Code, and English common law to American Constitutionalism. Students will gain an understanding of ancient, Greek, Roman, Justinian, canon, and common law legal traditions.

## HIST 4640 - Digital History

**Credit Hours:** 3

This course explores the emerging fields of digital history. As our methods of communication, storage, and story telling continue to live and operate in the digital realm, it will also prepare future historians to continue quality historical work in those mediums. Students will actively engage in the the practice of digital history.

**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Information Literacy

## HIST 4700 - Advanced Topics in Historical Culture, Diversity, Inclusion

**Credit Hours:** 3

This class will explore history from a variety of cultural, diversity, and inclusion perspectives each semester. The focus of the class will vary between different historical time periods and topics to give students a broad-based overview while focusing on specific historical events. The topic varies by semester and the course is repeatable.

**Prerequisite:** ENGL 1200
**General Education Attribute**

- Competency-Intercultural Fluency

## HIST 4900 - History Capstone

**Credit Hours:** 3

This course is a study of historians and their writings; changing interpretations of major topics in history; and historical research and writing. This course is a writing-intensive course.

**General Education Attribute**

- Competency-Intensive Writing
- Competency-Keystone Experience

## HIST 4950 - History Internship

**Credit Hours:** 0 TO 12

Application of historical methodologies to various professional environments, under faculty supervision.

## HLPE 1330 - Personal Health

**Credit Hours:** 3

This course assists students to acquire a background of scientific knowledge related to health education. It also studies recent developments and controversial issues in health information. It emphasizes topics commonly taught in public school health settings in anticipation of a teaching career in this field.

## HLPE 1333 - School and Community Wellness

**Credit Hours:** 3

This course provides students with an overview of community health education principles and practices. Areas of focus include the framework for corm health, an assessment of current and projected leading causes of death, an analysis of health status of under served and special populations, community health priorities, and environmental health issues.

## HLPE 1350 - Drugs/Alcohol

**Credit Hours:** 3

This course surveys issues surrounding the use, misuse, and abuse of licit and illicit drugs, including, but not limited to, alcohol, tobacco, over-the-counter and prescription drugs, performance enhancing drugs, and habituating and addictive substances. Prevention and intervention strategies are also incorporated.

## HLPE 2150 - Swimming and Tumbling

**Credit Hours:** 3

This course provides for the development and improvement of basic skills and knowledge in swimming and gymnastics. It emphasizes safe practices as well as various methods and techniques.

## HLPE 2200 - Basketball and Soccer

**Credit Hours:** 3

This course prepares students to teach team games by providing background, basic skills, teaching techniques, game strategies, and class organization structure. Students learn to plan and teach team sport skills in developmentally progressive lessons.

## HLPE 2220 - Principles of Fitness Instruction

**Credit Hours:** 3

This course provides knowledge and skills involved in fitness instruction. Students are introduced to a variety of concepts related to resistance training instruction, aerobic exercise instruction, flexibility training, and related fitness activities. Students will be introduced to requisite principles and skills leading to fitness instruction certification.

## HLPE 2250 - Volleyball an Softball

**Credit Hours:** 3

This course prepares students to teach team games by providing background, basic skills, teaching techniques, game strategies, and class organizational structure. Students learn to plan and teach team sport skills in developmentally progressive lessons.

## HLPE 2300 - Badminton, Golf, and Tennis

**Credit Hours:** 3

This course prepares students to teach lifetime activities of golf, tennis,and badminton by providing fundamental knowledge, basic skills, teaching techniques, and class organizational structure. Students will learn to plan and teach lifetime activities in developmentally progressive lessons.

## HLPE 2325 - Pedagogy of Team Sports

**Credit Hours:** 3

This course prepares students to teach team games by providing background, basic skills, teaching techniques, game strategies, and class organizational structure. Students learn to plan and teach team sport skills in developmentally progressive lessons.

## HLPE 2330 - Pedagogy of Lifetime Activities

**Credit Hours:** 3

This course prepares students to teach lifetime activities of golf, tennis,and badminton by providing fundamental knowledge, basic skills, teaching techniques, and class organizational structure. Students will learn to plan and teach lifetime activities in developmentally progressive lessons.

## HLPE 2345 - Family Health and Sex ED

**Credit Hours:** 3

This course reviews the biological, psychosocial moral, legal, and practical aspects of human sexuality. It prepares students to teach sexual health issues in school and community health settings.

## HLPE 2378 - Physical Education in Elementary Schools

**Credit Hours:** 3

This course teaches the importance of physical education in elementary schools and demonstrates how such programs can be developed, organized, and implemented. A field experience provides students observation and participation in an elementary physical education setting.

## HLPE 2450 - Human Sexuality

**Credit Hours:** 3

This course reviews the biological, psychosocial moral, legal, and practical aspects of human sexuality. It prepares students to teach sexual health issues in school and community health settings.

## HLPE 2780 - Physical Education in the Elementary School

**Credit Hours:** 3

This course teaches the importance of physical education in elementary schools and demonstrates how such programs can be developed, organized, and implemented. A field experience provides students observation and participation in an elementary physical education setting.

## HLPE 3000 - Anatomy I

**Credit Hours:** 3

This is the first of a two course sequence involving the study of normal structure and function of the human body. Designed specifically for Health and Physical Education Majors, this course surveys the structure and function of the integumentary, endocrine, cardiovascular, lymphatic, immune, respiratory, digestive, and urinary systems. Emphasis will be placed on the affect of exercise and fitness levels on each of these systems separately and the human body in general.

## HLPE 3010 - Anatomy II

**Credit Hours:** 3

The second of a two course sequence involving the study of normal structure and function of the human body. Designed specifically for Health and Physical Education Majors, this course will focus on structure and function of the skeletal, muscular, and nervous systems. Particular attention will be focused on motor behavior and its components; motor control, motor learning, and motor development with regard to the integration of these three systems.

## HLPE 3060 - Classroom Management in Physical Education

**Credit Hours:** 3

This course helps students acquire fundamental knowledge and skills in effective classroom management. Emphasis is placed on enabling the student to provide quality instruction within health education and physical education settings. Students are advised to complete this course prior to enrollment in HLPE 4950.

## HLPE 3110 - Planning and Evaluation

**Credit Hours:** 3

This course provides the foundation necessary to plan and evaluate health and physical education instruction in school and community settings. Specific areas of concentration include curriculum development and assessment, unit planning, program planning, and health and physical education evaluation in classroom and community settings.

## HLPE 3140 - Kinesiology

**Credit Hours:** 3

The purpose of this course is to study human movement and the physical and physiological principles upon which it depends. It analyzes human motion as based on anatomic, physiologic, and mechanical principles. This course includes laboratory experience in selected topics.

## HLPE 3150 - Management of Sport and PE Programs

**Credit Hours:** 3

This course describes the management and administrative duties in physical education and athletics. It studies problems, case studies, and strategies to help prepare the entry level manager to operate effectively in setting priorities for planning, evaluating, and implementing highly diverse activities.

## HLPE 3500 - Exercise Physiology

**Credit Hours:** 3

This course will explore the physiological responses and phenomena which are elicited by exercise. Opportunity for use of scientific instrumentation and practical application of exercise physiology principles to teaching and coaching situations will be provided by regular laboratory experience.

## HLPE 3600 - Adapted Physical Education

**Credit Hours:** 3

This course provides the knowledge and skills necessary to teach students with disabilities physical education in an inclusive environment. Assessment, planning, instructional techniques and specific sport adaptations for acquisition of psychomotor skills are emphasized. Field experiences working directly with special populations in physical education will be required.

## HLPE 3640 - Health Methodology

**Credit Hours:** 3

This course provides curriculum plans and strategies for effective health instruction. It presents and models principles of interactive instruction and classroom management through a variety of teaching experiences.

## HLPE 3840 - Technology Integration in Health and Physical Education

**Credit Hours:** 3

This course provides the knowledge, skills, and understanding need to effectively integrate technology into the work environments of fitness, human performance, recreation, sport, health and physical education. Basic data management skills will be enhanced, and use of hardware, desktop and web-based software, apps, sensors and accessories to maximize quality of life and longevity will be explored.

## HLPE 4000 - Critical Issues in Health

**Credit Hours:** 3

This course provides a foundation for the planning,development, and evaluation of health programs. It also examines professional development, grantsmanship, and computer use within various health education settings.

## HLPE 4950 - Student Teaching

**Credit Hours:** 6 TO 12

This course, providing experience in elementary, middle, and secondary schools, includes participation in teaching and other activities of the teacher. It emphasizes practical experience in aiding children to develop knowledge, skills, and appreciations regarded as essential to democratic society. Students may enroll in HLPE 4950 for six semester credit hours only under extenuating circumstances and with permission of the chairperson of the Health and Physical Education Department and the dean of the School of Education.

## HLSC 1010 - Foundations of Health Science

**Credit Hours:** 3

Describes health science/care professions, their histories, their education, licensing requirements, employment trends, earnings potential and career paths. Professional healthcare providers share their personal stories, introduce you to how they work with the healthcare system, and describe what a typical day looks like thru collaboration.

## HLSC 1100 - Allied Health Anatomy and Physiology I

**Credit Hours:** 4

This course studies the structure and function of the human body for those majors in Allied Health and diploma school of nursing. Beginning at the sub-cellular level and progressing to the organ systems, the course includes the integumentary, cardiovascular, lymphatic, gastrointestinal, respiratory, urinary, endocrine, and reproductive systems.

## HLSC 1150 - Current Health Issues

**Credit Hours:** 3

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.

**General Education Attribute**

- Wellness & Personal Health

## HLSC 1200 - Allied Health Anatomy & Physiology II

**Credit Hours:** 4

This course studies the neuromuscular and musculoskeletal structure and functions of the human body for those majors in Allied Health and diploma school of nursing. The course takes a systematic approach to the study of the bones, joints, muscles and nerves. Laboratory experiences include hands-on palpation needed for clincial application.

## HLSC 1500 - Introduction to Athletic Training

**Credit Hours:** 4

This course provides the students associated with PennWest an overview of the profession of athletic training and an introduction to basic knowledge and skills utilized within the profession. Student will be provided with the basic concepts and skills related to the current domains of the athletic training profession including hands-on skills.

## HLSC 2100 - Culturally Competent Community Health

**Credit Hours:** 3

This introductory course explores the complexities of health strategies to improve the health of communities. Learners explore community and public health theories and principles useful for delivery of health care for all. Learners will examine current delivery systems in the U.S. and be introduced to the major areas of public health.

**General Education Attribute**

- Competency-Intercultural Fluency

## HLSC 2250 - Medical Terminology

**Credit Hours:** 2

Students will gain an understanding of basic elements, rules of building and analyzing medical words, and medical terms associated with the body as a whole. Using a systems-approach, they will define, interpret, and pronounce medical terms relating to structure and function, pathology, diagnosis, and clinical procedures, oncology, and pharmacology.

## HLSC 2500 - Nutrition for Health and Wellness

**Credit Hours:** 3

This introductory course is designed to provide learners with a basic understanding of nutritional principles including the energy metabolism, ingestion, absorption, and transport of nutrients. The course will provide information on the role of macro-nutrients and micro-nutrients. Weight management and nutrition throughout the lifespan included.

## HLSC 2750 - Functional Kinesiology

**Credit Hours:** 3

Kinesiology utilizes principles of biomechanics, musculoskeletal anatomy, and neuromuscular physiology. This course will prepare students to analyze movement in order to correct movement abnormalities for clients/patients as well as rehabilitate and improve human performance.

**Prerequisite:** HLSC 1200 or EXSC 1315
**General Education Attribute**

- Competency-Applied Methodologies

## HLSC 3100 - Special Populations and Pathology of Disease

**Credit Hours:** 3

This course examines the disease process on the system level as well as specific needs of physically active individuals considered a special population or with known disabilities. Special emphasis is placed upon pathologies commonly encountered in the ambulatory care setting. Students will also investigate the basic concept of disease.

**General Education Attribute**

- Competency-Intensive Writing

## HLSC 3150 - First Aid and Personal Safety

**Credit Hours:** 3

First Aid and Personal Safety is a course designed to convey information to understand the cause-effect, prevention and treatment of emergency situations. Two year certification if offered by the American Heart Association.

**General Education Attribute**

- Wellness & Personal Health

## HLSC 3400 - Sports Nutrition

**Credit Hours:** 3

This course entails the study of basic concepts of nutrition and the effects of sound nutritional practices on everyday life and sports. The course is designed to allow students to apply nutritional concepts, thus enhancing athletic performance.

**General Education Attribute**

- Wellness & Personal Health

## HLSC 3600 - Holistic Medicine and Healthcare

**Credit Hours:** 3

This course introduces the learner to complementary and alternative medicine (CAAM) treatments and therapies, covering a broad range of healing philosophies. Topics include but are not limited to: traditional Chinese medicine, aroma therapy, chiropractic, reflexology, herbal medicine, etc. The role of the naturopathic physician will be explored.

## HLSC 4250 - Health Science Capstone

**Credit Hours:** 4

Students will produce a major culminating piece of academic work that synthesizes health science concepts and/or a career path. This will take the form of a research activity including original research, creation of an educational resource or other extensive produced work that is approved by the course instructor.

**General Education Attribute**

- Competency-Intensive Writing
- Competency-Keystone Experience

## HLSC 4600 - Sports Medicine and Evidence Based Research

**Credit Hours:** 3

Students will identify different types of research, particularly descriptive, experimental, and evidence- based. Emphasis is placed on developing library research skills, critically analyzing research, and becoming a knowledgeable consumer of research in order to apply it in a variety of allied health professions.

**General Education Attribute**

- Competency-Information Literacy

## HONR 3100 - Honors Discoveries in Natural Science and Technology

**Credit Hours:** 3

Each course will focus on a topic of instructor's choice that explores processes, components, and dynamics of the natural world and/or use of technology to change or control that world and alter the human condition. Disciplinary approaches may include but not limited to: biology, chemistry, geology, physics, mathematics or environmental science.

**General Education Attribute**

- Discoveries-Natural Science & Technology
- Competency-Applied Methodologies
- Competency-Information Literacy

## HONR 3200 - Honors Discoveries in the Social Sciences

**Credit Hours:** 3

Each course will focus on a topic of the instructor's choice that explores the components, processes, development, dynamics and/or impacts of individual & collective human behavior. The topic may be explored through topics including: political science, criminal justice, sociology, psychology, anthropology, communication studies, and economics.

**General Education Attribute**

- Discoveries-Social Sciences
- Competency-Applied Methodologies
- Competency-Information Literacy

## HONR 3300 - Honors Discoveries in Arts and Humanities

**Credit Hours:** 3

Each class will focus on a topic selected by the instructor. Questions of human values, beliefs, culture, experience and creative expression will be explored via that topic. Media may include a combination of any of, but not limited to: literature, history, the fine arts, creative writing, photography, the graphic arts, music, theatre, and film.

**General Education Attribute**

- Discoveries-Art/Humanities
- Competency-Applied Methodologies
- Competency-Information Literacy

## HONR 3900 - Honors Independent Study

**Credit Hours:** 1 TO 9

This course creates an opportunity for an honors student to work independently on a research or creative project, with guidance from a faculty member. The student and faculty member will meet ahead of time to determine the scope of the course and the number of credits.

**Prerequisite:** ENGL 1200

## HONR 4990 - Honors Thesis Project

**Credit Hours:** 3

The senior Honors thesis project serves as the culmination of a student's work in the Honors Program. Under the supervision of a faculty advisor and committee of the student's choosing, the Honors student seeks to make a contribution to their discipline that supplements the student's departmental expectations.

**Prerequisite:** ENGL 1200 and COMJ 1010
**General Education Attribute**

- Competency-Intensive Writing
- Competency-Keystone Experience

## HOSP 1001 - Hospitality Operations and Management

**Credit Hours:** 3

The course introduces the broad world of hospitality services and their relationship to the tourism industry. The course will provide an overview of the history, function, and organizational structures of the hospitality industry and the role of the manager.

## HOSP 2777 - Casinos and Gaming Entertainment

**Credit Hours:** 3

This course examines the history and development of gaming and casino operations. Managerial, technical, and operational concepts of casinos and gaming entertainment will be reviewed. Other topics will include regulatory issues and implications for game protection. Responsible gaming operations and management will be emphasized.

## HOSP 3500 - Hotels Resorts Lodging

**Credit Hours:** 3

Students will learn lodging management skills, including the managerial functions and responsibilities of the rooms division, marketing and sales, food and beverage, and non-room revenue streams. Students will learn about the relationship between various divisions and each department's importance in the lodging enterprise's success.

## HRMG 3000 - Principles of Human Resource Management

**Credit Hours:** 3

Students prepare to manage people in a variety of organizational contexts. Topics include job analysis, recruitment, selection, strategic fit, employment regulations, development, performance management, high-performance work systems, rewards, safety, health, and others. Theory and applications set the foundation for deeper HRM studies and careers.

## HRMG 3100 - Compensation Management

**Credit Hours:** 3

An examination of the general structure of an organization and the rewards employees seeks in exchange for the efforts

and contributions they provide. Topics to be offered include people and word rewards, a motivating work environment, government and market influences, job contract analysis, developing pay structures, pay for performance, employee benefits, and administration of the compensation plan.

## HRMG 3200 - Labor Relations

**Credit Hours:** 3

Students analyze the role of labor organizations in today's society. Students compare the impacts and effects of labor organizations on unionized and non-¬unionized organizations and their employees, including unions' influence on social, political, legal, economic, technical, cultural, and global environments.

## HRMG 3330 - Organizational and Career Development

**Credit Hours:** 3

Students learn theoretical and practical tools needed for organizational and career development. Change management, adult learning, needs analyses, performance, program evaluation, metrics, technologies, and related are examined to develop and implement training programs for organizational stakeholders.

## HRMG 3400 - Occupational Safety Management

**Credit Hours:** 3

Students learn theories, techniques, regulations, and trends on safety and health within diverse organizational settings, industries, and occupations. Developing policies and following procedures that promote safer workplaces and comply with existing directives are ways in which this course adds value to student's professional development.

## HRMG 3520 - Human Resource Information Systems

**Credit Hours:** 3

Students receive an introduction to technology and data in Human Resource administration. This course helps students understand the integration of technology into the human resource department. It will address the strategic needs of organizations and how they are met using data.

## HRMG 3630 - Diversity, Equity, and Inclusion at Work

**Credit Hours:** 3

Students appraise evolving organizational, societal, and regulatory contexts influenced by diversity dimensions such as gender, race, ethnicity, ability, and others less visible. Opportunities, challenges, and techniques with professional approaches to diversity are reviewed with the goal of promoting more equitable and inclusive workplaces.

**General Education Attribute**

- Competency-Ethical Reasoning

## HRMG 4600 - Global Talent Management

**Credit Hours:** 3

Students are given a framework for understanding the legal, regulatory, and business challenges of managing a global workforce. This includes a comparison of international labor markets in terms of costs, demand/supply, culture, and law. Current events and case studies are used to illustrate issues faced by multinational firms.

**Prerequisite:** MGMT 3000
**General Education Attribute**

- Competency-Intercultural Fluency

## HRMG 4750 - Employment Regulations

**Credit Hours:** 3

Students examine the ways that people management practices are influenced by workplace policies, unionization, federal, state, and local statutes. This course puts an emphasis on prevention and compliance to improve employment conditions. OSHA, EEOA, NLRA, ADAAA, workers' compensation, FMLA, IRCA, WARN Act, and discrimination cases are included.

**Prerequisite:** HRMG 3000

## HRMG 4850 - Hrm Regulations

**Credit Hours:** 3

Examines the industrial relations functions as they relate to federal, state, and local statutes and industrial policies. Includes OSHA, EEOA, NLRA, LMRA, and LMRDA, workers' compensation, and unemployment compensation. Offered Fall.

## HRMG 4900 - Human Resource Management Capstone

**Credit Hours:** 3

This is the capstone course for Human Resource Management students. Students will apply what they have learned throughout their HR coursework to real-world and hypothetical case studies and simulation problems and effectively communicate their findings through written analyses, oral presentations, and reports.

**Prerequisite:** HRMG 3000
**General Education Attribute**

- Competency-Keystone Experience

## HRMG 4950 - Internship for the Department of Management and Marketing Programs

**Credit Hours:** 1 TO 12

Students are placed with an organization for a practical training experience to supplement academic learning. Through coursework, students apply the theories, concepts, and techniques learned for further career readiness and success.

**General Education Attribute**

- Competency-Keystone Experience

## HRMG 4990 - SHRM-CP/SHRM-SCP Certification Preparation

**Credit Hours:** 3

This course is intended for senior-level HR students or non-traditional students interested in sitting for the SHRM exam. It is a structured explanation of each competency in the SHRM Body of Competency and Knowledge and study tools within the Learning System. Completion of this course does not guarantee success on the SHRM-CP/SHRM-SCP exam.

## HSRH 1260 - Introduction to Rehabilitation and Human Services

**Credit Hours:** 3

Serves as an interdisciplinary orientation to the field of rehabilitation and human services, including education, mental health, addictions, gerontology, disability, youth services, and criminal justice. The history and philosophy of human services, human services careers and function of human services agencies are explored with an emphasis placed on the reciprocal interactions between human service providers and their consumers. Offered each semester.

## HSRH 2270 - Neurological Impairments and Physical Disorders

**Credit Hours:** 3

Students explore characteristics and intervention strategies for physical disabilities/neurological impairments, chronic health issues, assistive technology, and related services across various settings. Discussion, simulation, research, and projects pertaining to education, related services, and habilitation/rehabilitation will be used.

**General Education Attribute**

- Competency-Information Literacy

## HSRH 2500 - Human Relations Skills

**Credit Hours:** 3

Assists students in acquiring knowledge and skill in the performance of required tasks and/or roles of rehabilitation service staff in developing humanizing environments for persons with disabilities in various settings.

## HSRH 2750 - Introduction to Occupational Therapy

**Credit Hours:** 3

This is an introductory level course for rehabilitative science majors contemplating the Pre-Occupational therapy concentration and for students in related majors who are interested in learning more about the field and practice of occupational therapy (OT). The goal is to allow Pre-OT concentration students a better understanding of the field they intend to pursue, including professional issues, graduate school requirements and professional identity. Offered as needed.

## HSRH 2950 - Internship in Human Services and Rehabilitation

**Credit Hours:** 3 TO 10

Students undertake a supervised experience in community based (re)habilitation programs for people with

developmental/intellectual disabilities , addictions , dual-diagnoses, and elderly. It includes professional development experiences in various community settings and/or human service agencies.

## HSRH 3000 - Introduction to Professional Counseling

**Credit Hours:** 3

This course provides an introduction to professional counseling. It provides a broad overview of its historical and theoretical foundations, and includes introductory information about professional counseling organizations, standards, and ethics; the basic core body of knowledge; professional credentialing; and essential interviewing and counseling skills. The course begins the process of the development of professional identity. It stresses self-growth and awareness as well as observational skills as related to becoming an agent of individual, group, family, and systems change. Must be Junior status or above.

## HSRH 3050 - Case Management

**Credit Hours:** 3

This course provides undergraduate students with theoretical, applied knowledge of the critical dynamics which constitute effective case management within the field of rehabilitation and human services. This course focuses on an overview of philosophical perspectives and skills that provide a foundation for case managers. Students will gain practical experience through the application of these skills in direct case studies and the development of service plans. Students will explore best practices, future trends, challenges and visions in helping to meet the needs of diverse individuals who are considered at-risk. Offered fall, biannually.

## HSRH 3700 - Assessment in Human Services and Rehabilitation

**Credit Hours:** 3

This course features a practical hands-on approach to assessment with a variety of specific populations. Target groups include persons in need of human services, to include disadvantaged, developmental disabilities, mental health and substance abuse/dependency disorders, and aging and child/adolescent populations. The course covers assessment fundamentals, standardized instruments for use with specific populations and practical techniques and strategies, leading to the formulation of therapeutic treatment plans.

## HSRH 3995 - Seminar for Human Services and Rehabilitation Internship

**Credit Hours:** 2

This companion course to HSRH 2950 and HSRH 4950 enables students to evaluate their internship experience in a structured seminar setting to better understand and integrate fundamental agency activities such as assessment, treatment planning, team meetings, case management, and therapeutic interventions, as well as agency policies and procedures.

**Prerequisite:** HSRH 2950 or HSRH 4950
**General Education Attribute**

- Competency-Intensive Writing

## HSRH 4050 - Substance Abuse

**Credit Hours:** 3

Participants study the physiological and psychosocial implication of drug or alcohol abuse, over-medication, and drug dependence, emphasizing intervention, advocacy, treatment, and prevention. Fall Semester.

## HSRH 4060 - Opioid Abuse

**Credit Hours:** 3

This course includes an overview of the history of drugs of abuse and the biological bases of behavior including the neurological mechanisms of addiction. General categories of addictive substances are surveyed before embarking upon a more in-depth exploration of opioid compounds. The medicinal properties of a range of both licit and illicit opioids are discussed, as is the related abuse potential. Medications used to treat opioid use disorder are covered, as are the strategies of opioid substitution, opioid antagonism and harm reduction. Offered as needed.

## HSRH 4100 - Prevention and Treatment Strategies in Substance Abuse

**Credit Hours:** 3

Participants engage in the study of societal pressures, attempts to prevent substance abuse, and treatment strategies along with the comparative analysis of efficacy. Offered spring semester annually.

## HSRH 4210 - Advocacy and Public Policy in Addictions and Recovery

**Credit Hours:** 3

This course provides students with a theoretical and applied knowledge of the critical aspects of individual advocacy and systems advocacy in the world of chemical dependency prevention and treatment. The student will become familiar with current addictions legislation on public policy and their intended and unintended impact on individuals and communities. Students will formulate plans to foster positive change and learn methods of effective advocacy to positively change services, policies, laws, and rules.

## HSRH 4300 - Aging & The Human Services

**Credit Hours:** 3

This course will provide information related to older adult care management from the framework of human services systems. Concepts of client triage, assessment, planning, and brokering will be reviewed within the context of identifying problems associated with aging, identifying components of human services delivery systems, and case management skill development.

## HSRH 4340 - Post -Concussive Social and Emotional Wellness and Recovery

**Credit Hours:** 3

The primary purpose of this course is to provide an examination of various ways concussion can impact social and emotional functioning. The identification of general conditions that are shown to promote post-concussive wellness and recovery will be explored, as well as the identification of an individual's environmental and personal resiliency and protective factors and ways these strengths might be utilized to help the client obtain a pre-injury level of functioning.

**Prerequisite:** Must have a minimum of 30 credits completed.

## HSRH 4400 - Principles of Psychiatric Rehabilitation & Recovery

**Credit Hours:** 3

This course introduces students to the principles of psychiatric rehabilitation and recovery. Inherent in this philosophy is the belief that every individual has the capacity for recovery and that desirable treatment systems build upon strengths and encourage and support the involvement of persons in normative community living, learning and working situations.

## HSRH 4700 - Intervention Strategies in Human Services & Rehabilitation

**Credit Hours:** 3

This course features a practical hands-on approach to intervention and treatment with a variety of specific populations. Target groups include people with developmental disabilities, mental health and chemical dependency disorders, as well as the treatment of aging and adolescent populations. The course covers fundamental issues, knowledge and the practical application of applied strategies and techniques, including the formulation, implementation, and evaluation of therapeutic treatment plans.

## HSRH 4750 - Administration Rehabilitation Delivery Systems

**Credit Hours:** 3

A study of the business and personnel aspects of functioning in and managing human service delivery systems. Examines organizing, operating, and managing human service systems relative to legal, economic, and personnel standards and practices. Prepares students to interact with legal, financial, and business experts in the operation and development of rehabilitation services.

## HSRH 4950 - Internship in Human Services and Rehabilitation

**Credit Hours:** 3 TO 10

Students undertake a supervised experience in community based (re)habilitation programs for people with developmental/intellectual disabilities , addictions , dual-diagnoses, and elderly. It includes professional development experiences in various community settings and/or human service agencies.

**General Education Attribute**

- Competency-Applied Methodologies
- Competency-Keystone Experience

## IENT 2000 - Introduction to Enterprise Systems

**Credit Hours:** 3

This course demonstrates that enterprise systems (ES) are comprised of computer hardware and software, business processes and people. It also provides an introduction to the components of management information systems (MIS) and investigates why enterprise systems are a necessity for business success and growth. This course uses SAP ERP.

## IENT 3000 - ERP Business Process Integration

**Credit Hours:** 3

This course will explore the concepts of the enterprise structure and organizational data, master data, transactional data, business scenarios and processes, and business process integration points. Key business process may include financial accounting, procurement, fulfillment, and production. This course uses SAP ERP.

**Prerequisite:** ACC 2000 and IENT 2000

## IENT 3050 - ERP Configuration

**Credit Hours:** 3

This course will explore the concepts, principles, and tools for configuring the Enterprise Resource Planning (ERP) system to meet the enterprise's business requirements. Configuration allows the enterprise to ensure the ERP system reflects the enterprise's organizational structure, master data, and business processes. This course uses SAP ERP.

**Prerequisite:** ACC 2000 and IENT 2000

## IENT 3100 - Enterprise Systems Implementation

**Credit Hours:** 3

Students will learn how to implement information system (IS) technologies using project management processes and methodologies that are aligned with the Project Management Institute's (PMI) Project Management Body of Knowledge (PMBOK). The students will manage an IS project by creating project deliverables. This course uses Microsoft Project.

**Prerequisite:** ACC 2000 and IENT 2000

## IENT 3150 - Enterprise Systems Business Analytics

**Credit Hours:** 3

Students will cover data analytics with a practical perspective using industry tools. Such tools may include SAP Analytics Cloud, ERP Simulation, and Microsoft Excel. Topics include data, data mining, business intelligence, visualizations, predictive modes, and more to prepare insights and support decision making.

**Prerequisite:** ACC 2000 and IENT 2000

## IENT 4000 - Digital Transformation and Innovation

**Credit Hours:** 3

Digital transformation explores how cloud computing, big data, artificial intelligence, and the internet of things' (IOT) capabilities transforms your business and competition. This course also explores and provides an orientation to innovation and Design Thinking.

**Prerequisite:** ACC 2000 and IENT 2000

## IENT 4950 - Internship for the Department of Management and Marketing Programs

**Credit Hours:** 3 TO 12

Students are placed with an organization for a practical training experience to supplement academic learning. Through coursework, students apply the theories, concepts, and techniques learned for further career readiness and success.

**General Education Attribute**

- Competency-Keystone Experience

## INFO 2250 - The Information Society

**Credit Hours:** 3

Examines the roles and functions of information in society with particular reference to libraries and how they preserve, organize, and make information available to members of society. The value of libraries as institutions is examined as is the role of libraries in ensuring a free and democratic society through the provision of free access to information for all citizens. While all library types are considered, the focus of the course is on public libraries in American communities, including their history, evolution, and current status. Offered annually.

## INFO 2560 - Information for Life

**Credit Hours:** 3

Basic information retrieval and assessment skills provide a foundation for successful work in college and careers. This course teaches processes for information retrieval and vetting. There will be an emphasis on evaluation of online resources, with attention to distinctions among the various methods such information is generated. Basic library skills and traditional information sources will be covered. Practical applications for everyday life choices are included.

## INFO 2570 - Basic Information Sources

**Credit Hours:** 3

Examines traditional and technological approaches to locating information. Analyzes the criteria for selecting reference materials and examines reviewing media for new reference sources. Explores the organization of reference service. Includes the study of selected reference sources.

## INFO 3550 - Informed Citizenry

**Credit Hours:** 3

Examines a variety of government-sponsored resources, agencies, and associations available to the general public that enhance civic knowledge, citizenship and social responsibility.

## INFO 3560 - Media for Young Adults

**Credit Hours:** 3

Examines literature and other resources for young adults, including principles related to the selection, evaluation, and use of such materials. Considers and analyzes the reading interests of teenagers, the characteristics of young adult literature, and methods of introducing young adults to books and non-book resources, including electronic products and services. Examines techniques of developing/preparing book talks, reviews, reader advisory services, and other programs for young adults, with attention being paid to under served and special needs groups. Biennially.

## INFO 3570 - Organization of Information

**Credit Hours:** 3

Examines organization of print and non-print materials for effective service, principles and methods of cataloging, and the structure and application of classification systems and standard subject authority lists.

## INFO 3580 - Media for Children

**Credit Hours:** 3

Surveys children's literature and related materials. Examines the principles of selection and evaluation of books, periodicals, and other materials for children. Includes reading guidance, with attention to materials for special groups; development of general and subject bibliographies; preparation of annotations; techniques of story-telling; and the selection of materials for the story hour. Includes a required field experience.

## INFO 3590 - Information for Health Living

**Credit Hours:** 3

Examines a variety of resources, agencies, and associations that help citizens to manage their own and their family's well-being and to make them effective partners with their health care providers.

## INFO 3630 - On the Money: Information for Financial Literacy

**Credit Hours:** 3

This course provides the student with the skills and tools necessary to determine personal and consumer financial literacy needs and to locate, evaluate, and disseminate information resources. The course will allow students to develop techniques and tools to address financial information needs in library and information centers. Offered yearly.

## INFO 4000 - Field Experience

**Credit Hours:** 3 TO 6

Provides a laboratory experience in the professional atmosphere of a cooperating library or information center; allows undergraduate students who are not interested in school librarianship an opportunity to have an applied field experience in a public or special library. Evaluation based on observation at the field site, an evaluative paper, and participation in professional seminars. Enrolled by permission of instructor. Offered each semester.

## INFO 4040 - Developing Library Collections

**Credit Hours:** 3

Acquiring familiarity with basic bibliographical tools, current reviewing media, and acquisitions procedures. Establishment of policies and criteria for the selection and evaluation of book and non-book materials. Graduate students taking this course will be required to do additional work. Offered yearly.

## INFO 4130 - Business Reference

**Credit Hours:** 3

Surveys the literature and services common in a business library or department of business information. Includes in-depth examination of major business reference tools, as well as in-depth examination of the special operations, organization, and management of business libraries and departments of business information. Annually.

## INFO 4450 - The Genealogy Quest

**Credit Hours:** 3

This course teaches fundamental skills in researching family history, including locating primary documents, evaluation of reliability of documents and completion of genealogical charts. Related skills important to family history will be considered, such as oral history, writing family histories, DNA, creation and retention of digitized materials through photography and scanning, know as personal digital archiving, and proper storage of family documents, artifacts and heirloom items. Offered every term.

## INFO 4810 - Library Marketing and the Community

**Credit Hours:** 3

Addresses the following aspects of successful community analysis and marketing of library services; the current and potential library users; their specific information needs; and how the library can provide adequate service. Offered yearly.

## INST 4900 - Seminar in Interdisciplinary Studies

**Credit Hours:** 3

This is the capstone course for the Interdisciplinary Studies student. Its focus is on the integration of information learned from diverse, but interrelated courses within the curriculum. Focus will center on individually selected and inter/cross discipline related theories, ethics, skill sets, and research methods.

**General Education Attribute**

- Competency-Keystone Experience

## INST 4920 - Seminar in Interdisciplinary Studies, Science and Technology

**Credit Hours:** 3

This course is the culminating experience for Interdisciplinary Studies, Science and Technology majors. Students will apply the knowledge foundations and skill sets acquired in their STEM courses to the solution of a human problem. Students work in teams to develop solutions. Students also explore and prepare a career plan.

**General Education Attribute**

- Competency-Keystone Experience

## ITE 3050 - OSHA Industrial Safety

**Credit Hours:** 3

The purpose of the course is to provide instruction to entry-level workers and students on general safety and health.

Topics covered include the following: introduction to OSHA, the OSHA Act/general duty clause, inspections, citations and penalties, record-keeping, walking and working surfaces, mean of egress and fire protection, electrical hazards, personal protective equipment, respiratory protection, hearing protection, machine guarding, hazard communication, chemical safety, lockout/tagout, confined space hazards, welding brazing and cutting hazards, asbestos awareness, hazardous materials, industrial hygiene, and ergonomics.

## ITE 3410 - Quality Control

**Credit Hours:** 3

An introduction to the methods used in analyzing quality control, this course's topics include a study of the fundamentals of statistics and probability, the construction and use of control and attribute charts, the definition and use of acceptance criteria, and the use of computers in modern quality control operations. An overview of the role of the quality control department of a manufacturing facility will be presented.

## ITE 3420 - Quality Planning and Analysis

**Credit Hours:** 3

This course builds on the techniques learned in Quality Control and applies those techniques to an industrial organization in a practical way. The student will learn the basics of the six sigma approach to quality and the use of quality functional deployment to identify customer needs. Students will study how a quality plan can be developed and implemented. The course will apply quality to all aspects of the organization, including personnel, shop floor operations, the supply chain, and products and services.

## ITE 3750 - Principles of Production

**Credit Hours:** 3

An introduction to the methods used in analyzing the production flow from raw materials to the finished products. Topics covered include a study of operations types, operations layout, decision analysis, work measurements, production and inventory control, scheduling and waiting line analysis. An overview of the role of production management will be presented.

## ITE 3760 - Technical Supervision

**Credit Hours:** 3

This course examines the aspects of technical supervision and brings the human factor into operations. The student will learn the basics of the supervision of technical operations with a focus on manufacturing and service environments. This course will include the basis for motivating employees and will identify some of the special problems associated with technical production and manufacturing.

## ITE 3850 - Industrial Cost Estimating

**Credit Hours:** 3

An introduction to the methods used to cost and budget a production organization, this course covers some accounting basics, cost accounting, the time value of money and cost estimating as related to industrial operations.

## ITE 4200 - Production Analysis

**Credit Hours:** 3

An introduction to the methods used in analyzing the production flow from raw materials to the finished product. Topics covered include a study of the major manufacturing processes, materials handling, plant layout, operations analysis, industrial engineering, inventory control and shipping. An overview of the role of production management as it relates to the various areas of an industrial environment will be presented.

## ITE 4610 - Supply Chain Fundamentals

**Credit Hours:** 3

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.

## ITE 4710 - Project Management

**Credit Hours:** 3

Operations and projects differ in that operations are ongoing while projects are temporary. A project, by its very nature, is also unique and requires particular knowledge of how the components combine to form an integrated whole. This course will introduce the student to the field of project management and will present an overview of the body of knowledge necessary for successful project management. The course will focus on the fundamental principles that cross the boundaries of projects and will demonstrate how project management techniques can be applied to a wide variety of disciplines. This course will also introduce the student to computer methods for solving project management problems.

## ITE 4810 - Concepts and Issues in Technology Management

**Credit Hours:** 3

This course combines the elements of Technology Management, providing the participant with the opportunity to study concepts and issues typically encountered by an industrial technologist. This multi-disciplinary course is intended as an overview of Technology Management as a discipline with emphases on the operation and performance of technological systems in industry and their effect on people and the environment. Also, the potential and limitations of the future developments in technological systems and their use in industry is discussed. Diversified approaches will be used to explore some crucial contemporary industry concepts and issues including problem solving and role-playing in various industrial settings and situations.

## ITE 4950 - Internship

**Credit Hours:** 1 TO 6

Student interns work with an industrial organization which most nearly approximates their goals for employment. The intent of the internship is to provide students with practical work experience in an environment in which they will be dealing with practical problems requiring real solutions in a relatively short time frame. Working with the Internship Center, advisor and department chairperson approval are required before course enrollment. Credit for this course shall be awarded as one academic credit for each 40 hours of internship work. During the internship, students will be limited

to three weeks of activities in one discipline area. For the purposes of this internship, a discipline area is defined as an area of industrial work that would normally be taught by one undergraduate course.

## ITE 4990 - Research Project

**Credit Hours:** 6

This course is designed to provide supervised research experience in initiating, designing, analyzing, documenting and presenting original research in an area of interest to the student. This course is to be completed under the supervision and direction of a faculty member who will work with the student to develop an appropriate topic related to technology management and methodology for investigation.

## LAW 1000 - Introduction to Legal Studies

**Credit Hours:** 3

This course provides an introduction to the role of the paralegal within the American legal system. Students are introduced to the structure and operation of the court system and tasks managed by paralegals. The ethical obligations of the paralegal is emphasized.

**General Education Attribute**

- Competency-Ethical Reasoning

## LAW 2000 - Methods of Legal Research

**Credit Hours:** 3

Students learn traditional legal research materials and brief writing techniques. The course emphasizes computerized legal research through West Law and Lexis-Nexis. Extensive work in brief and memorandum writing are used to apply the research techniques used.

**Prerequisite:** BLAW 2000
**General Education Attribute**

- Competency-Information Literacy

## LAW 2001 - Legal Writing

**Credit Hours:** 3

This course trains students in the various writing tasks performed by a paralegal. The learner will become proficient at writing pleadings, trial briefs, appellate briefs, legal memoranda, demand letters, and informational requests.

**Prerequisite:** LAW 2000
**General Education Attribute**

- Competency-Applied Methodologies
- Competency-Intensive Writing

## LAW 2500 - Procedure and Practice of Criminal Law

**Credit Hours:** 3

This course will examine the development of law and an analysis of the criminal system bureaucracy, including punishment, courts and police. This course will instruct the legal studies student to prepare all documents and procedures in a criminal law practice, be it the District Attorney's Office or a private defense office.

## LAW 3003 - Anglo-American Jurisprudence

**Credit Hours:** 3

The primary aim of this course is the introduction of mainline American theories of law and jurisprudence from its common law roots to the founding period of this nation. At issue is the evolution of our current legal institutions and principles. How does a body of law and practice become fully ensconced into the dynamism known as America? How does the English system influence the American model? The course looks at legal definitions, legal procedures and processes, common law principles, the role of judge, jury and the tribunal, the pedagogy of legal education, the types of legal professions common to Western democracies as well as the development of ecclesiastical, equitable, civil and criminal systems. Finally, the course examines some of the more influential thinkers in law and jurisprudence at the time of this nation's founding including Locke, Mill and Jefferson.

## LAW 3100 - Legal Resources and Databases

**Credit Hours:** 3

This course is designed to teach students to use a law library, perform legal research, analyze legal problems, and write a legal memorandum, draft pleadings and case briefs. Students are taught to locate and use primary, secondary and CALR legal research sources to solve legal problems, including federal and state cases, digests, statutes, regulations, treatises, encyclopedias, law reviews, citators, and practice works. Students are expected to produce a written scholarly work at the courses end.

## LAW 3200 - Litigation and Trial Evidence

**Credit Hours:** 3

This course will teach you the principles of civil litigation in federal and state courts. You will learn causes of action and defenses, and will be introduced to rules of procedure and discovery, along with ethical responsibilities. Pretrial practice, including discovery, pretrial motions and trial preparations, will be covered, together with the basics of a civil trial, post-trial motions and appeals. The principles learned will be applied to practical exercises.

## LAW 3300 - Real Property

**Credit Hours:** 3

This course is an introduction to Real Estate Law and covers the processes, procedures, and legal concepts involved in residential and commercial real estate. A solid foundation of real estate law concepts, with a special focus on the oil and gas industry, is provided in this course. The student will learn the essentials of real estate law, including various forms of ownership and tenancy, title search and closing activities, and real estate sale and transfer procedures. Special issues such as leasehold estates, common interest communities and real estate development will also be covered.

## LAW 3390 - Family Law

**Credit Hours:** 3

This course provides an in-depth study of all of the areas of family law encountered by the paralegal. Topics include

divorce, custody, child and spousal support, adoptions, termination of parental rights, and abuse of family members. Students learn both substantive law and procedure and create legal pleadings in family law.

**Prerequisite:** BLAW 2000

## LAW 3400 - Business Entity Law

**Credit Hours:** 3

This course is a survey of the basic principles of corporate law including their creation and operation as well as a review of partnerships and proprietorships as business entities. Student will be required to prepare the documents necessary for incorporation, amendment, by-laws, and the recording of director's meetings and minutes, dissolutions and liquidations. This course will cover the formation, operation, and dissolution of various kinds of business organizations including sole proprietorships, corporations, partnerships, the law of agency and employment agreements. Employee compensation agreements will also be reviewed.

## LAW 3430 - Wills, Trusts, and Estates

**Credit Hours:** 3

In this course, students examine the administration of the probate estate as well as necessary documentation and filing requirements. Students practice drafting wills, trusts, codicils, and ancillary documents. Tax consequences are examined.

**Prerequisite:** BLAW 2000

## LAW 3440 - Administrative Law

**Credit Hours:** 3

Students explore the concept and practice of administrative law within the American legal system. Topics include unemployment compensation, workers compensation, and Social Security disability law. Students will learn to present claims before various administrative law bodies.

**Prerequisite:** BLAW 2000 and LAW 1000

## LAW 3450 - Environmental Law

**Credit Hours:** 3

In this course, students study environmental law and policy in the United States. Students examine methods used by business entities and environmental organizations (governmental and non-governmental) to achieve legal compliance. Students consider legal remedies to protect the environment.

**Prerequisite:** LAW 1000
**General Education Attribute**

- Competency-Intensive Writing

## LAW 3460 - Principles and Practices of Litigation

**Credit Hours:** 3

This course provides students an in-depth study of litigation in the American legal system, including substantive and procedural law and the role of lawyers and paralegals in the litigation process.

**Prerequisite:** LAW 1000 and LAW 2000

## LAW 3470 - Real Estate Law

**Credit Hours:** 3

An in-depth study of all of the areas of Real Estate Law encountered by the Paralegal. This course will include estates in land, property sale contracts, deed preparation, title abstracts, searching courthouse records, adverse possession, easements, judgements and liens, tax sales and the Real Estate Settlement Procedures Act.

**Prerequisite:** BLAW 2000

## LAW 3500 - Understanding Admin Agencies

**Credit Hours:** 3

This course presents basic concepts of administrative law and procedure in federal and state agencies, with emphasis on the paralegal's role in the administrative process. Paralegal students will learn both formal and informal advocacy techniques, including representing clients before administrative bodies. Substantive topics will include administrative delegation of power, rule making, agency discretionary powers, remedies and judicial review. Procedural topics include agency operation, adjudication, hearing preparation, and administrative and judicial appeals.

## LAW 3600 - Law and the Modern Family

**Credit Hours:** 3

The purpose of the family law course is to give legal assistants a better understanding of domestic relations law and to show students how those laws governing family situations are applied. The content of the course covers such areas as formation of the marital relationship, dissolution, child custody and support, adoption, abortion, paternity, domestic violence, child neglect, and surrogacy. Participants will also draft pleadings and documents relevant to family practice.

## LAW 3700 - Bankruptcy Law

**Credit Hours:** 3

The main focus of this course will be on bankruptcy law and procedure. It will cover commencement of a case, preparing of schedules, operating and liquidating procedures, adversary matters and litigation in bankruptcy court, debtors' and creditors' rights and obligations, technical terminology, and practical hints for paralegals. Forms utilized in bankruptcy court will be stressed as well as proceedings under Chapter 7, Chapter 13 and, to a lesser extent, Chapter 11. Also, proceedings under Chapters 9 and 12 will be reviewed. Additionally, the rights of creditors will be explored. This includes secured transactions, consensual and non-consensual liens, UCC transactions, and the unique position of real estate. An introduction to garnishments and other judicial attachments of property will be taught.

## LAW 4000 - Constitutional Law

**Credit Hours:** 3

The Constitutional Law course is designed to give an overview of the interpretation of the constitutional articles and amendments. The student will explore the three branches of the federal government and the interpretation of the articles that created them and control their functioning. The course will also examine the individual's rights in society, the changes in society that impact individual rights, and the Supreme Court decisions interpreting individual rights. In addition, students will analyze and assess fact patterns, investigate claims and arguments, prepare pleadings and other legal documents as well as conduct sophisticated legal research in matters of constitutional law.

## LAW 4100 - Law and Ethics

**Credit Hours:** 3

An inquiry into the interplay of law, morality and ethical reasoning and Western legal tradition is the chief thrust of this course. The course exposes the tradition and foundations of the American legal system with special emphasis on its juris prudential foundations. Questions of right, justice, equity, law as moral command and order, natural law reasoning, and the dignity of the human person are central to the instruction. This course will also introduce students to the types of ethical dilemmas that they will face in the work force; generally to the ethical rules developed by the American Bar Association, and specifically, to the rules adopted by this jurisdiction for the regulation of attorney and paralegal conduct and the model codes of paralegal associations; and to methods for researching the answers to ethical dilemmas.

## LAW 4200 - Navigating Contracts

**Credit Hours:** 3

This course provides the student with a straightforward examination on the law of contracts. Complex area of law is clarified using numerous practical examples on how to draft and interpret different types of contracts. The student will learn to draft the initial agreements, incorporate changes, conduct an initial contract analysis in the event of a dispute to determine potential rights and liabilities, and help determine the appropriate remedies available. At the course's end, the student will be conversant with all of the elements of basic contract law and drafting.

## LAW 4300 - Law and Conflict Resolution

**Credit Hours:** 3

This course provides students with an in-depth understanding of alternate forms of dispute resolution outside courtroom litigation. These alternate forms include mediation, negotiation and arbitration. It incorporates a community service experience in mediation allowing students a unique opportunity to apply theories, concepts and skills learned in the classroom to practical experiences in serving others in the community. The course provides students with a thorough and complete approach to understanding the psychological dimensions to conflict diagnosis. It also provides guidelines to evaluate and develop strategies and tactics to address interpersonal conflict. It also provides a comprehensive survey of all ADR processes.

## LAW 4400 - Labor and Employment Law

**Credit Hours:** 3

Law concepts of labor and employment law and their respective applications are the central themes of the course. The course spends considerable time identifying applicable federal labor and employment laws, distinguishing between exempt and nonexempt employers, and differentiating between public and private sector employees. The course continues by analyzing labor organization, unfair labor practices, collective bargaining, picketing and strikes, the rights

of union members, and public sector labor relations. Additionally, the duties and responsibilities of government and business executives and human resource managers are analyzed; and the administration and enforcement roles of various federal (and state) commissions and departments are discussed.

## LAW 4600 - Elder Law

**Credit Hours:** 3

This course concentrates on the legal problems associated with the elderly and issues of aging. It introduces students to the unique client needs of the elder client and their families. This course introduces substantive legal theories in modern elder law, including introduction to government program, such as Medicare, Medicaid and Social Security for old age retirement assistance; advanced planning for retirement; elder abuse and protective services legislation; and nursing home rights legislation. Topics include health care funding; health care decision making; long-term care; end-of-life decisions; elder abuse and neglect, both institutional and non-institutional, and guardianship.

## LAW 4700 - Immigration Law

**Credit Hours:** 3

This course provides students with a theoretical and practical understanding of the process and procedures relating to immigration law. It also provides proper methodology for client interviews and client files, as well as an introduction to preparation of petitions and agencies that are part of Immigration law. Students will have practice in completing standard immigration forms, researching immigration law, accessing government and other websites for immigration related materials, and reviewing current issues in immigration law. Students will be able to assess each Visa category, determining the type of filing required by client circumstance. Students will analyze hypothetical situations, allowing students to scrutinize actual problems and issues that arise when processing a case. United States immigration statutes, rules and regulations, and precedent and administrative policies relevant to immigration law are fully covered.

## LAW 4800 - Education Law

**Credit Hours:** 3

This course is designed to provide a foundational understanding of the legal framework within which public schools operate, and to examine selected legal issues that arise in the organization and administration of public schools. Emphasis and focus will be placed on the relevant law as it pertains to students in today's schools.

## LAW 4900 - Legal Studies Experience

**Credit Hours:** 3

In this course, students explore paralegal practices in various types of legal settings, including community programs, institutions, and courts. Student will be instructed on ethics, office procedures, confidentiality, and general paralegal practice.

**Prerequisite:** LAW 2001
**General Education Attribute**

- Competency-Ethical Reasoning
- Competency-Keystone Experience

## MATH 201 - Basic Algebra

**Credit Hours:** 3

This course reviews the concepts required for more advanced college mathematics. It covers arithmetic, order of operations, fractions, variable expressions, solving linear equations in one variable, exponents and polynomials, quadratic equations, and graphing. It is graded S/U. (Course cannot be used for graduation requirements.)

## MATH 1010 - Quantitative Reasoning

**Credit Hours:** 3

This course provides study in mathematical representations and problem solving. Students analyze and solve problems in areas such as set theory, mathematics of finance, probability, and statistics. Students will apply mathematics to build financial strategies as they make purchases and investments throughout their lives.

**General Education Attribute**

- Foundations-Quantitative Reasoning

## MATH 1020 - Survey of Mathematics

**Credit Hours:** 3

This course will cover how to apply mathematics to real world situations such as determining methods of voting and apportionment, finding the shortest path between two vertices, scheduling meetings, determining the best return on investments, and collecting data to show patterns.

**General Education Attribute**

- Foundations-Quantitative Reasoning
- Discoveries-Natural Science & Technology

## MATH 1030 - Mathematics for Health Sciences

**Credit Hours:** 3

This course will prepare health science students for the mathematics applications within the healthcare field and certification exams. Topics include: algebra (fractions, ratios, proportions, percentages), relationships among systems of measure, scientific notation, logarithms, calculation of dosages, basic geometry, graphing, and statistics.

**Prerequisite:** MATH 201 or ALEKS placement test
**General Education Attribute**

- Foundations-Quantitative Reasoning

## MATH 1040 - Mathematics of Finance

**Credit Hours:** 3

This course introduces the mathematics of personal finance. It is intended to serve as a lifelong basis for wise money management. Topics include simple interest, compound interest, annuities (car payments, mortgage payment, or any series of equal payments), annuity factors, amortization tables, investments (stocks and bonds), and spreadsheets.

**Prerequisite:** MATH 201 or MATH 1010 or ALEKS placement test
**General Education Attribute**

- Foundations-Quantitative Reasoning
- Discoveries-Natural Science & Technology

## MATH 1078 - Current Questions in Science

**Credit Hours:** 3

The course will explore current and sometimes controversial topics in science. Topics will vary, and will be related to the natural science discipline prefix including concepts in chemistry, physics, geology, meteorology and climate science, geography, and mathematics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## MATH 1110 - Mathematics for Teachers I

**Credit Hours:** 3

This course helps students develop a deep understanding of the underlying concepts of elementary school mathematics. Topics include number systems, set theory, an extension of the natural numbers, algorithms for performing operations, various numerations systems, number theory, equations, and functions. This is the first in a two-part series.

**Prerequisite:** MATH 201 or ALEKS placement test
**General Education Attribute**

- Foundations-Quantitative Reasoning

## MATH 1178 - Discovering Physical Sciences

**Credit Hours:** 3

The course will explore the basic principles of physical science which describe the world we live in and the universe that surrounds us. Topics will vary related to the physical science discipline prefix including concepts in chemistry, physics, geology, meteorology and climate science, geography, and mathematics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## MATH 1210 - Intermediate Algebra

**Credit Hours:** 3

This course helps students prepare for more advanced mathematics courses. The topics include: polynomial, rational, and radical expressions (with an emphasis on algebraic manipulations and the solving of equations), exponents, graphing, functions, and relations. (Course does not count as General Education.)

**Prerequisite:** MATH 201 or ALEKS placement test

## MATH 1220 - College Algebra

**Credit Hours:** 3

This course develops properties of functions and their applications. Topics include rational expressions, linear equations, complex numbers, functions and their graphs, linear and quadratic inequalities, systems of equations, exponential functions, and logarithmic functions.

**Prerequisite:** MATH 1210 or ALEKS placement test
**General Education Attribute**

- Foundations-Quantitative Reasoning
- Discoveries-Natural Science & Technology

## MATH 1230 - Trigonometry

**Credit Hours:** 3

This course introduces the trigonometric and circular functions along with their relationships and applications. It includes graphing of functions, trigonometric identities, trigonometric equations, inverse trigonometric functions, and the solution of triangles.

**Prerequisite:** MATH 1220 or ALEKS placement test
**General Education Attribute**

- Foundations-Quantitative Reasoning
- Discoveries-Natural Science & Technology

## MATH 1410 - Precalculus

**Credit Hours:** 4

This course provides the background necessary for the successful study of calculus. Topics include: analyzing polynomial, rational, trigonometric, and exponential functions with their graphs and applications. Radical/root/power functions and conic sections are also explored. (This course fully covers material from both MATH 1220 and MATH 1230.)

**Prerequisite:** ALEKS placement test
**General Education Attribute**

- Foundations-Quantitative Reasoning
- Discoveries-Natural Science & Technology

## MATH 1510 - Discrete Structures

**Credit Hours:** 3

This course covers the theories and structures of mathematics needed for the study of computer science. Topics include: set theory, formal logic, introduction to proof writing, mathematical induction, Boolean algebra, number theory, matrix algebra, combinatorics, probability, algorithmic analysis, recursion, relations, graph theory, and trees.

**Prerequisite:** MATH 1220 or ALEKS placement test
**General Education Attribute**

- Foundations-Quantitative Reasoning
- Discoveries-Natural Science & Technology

## MATH 1610 - Informal Geometry

**Credit Hours:** 3

This course explores the fundamental properties of Euclidean and non-Euclidean geometry to gain a deeper understanding of the underlying principles involved, as well as applications. Topics include: points, line, geometric shapes in two and three dimension, measurement, similarity and congruence, proof techniques, and geometry in nature and art.

**Prerequisite:** MATH 1010 or MATH 1020 or MATH 1110 or MATH 1410 or ALEKS placement test
**General Education Attribute**

- Foundations-Quantitative Reasoning
- Discoveries-Natural Science & Technology

## MATH 2070 - Data Preparation and Cleaning

**Credit Hours:** 3

This course provides students with an introduction to the need for and methods for data cleaning. The course presents methods for locating and handling invalid values, out-of-range values, and missing values along with methods for managing datasets. The course uses SAS software.

## MATH 2120 - Mathematics for Teachers II

**Credit Hours:** 3

This course develops mathematical topics drawn from the areas of data analysis, measurement, geometry, probability, and statistics. It promotes the development of a deep understanding of the underlying concepts of these topics while maintaining an appropriate level of mathematical precision. This course is the second in a two-part sequence.

**Prerequisite:** MATH 1110
**General Education Attribute**

- Foundations-Quantitative Reasoning
- Discoveries-Natural Science & Technology

## MATH 2130 - Data Visualization

**Credit Hours:** 3

This course explores techniques and tools for creating effective data visualizations. The course covers the creation and exploration of visualizations for categorical data, time series data, spatial and geospatial data. SAS software will be used for this course.

## MATH 2310 - Calculus for Business

**Credit Hours:** 3

This course is designed to provide the mathematical foundation needed by students majoring in a business discipline. Topics include functions, functional models (linear, quadratic, polynomial, rational, exponential, and logarithmic), limits, and differentiation. Applications in business and economics are incorporated throughout the course.

**Prerequisite:** MATH 1220 or ALEKS placement test
**General Education Attribute**

- Foundations-Quantitative Reasoning
- Discoveries-Natural Science & Technology

## MATH 2320 - Essentials of Calculus

**Credit Hours:** 3

This course introduces the fundamental concepts of differential and integral calculus, emphasizing applications from business, economics, biological science, and the social sciences through an intuitive approach. It includes derivatives and their applications, integrals and their applications, and integration techniques.

**Prerequisite:** MATH 1220
**General Education Attribute**

- Foundations-Quantitative Reasoning
- Discoveries-Natural Science & Technology

## MATH 2410 - Analytical Geometry and Calculus I

**Credit Hours:** 4

This course introduces the student to the theory and applications of the concepts of limit, continuity, derivatives, and integration. Emphasis is placed upon the study of polynomial, rational, and trigonometric functions.

**Prerequisite:** MATH 1230 or MATH 1410 or ALEKS placement test
**General Education Attribute**

- Foundations-Quantitative Reasoning
- Discoveries-Natural Science & Technology

## MATH 2420 - Analytical Geometry and Calculus II

**Credit Hours:** 4

This course is a continuation of Calculus I. Students will solve multi-step problems using differentiation and integration of transcendental functions, techniques of integration, polar coordinates, derivatives and area in polar coordinates, indeterminate forms, improper integrals, and infinite sequences and series.

**Prerequisite:** MATH 2410
**General Education Attribute**

- Discoveries-Natural Science & Technology
- Competency-Quantitative Application

## MATH 2510 - Big Data Tools

**Credit Hours:** 3

This course covers an introduction to big data analysis tools. The course provides an overview of SAS, Hadoop and other big data tools. The course covers the structure and framework of data analytic tools and covers the use of these tools to perform various analyses.

## MATH 2610 - Big Data Analytics

**Credit Hours:** 3

This course is intended to provide the student with an introduction to big data, big data analytics and several methods useful in big data analytics such as clustering, association rules and various forms of regression. SAS statistical software will also be introduced and used to solve data problems.

## MATH 3000 - Foundations of Mathematics

**Credit Hours:** 3

This course is a rigorous approach to the study of the fundamental proof techniques in mathematics. It will introduce different methods for constructing proofs, including direct proofs, contradiction, contrapositive, and induction. Students will utilize these techniques to construct proofs in a variety of mathematical content areas.

**Prerequisite:** MATH 2420
**General Education Attribute**

- Competency-Intensive Writing

## MATH 3110 - Technology in the Mathematics Classroom

**Credit Hours:** 3

This course investigates the use of technology in teaching mathematics. The approach emphasizes the uses of technology in the mathematics classroom, with a special emphasis on how technology can enhance mathematical thinking and the development of technologically-astute mathematical thinkers.

**Prerequisite:** MATH 2410 and STAT 2020

## MATH 3210 - Linear Algebra I

**Credit Hours:** 3

This course provides an introduction to the theory of linear algebra, emphasizing computations, basic proof techniques, and applications. It covers systems of linear equations, matrices, vector spaces and and subspaces, determinants, linear transformations, bases and dimensions, eigenvalues and eigenvectors, and diagonalization.

**Prerequisite:** MATH 2320 or MATH 2410
**General Education Attribute**

- Competency-Quantitative Application

## MATH 3320 - Optimization

**Credit Hours:** 3

This course is an introduction to optimization. Topics to be included are unconstrained optimization, convex sets and convex functions, Broyden's method, and Karush-Kuhn-Tucker conditions. Various applications of these topics will be explored.

**Prerequisite:** MATH 3430 and MATH 3210

## MATH 3430 - Analytical Geometry and Calculus III

**Credit Hours:** 4

This course in multivariable calculus continues Calculus II. Students will solve multi-step problems using two and three dimensional vectors, solid analytic geometry, functions of several variables, multiple integration, and an introduction to vector calculus leading to Green's theorem, the divergence theorem, and Stokes' theorem.

**Prerequisite:** MATH 2420
**General Education Attribute**

- Competency-Quantitative Application

## MATH 3440 - Differential Equations

**Credit Hours:** 3

This course introduces the basic concepts, theory methods, and applications of differential equations. Topics include exact equations, linear and nonlinear equations, systems of linear equations, numerical methods, and applications of differential equations in science and engineering.

**Prerequisite:** MATH 2420
**General Education Attribute**

- Competency-Quantitative Application

## MATH 3520 - Advanced Discrete Mathematics

**Credit Hours:** 3

This course will introduce students to advanced topics in discrete mathematics including solving recurrence relations, counting rules, elements of graph theory, and trees. There will be an emphasis on theoretical aspects of discrete mathematics.

**Prerequisite:** MATH 3000
**General Education Attribute**

- Competency-Quantitative Application

## MATH 3610 - College Geometry

**Credit Hours:** 3

This course develops an axiomatic treatment of Euclidean geometry and introduces topics in non-Euclidean geometry. It focuses on the historical work on the parallel postulate, and it emphasizes rigorous proof and logical methods.

**Prerequisite:** MATH 3000
**General Education Attribute**

- Competency-Intensive Writing

## MATH 3620 - History of Mathematics

**Credit Hours:** 3

This course covers the historical roots of elementary mathematics: arithmetic, algebra, geometry, and number systems. It discusses the origins of many topics in the elementary and high school mathematics curricula. It considers this

history as a part of a cultural heritage and is particularly appropriate for the prospective teacher of mathematics.

**Prerequisite:** MATH 3000
**General Education Attribute**

- Competency-Intercultural Fluency

## MATH 3710 - Number Theory

**Credit Hours:** 3

This course will cover various theorems, algorithms, applications, and open questions in number theory. This course is a blending of the theoretical and computational components of number theory. The core topics will include divisibility, primes, and congruences and will expand upon these concepts from discrete mathematics.

**Prerequisite:** MATH 3000

## MATH 3750 - Cryptography

**Credit Hours:** 3

This course provides a self-contained introduction to cryptography. The underlying mathematical problems utilized in various cryptographic protocols and the necessary algorithms will be analyzed. The notion of computational complexity and its importance in cryptography and cryptanalysis will be introduced.

**Prerequisite:** MATH 3000

## MATH 3810 - Mathematical Interest Theory

**Credit Hours:** 3

This course prepares students for actuarial Exam FM. Emphasis is on calculating present and accumulated values for various streams of cash flows: reserving, valuation, pricing, asset/liability management, investment income, capital budgeting, and valuing contingent cash flows. Topics include time value of money, annuities, loans, bonds, and rates.

**Prerequisite:** MATH 2410
**General Education Attribute**

- Competency-Quantitative Application
- Competency-Applied Methodologies

## MATH 3990 - Special Topics in Mathematics

**Credit Hours:** 3

This course will focus on a specific topic in Mathematics suitable for advanced students. The content will vary from semester to semester according to interests of the students and faculty. Students may repeat this course up to three times for different topics.

**Prerequisite:** MATH 3000

## MATH 3995 - Junior Mathematics Seminar

**Credit Hours:** 1

This course introduces literature in mathematics and mathematics education. Students will read a collection of articles or chapters with topics ranging from history, applications, and creativity, to research in math education and the nature of mathematics. They will write short papers and pick a topic for senior seminar.

**Prerequisite:** MATH 3000 and MATH 3210
**General Education Attribute**

- Competency-Information Literacy

## MATH 4000 - Mathematical Modeling

**Credit Hours:** 3

This course covers the formulation, analysis, and interpretation of mathematical models in the natural sciences, the social sciences, industry, and medicine. Students will gain familiarity with problem-solving techniques employed throughout applied mathematics and a wide variety of disciplines.

**Prerequisite:** MATH 2410

## MATH 4010 - Data Analysis Capstone Project

**Credit Hours:** 3

This course is designed for the certificate in Data Science to provide hands-on experience in the area of data science. This experience will enable students to apply their knowledge of data science and provide valuable experience in the application of methods studied within the program that should enhance their job opportunities upon graduation. Students will receive experience with real world data. Analysis will be completed using SAS.

## MATH 4110 - Mathematics for Secondary Teachers

**Credit Hours:** 3

This course develops a depth and breadth in the following mathematical domains: Number, Algebra, Geometry, Trigonometry, Statistics, Probability, Calculus, and Discrete Math. It emphasizes the ability to apply the mathematical processes of problem solving, to reason and communicate using precise mathematical language, and to engage in modeling.

**Prerequisite:** MATH 3430 and STAT 3010

## MATH 4220 - Linear Algebra II

**Credit Hours:** 3

This course gives a rigorous development of the basic theory of linear algebra by building upon the concepts introduced in MATH 3210 - Linear Algebra I. Topics include inner product spaces, orthogonality, linear transformations, eigenvalues, and decomposition of matrices. Various applications of these topics will be explored.

**Prerequisite:** MATH 3210 and MATH 3000

## MATH 4260 - Abstract Algebra I

**Credit Hours:** 3

This course will provide the student with an introduction to the topics of abstract algebra, including groups, rings, and fields. In addition, this course will further develop the student's problem-solving skills and ability to follow and to construct a rigorous mathematical proof.

**Prerequisite:** MATH 3000 and MATH 3210
**General Education Attribute**

- Competency-Intensive Writing

## MATH 4270 - Abstract Algebra II

**Credit Hours:** 3

This course continues the development of algebraic themes introduced in MATH 4260. Topics include groups, rings, fields, vector spaces, and/or modules.

**Prerequisite:** MATH 4260

## MATH 4280 - Topology

**Credit Hours:** 3

This course is an introduction to point-set topology. Topics to be included are topological spaces, continuous functions, open sets, closed sets, compact sets, and connectivity. Various applications of these topics will be explored.

**Prerequisite:** MATH 3430 and MATH 3000

## MATH 4310 - Numerical Methods I

**Credit Hours:** 3

This course covers numerical methods in polynomial interpolation, root finding of nonlinear equations, numerical integration and differentiation, approximation of functions and curve-fitting, and numerical linear algebra. Computer implementation of numerical methods will be used.

**Prerequisite:** MATH 2420
**General Education Attribute**

- Competency-Quantitative Application

## MATH 4320 - Numerical Methods II

**Credit Hours:** 3

This course covers numerical methods in the solution of ordinary and partial differential equations, numerical differentiation, Runge-Kutta methods, iterative methods for ordinary differential equations, and finite differences for partial differential equations.

**Prerequisite:** MATH 4310

## MATH 4410 - Real Analysis I

**Credit Hours:** 3

This course introduces the basic theory underlying the calculus of a function of a single variable. It develops a deeper appreciation and understanding of several important definitions and theorems in calculus. The emphasis is on examples and appropriate proof techniques.

**Prerequisite:** MATH 3000 and MATH 3430
**General Education Attribute**

- Competency-Intensive Writing

## MATH 4420 - Real Analysis II

**Credit Hours:** 3

This course is a continuation of MATH 4410 - Real Analysis I. Topics include Riemann Integration, Infinite Series, Sequences and Series of Functions, and Power Series.

**Prerequisite:** MATH 4410

## MATH 4450 - Complex Analysis

**Credit Hours:** 3

This course covers the basics of analysis over the complex numbers. It develops the analogues to differentiable and integrable functions from real analysis in the new setting with startlingly different results. The course emphasizes both computation and appropriate techniques of proof.

**Prerequisite:** MATH 3430 and MATH 3000

## MATH 4900 - Senior Mathematics Seminar

**Credit Hours:** 1

This course is designed as a senior capstone experience with the intent of encouraging several aspects of independent research in mathematics: selection of problems either by the instructor or by the student with the instructor's approval, discussion, and presentation.

**Prerequisite:** MATH 3430 and MATH 3995 and (MATH 3610 or MATH 4260 or MATH 4410)
**General Education Attribute**

- Competency-Keystone Experience

## MECH 2000 - Manufacturing Processes

**Credit Hours:** 3

This course covers various methods of processing metals, plastics, ceramics, and composite materials with emphasis to the major processes used in manufacturing today: casting and molding, forming, separating, conditioning, assembling, and finishing. A final section provides students with an introduction to product design and process selection. Two lecture-hours and three laboratory-hours per week.

**Prerequisite:** MATH 1230 and MECH 2400

## MECH 2200 - Statics

**Credit Hours:** 3

This course will emphasize the study of forces acting on rigid bodies at rest. Concepts of force, moment, couple, force components, force resultants, concentrated and distributed loads, basics of static equilibrium of machines and structures, friction, centroids and moments of inertia will be covered. Emphasis will be placed on the concept of developing free body diagrams for simple mechanical structures and their resultant force equilibrium solutions. Three hours of lecture.

**Prerequisite:** MATH 1230 or MATH 1410 or MATH 2410 or MATH 2420

## MECH 2300 - Fundamentals of Programmable Logic Controllers

**Credit Hours:** 3

The course provides students with an introduction to programmable logic controllers through the design, troubleshooting, improvement, and optimization of mechatronic control systems. The course covers the component parts of a programmable logic controller, their function, and their interrelationship. PLC input/output systems and requirements are examined. Ladder logic programming using I/O instructions, logic instructions, timers, counters, and sequential control are covered in-depth. Sequence of PLC operation, hardware installation, networking PLC systems and peripherals, troubleshooting, safety requirements, and industrial applications of PLCs are also introduced. Two lecture-hours and three laboratory-hours per week.

**Prerequisite:** ECET 1110

## MECH 2400 - Engineering Graphics and Computer Aided Design

**Credit Hours:** 3

This course covers the critical skills necessary to create and communicate designs developed through higher-level courses in engineering and technology related fields. This course introduces both 2D and 3D modeling softwares, with emphasis on solid models of various components and assemblies, material properties, drawings, and export formats.

## MECH 3100 - Principles of Automatic Control

**Credit Hours:** 3

This course covers key concepts of industrial control systems including: system classifications; common measurement and control techniques; ability to read, interpret, and design electrical, pneumatic, and hydraulic circuit diagrams; problem-solving; and ability to design and conduct experiments, collect data, analyze data, and communicate results. Two lecture-hours and three laboratory-hours per week.

**Prerequisite:** ECET 1110 and ECET 2535
**General Education Attribute**

- Competency-Applied Methodologies
- Competency-Intensive Writing

## MECH 3200 - Dynamics

**Credit Hours:** 3

This course will cover the dynamics of particles and rigid (planar) bodies. Topics will include kinematic equations, Newton's Second Law, work and energy solutions, and impact and momentum solutions. Emphasis will be on particle analysis, with coverage of rigid bodies as appropriate, as assessed by course instructor. Students will hone problem-solving skills through dynamic system analysis, and learn professional preparation skills. Three hours of lecture.

**Prerequisite:** MECH 2200 and MATH 2420

## MECH 3210 - Fluid Power

**Credit Hours:** 3

This course provides students both with fundamental theory of fluid mechanics and fluid power, as well as hands-on experience applying this information to real-world systems in the laboratory. Major topics include (but not limited to) general fluid properties, continuity, Bernoulli's Equation, Reynolds Number, and energy losses in piping systems. Two lecture-hours and three laboratory-hours per week.

**Prerequisite:** MECH 2200 and MATH 2420

## MECH 3220 - Properties and Strength of Materials

**Credit Hours:** 3

This course will provide survey of materials used in industry and their physical and chemical principles as they relate to structure, properties, corrosion, and engineering applications. An introductory level in stress analysis will include: shear and bending moment diagrams, Hook's Law as it relates to normal and shear stress and strain, stresses in bolted connections, shear stress and angle of twist in shafts, normal and shear stress in beams, and the concept of factor of safety. Additional topics covered will include bending stresses, shear stresses, combined stresses, Mohr circle, beam deflection, stress concentration factors and fluctuating loads (qualitative discussion only). Three hours of lecture.

**Prerequisite:** MECH 2200 and MATH 2420

## MECH 3300 - Advanced PLCs and Integration

**Credit Hours:** 3

The course provides students with additional and more advanced skills in Programmable Logic Controllers (PLCs). Students will learn how to program and apply zone control techniques, data transfer, math functions, and data communications. Also covered are sequencers, analog I/O, the use of HMIs (Human Machine Interface), programming special function modules, process control, and I/O bus networks. In addition to ladder logic programming, sequential function chart and function block programming will be used to program a PLC. Two lecture-hours and three laboratory-hours per week.

**Prerequisite:** MECH 2300

## MECH 3500 - Numerical Solution of Engineering Problems

**Credit Hours:** 3

Through hands-on exercises, engineering technology students learn to apply fundamental numerical solution and

artificial intelligence techniques to real-world problems related to engineering and technology fields, which often require iterative solution through numerical approximation. Two lecture-hours and three laboratory-hours per week.

**Prerequisite:** CMSC 1240 or CMSC 1380 and MATH 2420

## MECH 4000 - Computer-Integrated Manufacturing

**Credit Hours:** 3

This course will cover conventional and computer-integrated manufacturing processes. Students will develop an understanding of the manufacturing systems used to make products, the application and potential benefits of automation, and Computer-Integrated Manufacturing (CIM) concepts. This course provides the student with information on the way computer based systems support the operation of a manufacturing business. The course is designed to give students an integrated hands-on experience with tools and systems used in industry. Special attention is given to the roles of computer-aided design (CAD), computer-aided manufacturing (CAM), computer-aided process planning (CAPP), Manufacturing Resource Planning (MRP II), programmable logic controllers (PLCs), industrial robots, and supporting technologies including automated data capture as they apply to the modern manufacturing facility. Concepts will be reinforced using simulation, analog, and hardware. Two lecture-hours and three laboratory-hours per week.

**Prerequisite:** MECH 2000 and MECH 3300

## MECH 4100 - Process Control

**Credit Hours:** 3

This course introduces students to the mathematical theory governing process control, and develops an understanding of the dynamic behavior of process control systems, including system stability. Simulation and practice are used to reinforce theory and apply it to practical industrial applications of varying complexity. Methods are presented for designing and tuning process controllers. Two lecture-hours and three laboratory-hours per week.

**Prerequisite:** MECH 3100 and MECH 3200 and MATH 2420

## MECH 4200 - Machine Design and Kinematics

**Credit Hours:** 3

This course covers the methods and theory of practical machine design with an introduction to kinematics. The course will integrate the knowledge of Statics, Dynamics, and Properties and Strength of Materials in the engineering machine design process and analyze the ethical and moral issues of machines in society. Two lecture-hours and three laboratory-hours per week.

**Prerequisite:** MATH 2420 and MECH 2400 and MECH 3200 and MECH 3220
**General Education Attribute**

- Competency-Quantitative Application

## MECH 4900 - Senior Project Design

**Credit Hours:** 3

This course composes the first part of the capstone experience for Mechatronics Engineering Technology. Students are

required to research and identify an appropriate Mechatronics Engineering Technology related problem and present a solution using relevant technology and problem solving.

**Prerequisite:** MECH 2400 and MECH 3220 and MECH 3300
**General Education Attribute**

- Competency-Ethical Reasoning
- Competency-Information Literacy

## MECH 4910 - Senior Project Implementation

**Credit Hours:** 3

This course composes the second part of the capstone experience for Mechatronics Engineering Technology. Students are required to implement, troubleshoot, verify, validate, and document their design which was developed in MECH 4900: Senior Project Design. Final results will be presented to program constituents.

**Prerequisite:** MECH 4900
**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Keystone Experience

## MECH 4950 - Mechatronics Engineering Technology - Internship

**Credit Hours:** 4

Student interns are placed with an industrial, corporate or governmental organization that most nearly approximates their goals for mechatronics engineering technology employment. The intent of the internship is to provide students with practical work experience solving actual problems in a dynamic environment, yielding enhanced job opportunities upon graduation. Students must follow the step-by-step procedure as outlined at the Cal U Intern site.

## MEDI 3110 - Radiologic Technology Clinical I

**Credit Hours:** 1 TO 15

Facilitates transference of a block of 1-15 credits for completion of a formal, accredited clinical educational program in radiologic technology that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT) or is taught in a regionally-accredited institution of higher learning.

## MEDI 3120 - Radiologic Technology Clinical II

**Credit Hours:** 1 TO 15

Facilitates transference of a block of 1-15 credits for completion of a formal, accredited clinical educational program in radiologic technology that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT) or is taught in a regionally-accredited institution of higher learning.

## MEDI 3130 - Radiologic Technology Clinical III

**Credit Hours:** 1 TO 15

Facilitates transference of a block of 1-15 credits for completion of a formal, accredited clinical educational program in

radiologic technology that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT) or is taught in a regionally-accredited institution of higher learning.

## MEDI 3210 - Ultrasound Clinical I

**Credit Hours:** 1 TO 15

Within the B.S. in Medical Imaging Sciences degree, the concentration in ultrasound was approved so that a block of credits ranging from 30 - 60 credits may be transferred from a formal ultrasound educational program that is accredited by the Joint Review Committee on Education in Diagnostic Medical Sonography (JRCDMS). The curriculum of every JRCDMS-accredited ultrasound program must meet the same standards and guidelines although clinical course titles and credits vary slightly with each program. Placeholder courses will facilitate transference of clinical credits from accredited ultrasound programs into PennWest. Prerequisite: Students may complete their general education course work before completing their ultrasound clinical program, or they may complete the clinical ultrasound program prior to completing general education coursework at PennWest.

## MEDI 3220 - Ultrasound Clinical II

**Credit Hours:** 1 TO 15

Within the B.S. in Medical Imaging Sciences degree, the concentration in ultrasound was approved so that a block of credits ranging from 30 - 60 credits may be transferred from a formal ultrasound educational program that is accredited by the Joint Review Committee on Education in Diagnostic Medical Sonography (JRCDMS). The curriculum of every JRCDMS-accredited ultrasound program must meet the same standards and guidelines although clinical course titles and credits vary slightly with each program. Placeholder courses will facilitate transference of clinical credits from accredited ultrasound programs into PennWest. Prerequisite: Students may complete their general education course work before completing their ultrasound clinical program, or they may complete the clinical ultrasound program prior to completing general education coursework at PennWest.

## MEDI 3230 - Ultrasound Clinical III

**Credit Hours:** 1 TO 15

Within the B.S. in Medical Imaging Sciences degree, the concentration in ultrasound was approved so that a block of credits ranging from 30 - 60 credits may be transferred from a formal ultrasound educational program that is accredited by the Joint Review Committee on Education in Diagnostic Medical Sonography (JRCDMS). The curriculum of every JRCDMS-accredited ultrasound program must meet the same standards and guidelines although clinical course titles and credits vary slightly with each program. Placeholder courses will facilitate transference of clinical credits from accredited ultrasound programs into PennWest. Prerequisite: Students may complete their general education course work before completing their ultrasound clinical program, or they may complete the clinical ultrasound program prior to completing general education coursework at PennWest.

## MEDI 3310 - Radiation Therapy Clinical I

**Credit Hours:** 1 TO 15

Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in Radiation Therapy, MEDI 3310 will facilitate transference of a block of 1 to 12 credits for completion of a formal, accredited clinical educational program in radiation therapy that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).

## MEDI 3320 - Radiation Therapy Clinical II

**Credit Hours:** 1 TO 15

Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in Radiation Therapy, MEDI 3320 will facilitate transference of a block of 1 to 12 credits for completion of a formal, accredited clinical educational program in radiation therapy that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).

## MEDI 3330 - Radiation Therapy Clinical III

**Credit Hours:** 1 TO 15

Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in Radiation Therapy, MEDI 3330 will facilitate transference of a block of 1 to 12 credits for completion of a formal, accredited clinical educational program in radiation therapy that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).

## MEDI 3410 - Nuclear Medicine Clinical I

**Credit Hours:** 1 TO 15

Within the B.S. in Medical Imaging Sciences degree, the concentration in nuclear medicine has been proposed so 30 - 60 clinical credits may be transferred from formal nuclear medicine educational programs that are accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT). The curriculum of every JRCNMT-accredited nuclear medicine program must meet the same standards and guidelines although clinical course titles and credits vary slightly with each program.

## MEDI 3420 - Nuclear Medicine Clinical II

**Credit Hours:** 1 TO 15

Within the B.S. in Medical Imaging Sciences degree, the concentration in nuclear medicine has been proposed so 30 - 60 clinical credits may be transferred from formal nuclear medicine educational programs that are accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT). The curriculum of every JRCNMT-accredited nuclear medicine program must meet the same standards and guidelines although clinical course titles and credits vary slightly with each program.

## MEDI 3430 - Nuclear Medicine Clinical III

**Credit Hours:** 1 TO 15

Within the B.S. in Medical Imaging Sciences degree, the concentration in nuclear medicine has been proposed so 30 - 60 clinical credits may be transferred from formal nuclear medicine educational programs that are accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT). The curriculum of every JRCNMT-accredited nuclear medicine program must meet the same standards and guidelines although clinical course titles and credits vary slightly with each program.

## MEDI 3510 - Medical Dosimetry Clinical I

**Credit Hours:** 1 TO 15

Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in medical dosimetry, MEDI 3510 will facilitate transference of a block of 1 to 12 credits for completion of a formal, accredited clinical educational program in medical dosimetry that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).

## MEDI 3520 - Medical Dosimetry Clinical II

**Credit Hours:** 1 TO 15

Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in medical dosimetry, MEDI 3520 will facilitate transference of a block of 1 to 12 credits for completion of a formal, accredited clinical educational program in medical dosimetry that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).

## MEDI 3530 - Medical Dosimetry Clinical III

**Credit Hours:** 1 TO 15

Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in medical dosimetry, MEDI 3530 will facilitate transference of a block of 1 to 12 credits for completion of a formal, accredited clinical educational program in medical dosimetry that is recognized by the Joint Review Committee on Education in Radiologic Technology (JTCERT).

## MEDI 4110 - Radiologic Technology Clinical IV

**Credit Hours:** 1 TO 15

Facilitates transference of a block of 1-15 credits for completion of a formal, accredited clinical educational program in radiologic technology that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT) or is taught in a regionally-accredited institution of higher learning.

## MEDI 4120 - Radiologic Technology Clinical V

**Credit Hours:** 1 TO 15

Facilitates transference of a block of 1-15 credits for completion of a formal, accredited clinical educational program in radiologic technology that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT) or is taught in a regionally-accredited institution of higher learning.

## MEDI 4130 - Radiologic Technology Clinical VI

**Credit Hours:** 1 TO 15

Facilitates transference of a block of 1-15 credits for completion of a formal, accredited clinical educational program in radiologic technology that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT) or is taught in a regionally-accredited institution of higher learning.

## MEDI 4210 - Ultrasound Clinical IV

**Credit Hours:** 1 TO 15

Within the B.S. in Medical Imaging Sciences degree, the concentration in ultrasound was approved so that a block of credits ranging from 30 - 60 credits may be transferred from a formal ultrasound educational program that is accredited by the Joint Review Committee on Education in Diagnostic Medical Sonography (JRCDMS). The curriculum of every JRCDMS-accredited ultrasound program must meet the same standards and guidelines although clinical course titles and credits vary slightly with each program. Placeholder courses will facilitate transference of clinical credits from accredited ultrasound programs into PennWest. Prerequisite: Students may complete their general education course work before completing their ultrasound clinical program, or they may complete the clinical ultrasound program prior to completing general education coursework at PennWest.

## MEDI 4220 - Ultrasound Clinical V

**Credit Hours:** 1 TO 15

Within the B.S. in Medical Imaging Sciences degree, the concentration in ultrasound was approved so that a block of credits ranging from 30 - 60 credits may be transferred from a formal ultrasound educational program that is accredited by the Joint Review Committee on Education in Diagnostic Medical Sonography (JRCDMS). The curriculum of every JRCDMS-accredited ultrasound program must meet the same standards and guidelines although clinical course titles and credits vary slightly with each program. Placeholder courses will facilitate transference of clinical credits from accredited ultrasound programs into PennWest. Prerequisite: Students may complete their general education course work before completing their ultrasound clinical program, or they may complete the clinical ultrasound program prior to completing general education coursework at PennWest.

## MEDI 4230 - Ultrasound Clinical VI

**Credit Hours:** 1 TO 15

Within the B.S. in Medical Imaging Sciences degree, the concentration in ultrasound was approved so that a block of credits ranging from 30 - 60 credits may be transferred from a formal ultrasound educational program that is accredited by the Joint Review Committee on Education in Diagnostic Medical Sonography (JRCDMS). The curriculum of every JRCDMS-accredited ultrasound program must meet the same standards and guidelines although clinical course titles and credits vary slightly with each program. Placeholder courses will facilitate transference of clinical credits from accredited ultrasound programs into PennWest. Prerequisite: Students may complete their general education course work before completing their ultrasound clinical program, or they may complete the clinical ultrasound program prior to completing general education coursework at PennWest.

## MEDI 4310 - Radiation Therapy Clinical IV

**Credit Hours:** 1 TO 15

Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in Radiation Therapy, MEDI 4310 will facilitate transference of a block of 1 to 12 credits for completion of a formal, accredited clinical educational program in radiation therapy that is recognized by the Joint Review Committee on Education in Radiolologic Technology (JRCERT).

## MEDI 4320 - Radiation Therapy Clinical V

**Credit Hours:** 1 TO 15

Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in Radiation Therapy, MEDI 4320 will facilitate transference of a block of 1 to 12 credits for completion of a formal, accredited clinical

educational program in radiation therapy that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).

## MEDI 4330 - Radiation Therapy Clinical VI

**Credit Hours:** 1 TO 15

Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in Radiation Therapy, MEDI 4330 will facilitate transference of a block of 1 to 12 credits for completion of a formal, accredited clinical educational program in radiation therapy that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).

## MEDI 4410 - Nuclear Medicine Clinical IV

**Credit Hours:** 1 TO 15

Within the B.S. in Medical Imaging Sciences degree, the concentration in nuclear medicine has been proposed so 30 - 60 clinical credits may be transferred from formal nuclear medicine educational programs that are accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT). The curriculum of every JRCNMT-accredited nuclear medicine program must meet the same standards and guidelines although clinical course titles and credits vary slightly with each program.

## MEDI 4420 - Nuclear Medicine Clinical V

**Credit Hours:** 1 TO 15

Within the B.S. in Medical Imaging Sciences degree, the concentration in nuclear medicine has been proposed so 30 - 60 clinical credits may be transferred from formal nuclear medicine educational programs that are accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT). The curriculum of every JRCNMT-accredited nuclear medicine program must meet the same standards and guidelines although clinical course titles and credits vary slightly with each program.

## MEDI 4430 - Nuclear Medicine Clinical VI

**Credit Hours:** 1 TO 15

Within the B.S. in Medical Imaging Sciences degree, the concentration in nuclear medicine has been proposed so 30 - 60 clinical credits may be transferred from formal nuclear medicine educational programs that are accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT). The curriculum of every JRCNMT-accredited nuclear medicine program must meet the same standards and guidelines although clinical course titles and credits vary slightly with each program.

## MEDI 4510 - Medical Dosimetry Clinical IV

**Credit Hours:** 1 TO 15

Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in medical dosimetry, MEDI 4510 will facilitate transference of a block of 1 to12 credits for completion of a formal, accredited clinical educational program in medical dosimetry that is recognized by the Joint Review Committee on Education in Radiologic Technology (JTCERT).

## MEDI 4520 - Medical Dosimetry Clinical V

**Credit Hours:** 1 TO 15

Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in medical dosimetry, MEDI 4520 will facilitate transference of a block of 1 to 12 credits for completion of a formal, accredited clinical educational program in medical dosimetry that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).

## MEDI 4530 - Medical Dosimetry Clinical VI

**Credit Hours:** 1 TO 15

Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in medical dosimetry, MEDI 4530 will facilitate transference of a block of 1 to 6 credits for completion of a formal, accredited clinical educational program in medical dosimetry that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).

## MEDT 4930 - Clinical Microbiology

**Credit Hours:** 6 TO 9

Explores identification and clinical pathology of bacteria, fungi, viruses, and parasites. Presents techniques to isolate, stain, culture, and determine antimicrobial susceptibility. Includes instrumentation and quality control.

## MEDT 4935 - Clinical Chemistry

**Credit Hours:** 6 TO 9

Examines enzymology, endocrinology, biochemistry of lipids, carbohydrates and proteins, metabolism of nitrogenous end products, physiology and metabolism of fluids and electrolytes, and toxicology as related to the body and diseases. Includes colorimetry, spectrophotometry, electrophoresis, chromatography, automation, and quality control.

## MEDT 4940 - Clinical Hematology/Coagulation

**Credit Hours:** 3 TO 6

Analyzes the composition and functions of blood; diseases related to blood disorders; the role of platelets and coagulation. Includes manual and automated techniques of diagnostic tests for abnormalities.

## MEDT 4943 - Clinical Immunohematology

**Credit Hours:** 4 TO 6

Examines blood antigens, antibodies, crossmatching, hemolytic diseases, and related diagnostic tests. Includes an in-depth study of blood donor service and its many facets such as transfusions, medico-legal aspects, etc.

## MEDT 4944 - Clinical Immunology/Serology

**Credit Hours:** 2 TO 4

Explores immune response, immunoglobulins, autoimmunity and complement, and related tests and diseases. Includes survey and demonstration of serological diagnostic tests.

## MEDT 4945 - Clinical Seminar

**Credit Hours:** 0 TO 4

Other courses which are not included in the above (such as orientation, laboratory management, education, clinical microscopy) are unique to the individual hospital program.

## MGMT 2400 - Business, Nature, and Well-Being

**Credit Hours:** 3

In this introduction to sustainability, students examine the challenges of trying to improve our lives through business while living within planetary boundaries. Like a sustainability manager, students will calculate their footprints and propose related ways for business to address some of societies' toughest issues.

## MGMT 3000 - Principles of Management

**Credit Hours:** 3

This course explores foundational theories and concepts of management functions for planning, controlling, organizing, and leading within ethical, inclusive, and global lenses. Students will develop analytical skills, effective communication practices, and personal competencies for academic and career goals via individual and group activities.

**Prerequisite:** ENGL 1200

## MGMT 3020 - Entrepreneurship I

**Credit Hours:** 3

This course explores entrepreneurship and the entrepreneurial process associated with new venture formation. Emphasis is placed on creativity and innovation as it relates to the initiation of a new business. The course highlights the preparation involved in a new venture and challenges facing the entrepreneur.

## MGMT 3100 - Entrepreneurship II

**Credit Hours:** 3

This course develops practical knowledge of firm acquisition and management. Emphasis is placed on assessing the financial viability and exploring methods to secure funding for acquisitions, operations, and market expansion. This course highlights the preparation involved in developing a detailed business plan and the challenges associated with it.

## MGMT 3110 - Organizational Behavior

**Credit Hours:** 3

This course explores the dynamics of organizations, focusing on building knowledge and skills that improve

managerial effectiveness. Emphasis is placed on understanding individual, group, and organization-level behaviors in an inclusive, ethical, and global environment through application to case studies, reflection, and collaborative activities.

**Prerequisite:** MGMT 3000

## MGMT 3120 - Organization Theory and Design

**Credit Hours:** 3

This course explores the design and function of organizational systems primarily following the Star Model. Emphasis is placed on alignment, internal and external forces that affect organizational strategy, structure, effectiveness, and practical application of theory.

**Prerequisite:** MGMT 3000

## MGMT 3220 - Corporate Social Responsibility

**Credit Hours:** 3

This course surveys corporate social responsibility initiatives. Practicing corporate citizenship helps them to form partnerships to support governments and special interest groups to fill service gaps. Students will study actions business can take to internalize externalities they cause, do good for the community, or increase their brand equity.

## MGMT 3330 - Teamwork and Leadership

**Credit Hours:** 3

This course develops leadership and teamwork through self-reflection and group interaction, building upon core concepts through active engagement. Students practice and refine interpersonal team and leadership skills as they model professional communication delivering collaborative products.

**Prerequisite:** MGMT 3000

## MGMT 3400 - Introduction to Sustainable Business

**Credit Hours:** 3

In this course, students discover best practices from across industries for making business better and innovate ways to go further. To achieve business excellence, managers today must implement a comprehensive approach, seeking transformative business leadership across financial, social, and environmental dimensions.

**Prerequisite:** MGMT 2400 or RECR 2400 or RECR 2750 or TOUR 4000

## MGMT 3700 - Operations Management

**Credit Hours:** 3

In this course, students will learn the importance of Operations Management to the firm, and the different challenges faced when delivering goods versus services. Students will learn how to perform layout, location, inventory and other operations analyses along with how Operations Management has become more sustainability focused over time.

**Prerequisite:** QBA 2000 and MGMT 3000

## MGMT 3990 - Topics in Management

**Credit Hours:** 3

Allows examination of a particular problem, theme, or issue pertinent to the management discipline in an interdisciplinary construct. Topic(s) addressed will vary by semester.

**General Education Attribute**

- Competency-Ethical Reasoning

## MGMT 3991 - Topics in Management: Leadership On Film

**Credit Hours:** 3

Explores the depiction of leaders and leadership on film. Students analyze how popular culture shapes the collective understanding of leaders on individual, organizational, and societal levels. Emphasis is placed on analysis of apparent and absent ethical, gendered, diverse, and inclusionary leadership practices within different cultural contexts.

## MGMT 4020 - Hackers, Snoops & Con Artists: Managing legal risks with regard to privacy and cybersecurity

**Credit Hours:** 3

Privacy is often described as the right to be left alone. However, does privacy exist in a world of social media, location trackers and hackers? This course examines what business managers need to know about privacy, with special attention given to legal and cybersecurity issues.

## MGMT 4100 - Management Research

**Credit Hours:** 3

This course explores practical business applications for formulating solutions to managerial problems. Students will also design a questionnaire, analyze with descriptive statistics, report data, and demonstrate academic writing skills. The course balances team activities with independent research and other techniques.

**Prerequisite:** QBA 2000
**General Education Attribute**

- Competency-Intensive Writing

## MGMT 4250 - Quality Management

**Credit Hours:** 3

Introduces quality management approaches, frameworks, tools, quality awards, and performance excellence programs. Students learn how to define quality for a product or service, develop appropriate measurement systems, and apply statistical and systems thinking to control and improve underlying processes.

**Prerequisite:** MGMT 3000

## MGMT 4400 - Advanced Sustainable Business

**Credit Hours:** 3

In this course, students apply principles and practices of more sustainable business management to a variety of business functional areas as they develop a consultative business plan. The course takes a deep dive into sustainability initiatives in particular industries to illustrate alternative business models.

**Prerequisite:** MGMT 3400

## MGMT 4480 - Nonprofit Management

**Credit Hours:** 3

Students learn the key topics and trends in the administration of not-for-profit organizations, such as social entrepreneurship, governing boards, philanthropy, earned income strategies, advocacy, lobbying, fundraising, and volunteering. This fast-growing economic sector is analyzed through classic and current domestic and international cases.

## MGMT 4500 - Supply Chain Management

**Credit Hours:** 3

The coordination and integration of functions across the supply chain are often more important than the individual functions themselves. As global supply chains increase their reach and complexity, there is increasing demand for the skills to manage them. This course develops fundamental supply chain principles and explains the role of global supply chain managers in managing the flow of goods and dealing with suppliers. Topics include supply chain metrics, production planning and inventory control, global supply chain design, logistics and outsourcing.

**Prerequisite:** MGMT 3000

## MGMT 4600 - International Business Management

**Credit Hours:** 3

Examines international business concepts and strategies, including the political, legal, economic, and cultural systems to be navigated in a global company. Emphasis is placed on using analytical tools to determine trade opportunities for country selection and entry, strategy, structure, finance, operations, and supply chain management.

**Prerequisite:** MGMT 3000

## MGMT 4700 - Project Management

**Credit Hours:** 3

This course establishes fundamental guidelines for project management. It emphasizes designing time-constrained projects to meet organizational goals and budget via hands-on work and project-based technology. Students study the challenges and issues concerning effective teamwork and discuss the principles and practical skills of team leadership.

**Prerequisite:** MGMT 3000

## MGMT 4750 - Nonprofit Management

**Credit Hours:** 3

Students learn key topics and trends in the nonprofit sector, along with the fields of social entrepreneurship, governing boards, philanthropy, earned incom strategies, advocacy, lobbying, fundraising and leadership, which are the building blocks for the administration of not-for-profit organizations. Through classic and current, domestic and international cases, students review and assess how management theory and practice apply in the fast-growing sector of the economy. A service-learning team project gives students practical experience.

**Prerequisite:** MGMT 3000

## MGMT 4800 - Sustainable Business Research

**Credit Hours:** 3

In this course, students will design and implement a study in sustainable business applied to their area of interest in management, under the close supervision of a faculty member. The research process includes proposal, literature review, second source study, and presentation.

**Prerequisite:** MGMT 2400
**General Education Attribute**

- Competency-Intensive Writing

## MGMT 4950 - Internship for the Department of Management and Marketing Programs

**Credit Hours:** 1 TO 12

Students are placed with an organization for a practical training experience to supplement academic learning. Through coursework, students apply the theories, concepts, and techniques learned for further career readiness and success.

**General Education Attribute**

- Competency-Keystone Experience

## MKTG 3000 - Principles of Marketing

**Credit Hours:** 3

This course serves as an introduction to the marketing discipline. Foundational topics include identification of target markets, understanding of population demographics and psychographics, the four P's (product, price, place, promotion) of marketing, social responsibility, marketing segmentation, environmental factors affecting marketing efforts.

## MKTG 3200 - Principles of Selling

**Credit Hours:** 3

This course is an introduction to the role of the professional salesperson in the marketing process. Students will examine characteristics and skills necessary for success in sales, techniques for identifying prospects and buyers, importance of relationship building, and ethical sales behaviors.

**Prerequisite:** MKTG 3000

## MKTG 3210 - Sales Management

**Credit Hours:** 3

This course provides an understanding of the concepts and theories pertaining to sales management and its importance in the successful implementation of marketing strategies. Students will examine planning, organizing, and evaluating a sales force in different contexts and in ethical behaviors.

**Prerequisite:** MKTG 3000 and MKTG 3200

## MKTG 3410 - Marketing for Non-Profits

**Credit Hours:** 3

This marketing course is designed for both business and non-business majors that differentiates between for-profit and not-for-profit organizations, investigates the competitive environment facing nonprofits (e.g., hospitals, churches, charities, colleges, etc.), and applies research techniques and marketing tools to the nonprofit entity.

**Prerequisite:** MKTG 3000

## MKTG 3510 - Advertising Management

**Credit Hours:** 3

This course serves to present the theories and concepts involved in the understanding of the advertising mix: advertising, public relations, sales promotion and professional selling. Topics include marketing communication, branding, promotional opportunity analysis, theoretical frameworks, types of appeals, and executional framework.

**Prerequisite:** MKTG 3000

## MKTG 3610 - Entrepreneurial Marketing

**Credit Hours:** 3

This is a marketing course designed to address the strategies and analysis within the entrepreneurial process to establish a new business or to launch a new product line in an established organization. This course is directed toward how to successfully analyze new venture opportunities

**Prerequisite:** MKTG 3000

## MKTG 3630 - Integrated Marketing Communication

**Credit Hours:** 3

Advertising is a marketing communication process whereby information is provided and transmitted for the firm. Advertising and promotion face a rapidly shifting landscape. A decline in traditional media viewing combined with the rise in internet usage and the use of social media have created a new paradigm. Effective advertising and marketing campaigns often now involve more than one well-made commercial because such a wide variety of media are available.

Today, all the communication tools are together grouped as integrated Marketing Communications or Promotional Mix. This course provides the theory, concepts, and applications related to various elements of the promotional mix - advertising, sales promotion, direct marketing, public relations, and personal selling.

## MKTG 3640 - Integrated Marketing Communications

**Credit Hours:** 3

This course focuses on the importance of Integrated Marketing Communication to marketing firms. Students will explore the effective management of communication channels from advertising, personal selling, sales promotion, public relations, direct marketing to the utilization of variety of social media platforms, to create consistent brand image.

**Prerequisite:** MKTG 3000

## MKTG 3660 - Channels of Distribution

**Credit Hours:** 3

Examines factors involved in the selection of marketing and e-marketing channels and problems involved in managing the task efficiently.

## MKTG 3690 - Services Marketing

**Credit Hours:** 3

This course introduces students to the field of service businesses. Services are majority of the US economy. Marketing of services is unique in contrast to marketing of goods. Students will be prepared to become successful managers in service organizations by addressing the distinct needs and challenges in marketing and delivering services.

**Prerequisite:** MKTG 3000

## MKTG 3700 - Business to Business (B2B) Marketing

**Credit Hours:** 3

This course emphasizes characteristics and dynamics of commercial, government and institutional markets. Students will explore the marketing strategies of these markets to remain competitive within the business to business marketing environment. Details will be focused on the marketing concept philosophy in the context of business marketing.

**Prerequisite:** MKTG 3000

## MKTG 3710 - Customer Relationship Management

**Credit Hours:** 3

This course presents information needed to build effective customer relationships and retention. Key concepts are presented to show how CRM aligns business processes with customer strategies in an effort to build customer loyalty and increase profits. The course presents data management concepts, data platforms, and customer experience integration.

**Prerequisite:** MKTG 3000

## MKTG 3800 - Social Media Marketing

**Credit Hours:** 3

This course lays the foundation of social media marketing. Students will understand how to utilize each social media platform correctly in business to achieve marketing goals. This course covers the technological use of major social media platforms, building and managing, presenting, and analyzing social media strategies and campaigns.

**Prerequisite:** MKTG 3000

## MKTG 4010 - Marketing Management

**Credit Hours:** 3

This course focuses on the description and analysis of the nature, strategies, and techniques used in marketing. It examines the impact of technology on marketing, and the strategic role of marketing in the overall goal of organizational success in highly competitive and volatile markets.

**Prerequisite:** MKTG 3000

## MKTG 4210 - Consumer Behavior

**Credit Hours:** 3

This course presents a strategic framework for understanding and applying marketing strategies. It integrates the disciplines of psychology, anthropology, economics and sociology with the marketing discipline to explain, understand, and predict consumer decisions in the marketplace.

**Prerequisite:** MKTG 3000

## MKTG 4610 - Marketing Research

**Credit Hours:** 3

This course focuses on explaining and using the behavioral and statistical tools needed for designing, implementing, and reporting marketing research projects. It provides a basic foundation of a marketing research report in five phases: business case, annotated bibliography, literature review, data collection, and analysis.

**Prerequisite:** MKTG 3000 and QBA 2000
**General Education Attribute**

- Competency-Intensive Writing

## MKTG 4650 - Marketing Problems

**Credit Hours:** 3

This course asks students to identify a marketing related problem and a solution for a real-world business. Working with mentors and consultants students learn important business skills on problem identification, critical reasoning, and

feasible solutions.

**Prerequisite:** MKTG 3000

## MKTG 4680 - Digital Retailing

**Credit Hours:** 3

This course will explore a wide range of digital retail applications, such as retail analytics and omni-channel retail strategy, and will also contemplate how the retail environment changes with technology advancement.

**Prerequisite:** MKTG 3000

## MKTG 4690 - International Marketing

**Credit Hours:** 3

International Marketing course prepares students as global managers by equipping them with relevant skills required internationally. Students learn to apply key concepts (social & cultural aspects, economic & political conditions, and legal & trade policies) that are critical to market products internationally via Transnational Marketing Projects.

**Prerequisite:** MKTG 3000

## MKTG 4750 - Marketing Analysis and Planning

**Credit Hours:** 3

This course provides students with the skills necessary to analyze market conditions and to formulate strategies and plans for addressing market opportunities. It covers analysis of the firm's marketing performance, market demand and competition, and market opportunities in domestic and international markets, as well as the development and implementation of the firm's marketing plan.

## MKTG 4910 - Digital Marketing and Analytics

**Credit Hours:** 3

Digital Marketing & Analytics course is designed to provide necessary information related to today's online dynamic marketplace and how it works. Theoretical understanding of the online/internet marketplace and necessary skills to handle its functions. Simulation will provide hands-on experience to understand digital marketing in the real world.

**Prerequisite:** MKTG 3000

## MKTG 4950 - Internship for the Department of Management and Marketing Programs

**Credit Hours:** 1 TO 12

Students are placed with an organization for a practical training experience to supplement academic learning. Through coursework, students apply the theories, concepts, and techniques learned for further career readiness and success.

**General Education Attribute**

- Competency-Keystone Experience

## MLSC 1100 - Introduction to the Army

**Credit Hours:** 3

This course introduces the student to the organization, traditions, and structure of the Army. It focuses on developing knowledge of the Army Profession and the individual and leadership skills required of Army officers. Students study command structure, military organizations, customs and courtesies, and leadership attributes and competencies.

## MLSC 1120 - Military Science Foundations of Leadership

**Credit Hours:** 3

This course introduces students to the skills necessary to respond to personal challenges and develops competencies that are critical to effective leadership. Students learn critical thinking, time management, goal setting, and the communications process. Students are introduced to the basics of organizational structure, teamwork, and leadership.

## MLSC 2010 - Leadership and Ethics

**Credit Hours:** 3

This course focuses on Army leadership and ethics. Students examine various leadership styles; conduct a leadership analysis of a famous leader; and analyze their own leadership style. Students conduct detailed study of values and ethics and how both apply to international law of armed conflict and military service.

**General Education Attribute**

- Competency-Ethical Reasoning

## MLSC 2020 - Army Doctrine and Decision Making

**Credit Hours:** 3

This course examines analytical techniques and creative thinking skills necessary to solve problems and make decisions. Students will learn methods for assessing tasks and problems, determining optimal solutions, and communicating directives. Students will also be introduced to the basic principles, tenets, and symbology of military doctrine.

**General Education Attribute**

- Competency-Applied Methodologies

## MLSC 3010 - Training Management and the Warfighting Functions

**Credit Hours:** 4

MLSC 3010 focuses on training management and the warfighting functions. It is an academically challenging course where you will study, practice, and apply the fundamentals of Training Management and how the Army operates through the Warfighting Functions. At conclusion of this course, you will be capable of planning, preparing, and executing train

**Prerequisite:** MLSC 2010 and MLSC 2020

## MLSC 3020 - Applied Leadership in Small Unit Operations

**Credit Hours:** 4

MLSC 3020 focuses on applied leadership in small unit operations. It is an academically challenging course where the student will study, practice, and apply the fundamentals of direct level leadership and small unit tactics at the platoon level.

**Prerequisite:** MLSC 2010 and MLSC 2020 and MLSC 3010

## MLSC 4010 - The Army Office

**Credit Hours:** 4

This course provides content to effectively lead small organizations through team cohesion and development. Students will be exposed to solving problems in complex environments, understanding their roles as 2nd Lieutenants, the overall Army profession and support to national security.

**Prerequisite:** MLSC 3010 and MLSC 3020

## MLSC 4020 - Military Management and Analysis

**Credit Hours:** 4

MLSC 3020 focuses on applied leadership in small unit operations. It is an academically challenging course where the student will study, practice, and apply the fundamentals of direct level leadership and small unit tactics at the platoon level.

**Prerequisite:** MLSC 3010 and MLSC 3020

## MORT 4000 - Mortuary Science Cooperating School

**Credit Hours:** 0 TO 28

Transfer course for Mortuary Science. (28 credits)

## MUSI 1000 - Introduction to Music

**Credit Hours:** 3

The purpose of this course is to expose the student to the various historical, analytical and aesthetic elements of music, thereby providing an opportunity to broaden and enrich personal enjoyment. This exposure to music is made through the use of visual aids, audio recordings, radio, television, films and concerts.

**General Education Attribute**

- Discoveries-Art/Humanities

## MUSI 1040 - Voice Class

**Credit Hours:** 3

This course is designed for the student who wants to improve his/her unique singing (and speaking) voice as a musically expressive instrument. Understanding and practice of diaphragmatic breathing, breath management, vocal placement and deportment are emphasized.

## MUSI 1090 - Private Instruction: Brass I

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

## MUSI 1190 - Private Instruction: Piano I

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

## MUSI 1290 - Private Instruction: Percussion I

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

## MUSI 1490 - Private Instruction: Woodwind I

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

## MUSI 1590 - Private Instruction: Voice I

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

## MUSI 1700 - Private Instruction: Guitar I

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

## MUSI 1790 - Private Instruction: String I

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

## MUSI 1800 - Private Instruction: Bagpipes I

**Credit Hours:** 1

Applied instruction will continue the development of repertoire, exercises, and special techniques leading to the satisfactory attainment of proficiencies as established by the Department. Credit for Applied Music is given on the basis of 1 semester hour credit for each hour lesson a week. The following are included in Applied Music instruction: voice, piano, flute, oboe, clarinet, saxophone, bassoon, horn, trumpet, trombone, euphonium, tuba, violin, viola, cello, bass, percussion, organ, bagpipes guitar, and Scottish Drumming.

## MUSI 1810 - Private Instruction: Scottish Drums I

**Credit Hours:** 1

Applied instruction will continue the development of repertoire, exercises, and special techniques leading to the satisfactory attainment of proficiencies as established by the Department. Credit for Applied Music is given on the basis of 1 semester hour credit for each 1/2 hour lesson a week. The following are included in Applied Music instruction: voice, piano, flute, oboe, clarinet, saxophone, bassoon, horn, trumpet, trombone, euphonium, tuba, violin, viola, cello, bass, percussion, organ, bagpipes and guitar.

## MUSI 1870 - Guitar Ensemble

**Credit Hours:** 0 OR 1

The Guitar Ensemble will provide a music experience for students so they can actively engage in the artistic, cultural and social benefits of music presentations. This is a performance based course requiring the development of intellectual and physical demonstrations. Active participation by all members is required since the quality of the course and the experiences gained are dependent on the progress of all individuals. The University Guitar Ensemble performs at concerts both on and off campus. Membership in this ensemble is open to any interested guitarist. No audition is necessary, but a successful with and permission by the director is required. This course is repeatable to a maximum of 8 credits.

## MUSI 1880 - String Ensemble

**Credit Hours:** 1

The String Ensemble will provide a music experience for students so they can actively engage in the artistic, cultural and social benefits of music presentations. This is a performance based course requiring the development of intellectual and physical demonstrations. Active participation by all members is required since the quality of the course and the experiences gained are dependent on the progress of all individuals. The University Clavinova Ensemble performs at concerts both on and off campus. Membership in this ensemble is open to any interested keyboard player. No audition is necessary, but a successful interview with and permission of the director is required. This course is repeatable to a maximum of 8 credits.

## MUSI 1910 - University Choir

**Credit Hours:** 0 TO 1

The California campus choir provides an opportunity for students to sing a wide variety of music from both contemporary and traditional repertoire. The choir performs frequently on campus and throughout southwestern Pennsylvania. Choir membership is elective; an interview with the director is required. Repeatable up to 8 credits.

## MUSI 1920 - University Singers

**Credit Hours:** 0 TO 1

A small (20-24 members) vocal ensemble, with membership determined by audition. The group performs entertainment music of all eras and many cultures; the style of performance is adapted to fit the music being performed, the audience and the season. Smaller groups within the ensemble, such as the A Capella Stella (all women a capella) and Vulcanize (all male acapella), may rehearse separately to prepare extra concert repertoire. Choreography, dialogue or mime is part of some performances. A student may participate with or without using credit. Repeatable up to a maximum of 8 credits.

## MUSI 1930 - Gospel Choir

**Credit Hours:** 1

The Gospel Choir provides an opportunity for students to sing a wide variety of gospel music from both contemporary and traditional repertoire. The choir performs frequently on campus and at various venues throughout southwestern Pennsylvania. Choir membership is elective; an interview with the director is required. This course is repeatable to a maximum of 8 credits.

## MUSI 1940 - Beginning Pipe Band

**Credit Hours:** 0 TO 1

The Pipe Band prepares music for an ensemble of bagpipes and percussion for public performance. Music to be selected for the Pipe Band will be chosen for its appropriateness with respect to the number of performers in the group and their capabilities. The ensemble is open to any student.

## MUSI 1950 - Advanced Pipe Band

**Credit Hours:** 0 TO 1

The Pipe Band prepares music for an ensemble of bagpipes and percussion for public performance. Music to be selected for the Pipe Band will be chosen for its appropriateness with respect to the number of performers in the group and their capabilities. The ensemble is open to any student.

## MUSI 1960 - Jazz Ensemble

**Credit Hours:** 0 OR 1

The Jazz Ensemble performs a wide variety of literature, from swing through fusion, funk, rock and ballad. Entrance is by an interview with the Jazz Ensemble director. Attendance is required at rehearsals and all public performances. Membership granted only by audition. Course is repeatable for up to 8 crs.

## MUSI 1970 - Pep Band

**Credit Hours:** 0 OR 1

The Pep Band performs at select basketball games, other spring sporting events, and various campus activities where the need for a smaller ensemble exists. Membership in this ensemble is open to any interested instrumentalist or equipment technician. The audition is a required interview with the director.

## MUSI 1980 - Marching Band

**Credit Hours:** 0 OR 1

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. Repeatable up to a maximum of 8 crs.

## MUSI 1990 - Concert Band

**Credit Hours:** 0 OR 1

The University Concert Band performs a wide variety of traditional and contemporary literature written for the idiom. The University Concert Band performs at convocations and concerts both on and off campus. Membership in this ensemble is open to any interested instrumentalist. No audition is necessary, but an interview with the director is required. Repeatable up to a maximum of 8 crs.

## MUSI 2010 - Fundamentals of Music

**Credit Hours:** 3

This course acquaints students with musical notation, the basic materials and elements of the musical language, piano and recorder techniques, and independent singing of simple songs. Not open to music majors.

## MUSI 2090 - Private Instruction: Brass II

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 1090

## MUSI 2110 - Keyboard Class

**Credit Hours:** 3

For the beginning level students interested in achieving facility at the piano. Includes playing of major and minor scales, patterns and fingerings, and 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.

## MUSI 2150 - Comprehensive Musicianship I

**Credit Hours:** 3

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.

**Prerequisite:** MUSI 2010

## MUSI 2190 - Private Instruction: Piano II

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 1190

## MUSI 2290 - Private Instruction: Percussion II

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 1290

## MUSI 2490 - Private Instruction: Woodwind II

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 1490

## MUSI 2590 - Private Instruction: Voice II

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 1590

## MUSI 2700 - Private Instruction: Guitar II

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 1700

## MUSI 2750 - Music & Recording Technology I

**Credit Hours:** 3

Careers in the music technology industry are often multifaceted in nature. This requires one to be prepared to utilize a wide range of skills in the workplace, rather than relying on a single skill set. Music and Recording Technology I is a course that is designed to provide students with a wide range of creative skills, so that they may be confident as they forge their careers in this industry. Students are also introduced to digital music concepts that will be explored in greater depth in future courses. Specific topics that are to be covered include: photo editing, movie editing/production, MIDI recording/editing, audio recording/editing and music notation.

**Prerequisite:** MUSI 2010

## MUSI 2790 - Private Instruction: String II

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 1790

## MUSI 2800 - Private Instruction: Bagpipes II

**Credit Hours:** 1

Applied instruction will continue the development of repertoire, exercises, and special techniques leading to the satisfactory attainment of proficiencies as established by the Department. Credit for Applied Music is given on the basis of 1 semester hour credit for each 1/2 hour lesson a week. The following are included in Applied Music instruction: voice, piano, flute, oboe, clarinet, saxophone, bassoon, horn, trumpet, trombone, euphonium, tuba, violin, viola, cello, bass, percussion, organ, bagpipes guitar, and Scottish Drumming.

**Prerequisite:** MUSI 1800

## MUSI 2810 - Private Instruction: Scottish Drums II

**Credit Hours:** 1

Applied instruction will continue the development of repertoire, exercises, and special techniques leading to the satisfactory attainment of proficiencies as established by the Department. Credit for Applied Music is given on the basis of 1 semester hour credit for each 1/2 hour lesson a week. The following are included in Applied Music instruction: voice, piano, flute, oboe, clarinet, saxophone, bassoon, horn, trumpet, trombone, euphonium, tuba, violin, viola, cello, bass, percussion, organ, bagpipes and guitar.

**Prerequisite:** MUSI 1810

## MUSI 3000 - Jazz: History/Form/Analysis

**Credit Hours:** 3

This course presents the historical background of jazz from 1900 to present; the important artists and ensembles and their contribution to the art form; and the analysis of jazz styles and forms via guided listening to recordings and live performances.

**Prerequisite:** MUSI 2010 and MUSI 2150

## MUSI 3020 - Music For the Young Child

**Credit Hours:** 3

Included in this course are methods, materials, and procedures in music related to pre-school, kindergarten, and primary grades. This course is for non-music majors.

**Prerequisite:** MUSI 2010 and MUSI 2150

## MUSI 3040 - The American Musical:Â Â HFA

**Credit Hours:** 3

This course presents the various historical, cultural and social elements of the American musical. This will be accomplished through the use of visual aids, audio recordings, television, video tapes, films and, whenever possible, attendance at live performances. Experts in the field will be utilized as guest lecturers.

**Prerequisite:** MUSI 2010 and MUSI 2150

## MUSI 3070 - Special Music Project

**Credit Hours:** 1

This course revolves around a specific staged musical production. It encompasses all facets of this project from concept through delivery, including individual and ensemble performances, technical design and implementation, business and marketing.

## MUSI 3090 - Private Instruction: Brass III

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 2090

## MUSI 3100 - Music In The Media

**Credit Hours:** 3

This class will study the role of music in various media as a reflection and determinant of social behavior as well as an artistic expression. From its earliest roots to today's top-selling film and TV scores, jingles, video games and other marketing media, the interaction of music with drama and narrative has served to elicit and motivate behavior and reaction among audiences. Sociological theories interact with popular theater, film and other media to act upon its audiences at a visceral level. This course aims to explore the evolution of and contemporary uses of the sociological implications of music as used in the media.

**Prerequisite:** MUSI 2010 and MUSI 2150

## MUSI 3110 - World Music

**Credit Hours:** 3

This course introduces students to music from outside the sphere of Western influence and examines its history, characteristics and cultural functions.

**Prerequisite:** MUSI 2010 and MUSI 2150
**General Education Attribute**

- Competency-Intercultural Fluency

## MUSI 3120 - Country Music: HFA

**Credit Hours:** 3

This course examines the issues which influenced country music. Stylistic features of Bluegrass, Rockabilly, and Country Pop will be included, as well as investigation of musical techniques, structure, and instrumentation in country music from the early 1920's to the present. This course is for non-music majors.

**Prerequisite:** MUSI 2010 and MUSI 2150

## MUSI 3130 - Rock & Roll: History/Form/Analysis

**Credit Hours:** 3

The course presents the various musical, historical, cultural, and social elements of Rock and Roll. The student will acquire from this course an aural and intellectual grasp of this facet of music. This will be accomplished through the use of lecture/discussion and individual projects as well as the use of audio and video methods to study the important artists and ensembles and their contributors to the art form.

**Prerequisite:** MUSI 2010 and MUSI 2150

## MUSI 3140 - Music Industry: History/Form/Analysis

**Credit Hours:** 3

This course presents the historical background of the Music Industry in America. It will cover an overview of the music industry including song writing, publishing, live performance, the record industry, music merchandising and publishing, contracts and licenses, and career opportunities.

**Prerequisite:** MUSI 2010 and MUSI 2150

## MUSI 3150 - Comprehensive Musicianship II

**Credit Hours:** 3

This course is designed for the student who wishes to acquire comprehensive musicianship skills. The student will learn the sol-fa system of note reading and interval identification, using both stationary and moveable tonic. Through sight-singing and ear-training exercises, students will refine their aural skills. Students will learn to notate simple melodies dictated, as well as to sing, whistle, or hum melodies and chords represented by notation.

**Prerequisite:** MUSI 2150 and MUSI 2010

## MUSI 3155 - Commercial Music Arranging

**Credit Hours:** 3

Commercial Musical Arranging will call upon the application of previously acquired skills and apply them to the task of creating imaginative and practical commercial arrangements in various musical styles.

## MUSI 3160 - Comprehensive Musicianship III

**Credit Hours:** 3

This course is designed to provide students with knowledge of the fundamentals of music and an ability to execute basic skills, including the study of notation, rhythms and meters, major and minor scales and key signatures, intervals and chords. Ear training and piano keyboard skills are also included. Comprehensive Musicianship III is designed for music majors as well as advanced music minors.

**Prerequisite:** MUSI 3150

## MUSI 3190 - Private Instruction: Piano III

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 2190

## MUSI 3220 - Music For The Young Child

**Credit Hours:** 3

Included in this course are methods, materials and procedures in music related to teaching the subject at the pre-school, kindergarten and primary grade levels. This course is recommended for any student wishing to develop the skills necessary to teach the art of music to young learners.

**Prerequisite:** MUSI 1000

## MUSI 3290 - Private Instruction: Percussion III

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 2290

## MUSI 3490 - Private Instruction: Woodwind III

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 2490

## MUSI 3590 - Private Instruction: Voice III

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 2590

## MUSI 3700 - Private Instruction: Guitar III

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 2700

## MUSI 3750 - Music & Recording Tech II

**Credit Hours:** 3

Music and Recording Technology II provides students with the foundational knowledge needed to begin a career in the recording arts. The primary focus of this course is to expose students to topics related to analog recording and engineering, including: acoustic and psycho-acoustic principles of sound, audio cables and connectors, connecting analog sound systems, operating principles of microphones, analog mixing console design and operation, analog recorders, signal routing and analog signal processing.

**Prerequisite:** MUSI 2750
**General Education Attribute**

- Competency-Intensive Writing

## MUSI 3790 - Private Instruction: String III

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 2790

## MUSI 4090 - Private Instruction: Brass IV

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 3090

## MUSI 4160 - Comprehensive Musicianship IV

**Credit Hours:** 3

Comprehensive Musicianship IV is the final theory course of the rotation and builds on the foundations of Comprehensive Musicianship I, II and III. It is the study of advanced theory of music including chromatic harmony. Stylistic differences between 18th- 19th- and 20th-century practice will be studied. Sight-singing and ear-training work will be continued. Ongoing practice of basic keyboard skills will continue to reinforce knowledge of these elements of music literacy. Original composition will be encouraged.

**Prerequisite:** MUSI 3160

## MUSI 4190 - Private Instruction: Piano IV

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 3190

## MUSI 4290 - Private Instruction: Percussion IV

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 3290

## MUSI 4490 - Private Instruction: Woodwind IV

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 3490

## MUSI 4590 - Private Instruction: Voice IV

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 3590

## MUSI 4700 - Private Instruction: Guitar IV

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 3700

## MUSI 4750 - Music & Recording TechÂ Â III

**Credit Hours:** 3

Music Production III exposes students to the concepts and skills used in the field digital audio production. Students will accomplish this by exploring industry standard recording software titles as well as by completing various independent and group recording projects. At the conclusion of this course all students will take the Pro Tools User Certification Exam, which, if passed, will award them with Pro Tools User Certification.

**Prerequisite:** MUSI 3750

## MUSI 4760 - Music & Recording Tech IV

**Credit Hours:** 3

Music & Recording Technology IV introduces students to the topics of digital audio editing and mixing by exposing them to various post-production techniques commonly used in modern music production. Students will experiment with these techniques on recording projects they themselves completed in previous Music and Recording Technology courses throughout the semester. In addition to being exposed to these topics, students are also taught the official Avid Pro Tools 110 curriculum which further emphasizes the use of advanced production techniques specific to the Pro Tools software environment. Midway through the course, all students will take the Pro Tools User Certification Exam, which, if passed, will award them with Pro Tools User Certification.

**Prerequisite:** MUSI 4750

## MUSI 4770 - Music & Recording Technology V

**Credit Hours:** 3

Music & Recording Technology V is the capstone course in the music department's music technology course offerings. Throughout the semester, students will complete a comprehensive recording portfolio that consists of detailed written reports which outline all technical and artistic decisions, processes that were utilized to create five recording projects (four guided, one self-guided). While the completion of the portfolio is generally self-guided, each student's work will be reviewed and critiqued by the professor of record three times throughout the semester (week 5, week 10, week 15). Once completed, the portfolio can be used as a tool for internship applications, future employment applications, and the like. All class lectures in MUS 4770 will consist of discussions centered around the following topics: advanced editing and production skills used in Pro Tools software, figureheads in the fields of audio engineering and music production, proper engineering etiquette, communicating well with clients, understanding the role technology serves in helping to achieve artistic goals.

**Prerequisite:** MUSI 4760

## MUSI 4790 - Private Instruction: String IV

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

**Prerequisite:** MUSI 3790

## MUSI 4850 - Music Technology Practicum

**Credit Hours:** 1 TO 6

Music Department Practicum offers the student the opportunity for practical, professional recording work and field experiences in various on & off-campus settings.

**Prerequisite:** MUSI 3750

## MUSI 4880 - Music Technology Internship

**Credit Hours:** 0 TO 12

Music Department Internship offers the student the opportunity for practical, professional recording work and field experiences in various on & off-campus settings. Internship are to be jointly administered by an on-site supervisor and a Departmental Internship Supervisor.

**Prerequisite:** MUSI 4770

## MUSI 4951 - Music Technology Internship

**Credit Hours:** 3

Music Technology Internship offers students the opportunity for practical, professional work and field experiences in various off-campus settings. Internship are to be jointly administered by an on-site Internship Supervisor and a Departmental Faculty Supervisor. Internships are unique to the student but entail a min. of 120 hours of experience.

**Prerequisite:** MUSI 4770
**General Education Attribute**

- Competency-Keystone Experience

## MUSI 4990 - Senior Project/Recital

**Credit Hours:** 3

The Senior Project / Recital serves as the final demonstration of the student's specialization within the Commercial Music Technology Program. Under the supervision of a faculty advisor, the student seeks to make a substantive contribution to the discipline. Considerable latitude in the form of the contribution is permitted. Empirical and historical research as well as creative presentations are all appropriate. Other faculty members of the Music Department are assigned to independently pass judgment on the student's scholastic effort. An oral defense, demonstration or display of the completed project / recital is required.

**Prerequisite:** MUSI 3090 or MUSI 4190 or MUSI 3290 or MUSI 3490 or MUSI 3590 or MUSI 3700 or MUSI 3790
**General Education Attribute**

- Competency-Keystone Experience

## NSET 1078 - Current Questions in Science

**Credit Hours:** 3

The course will explore current and sometimes controversial topics in science. Topics will vary, and will be related to the natural science discipline prefix including concepts in chemistry, physics, geology, meteorology and climate science, geography, and mathematics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## NSET 1178 - Discovering Physical Sciences

**Credit Hours:** 3

The course will explore the basic principles of physical science which describe the world we live in and the universe that surrounds us. Topics will vary related to the physical science discipline prefix including concepts in chemistry, physics, geology, meteorology and climate science, geography, and mathematics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## NSET 1278 - Discovering Environmental Sciences

**Credit Hours:** 3

The course will explore and apply scientific principles that describe and explain interesting current topics in the environmental sciences. Topics will be related to the environmental science discipline prefix including concepts in biology, meteorology and climate science, geology, geography, chemistry and physics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## NURS 1010 - Nursing Process I

**Credit Hours:** 4

Introduces students to the concepts of multiple dimensions of patient centered care with the healthcare environment. Emphasizes the nursing process as the basis for collaborative, patient centered care. Provides the theoretical foundation for the development of cognitive, psychomotor, and communication skills necessary to function effectively within nursing and Inter-professional teams that provide care for clients based on open communication, mutual respect, and shared decision making to achieve quality patient care.

## NURS 1020 - Nursing Process II

**Credit Hours:** 5

Focuses on the application of the nursing process in acute care settings to individuals across the life span. Explores the nursing process as it relates to the care of clients in crisis from rape/sexual assault/domestic violence and clients with ineffective response to crisis (chemical dependency/suicide). Considers the nursing care of clients with musculoskeletal, gastrointestinal, and gynecologic dysfunction. The last portion of the class focuses on human reproduction in health and illness.

## NURS 1101 - Intro to Professional Nursing

**Credit Hours:** 2.00

This course introduces professional nursing by examining the history of nursing and the role of nursing today. Communication, cultural sensitivity, ethics, safety, and quality are emphasized. Health promotion and disease prevention are explored.

## NURS 1110 - Nursing Process I

**Credit Hours:** 2

Explores concepts of patient-centered care within the healthcare environment. The nursing process provides the basis for collaborative, patient-centered care. Provides a theoretical foundation for the development of cognitive, psychomotor, and communication skills to function effectively within an interprofessional team to provide quality care.

**General Education Attribute**

- Competency-Intercultural Fluency

## NURS 1120 - Nursing Process II Clinical

**Credit Hours:** 4

Clinical practice experience provides opportunities for the student to implement the objectives identified in NURS 1020. Students care for clients in crisis and clients across the life span having musculoskeletal, gastrointestinal, and gynecologic dysfunction. Provides clinical experience in the obstetrical setting with mothers and newborns. Offers increased opportunities for medication administration. Offered spring, annually.

## NURS 1210 - Nursing Process I Clinical Lab

**Credit Hours:** 1

Provides students with the opportunity to learn basic nursing skills required to deliver nursing interventions to clients experiencing alterations in their health status. Enables nursing students to acquire beginning skills and confidence through practice in the college learning laboratory. Three laboratory hours weekly. Pass/ Fail. Fall, annually.

**Prerequisite:** Prerequisite or co-requisite: NURS 1310
**CoRequisite:** NURS 1010 and NURS 1110

## NURS 1310 - Nursing Health Assessment

**Credit Hours:** 2

Teaches students beginning skills in assessing the health of clients through health histories and physical examinations. Provides students with opportunities to practice assessment skills. Required of all ASN students. Open to any student with permission of the instructor. Fall, annually.

## NURS 2010 - Nursing Process III

**Credit Hours:** 5

Focuses on the application of the nursing process to individuals across the life span in acute care and community settings. Utilizes the nursing process in determining the care of clients having cancer, and the care of clients with respiratory, cardiovascular, sensory, and urinary and renal dysfunctions. Offered spring as needed.

**Prerequisite:** NURS 1020
**CoRequisite:** NURS 2110

## NURS 2020 - Nursing Process IV

**Credit Hours:** 5

Focuses on the application of the nursing process in a variety of settings to individuals across the life span. Explores the nursing process as it relates to the care of clients having immune, neurologic, endocrine and psychiatric-mental health dysfunction. Emphasizes the nursing management of selected clients requiring critical care. Offered spring, annually.

**Prerequisite:** NURS 2010
**CoRequisite:** NURS 2120

## NURS 2030 - Nursing Seminar

**Credit Hours:** 2

Introduces students to relevant issues and current and future trends in nursing and healthcare. It provides opportunities for students to explore ethical issues that nurses often encounter. Emphasizes role transition from student to graduate nurse.

**General Education Attribute**

- Competency-Information Literacy

## NURS 2110 - Nursing Process III Clinical

**Credit Hours:** 4

Clinical practice experience provides opportunities for students to implement objectives identified in NURS 2010. Students care for clients across the life span having cancer and clients having respiratory, cardiovascular, sensory, urinary, and renal dysfunctions. Provides opportunities for administration of intravenous medications and development of skills in comprehensive client assessment. Twelve clinical hours weekly. Offered spring as needed.

**Prerequisite:** NURS 1120
**CoRequisite:** NURS 2010

## NURS 2120 - Nursing Process IV Clinical

**Credit Hours:** 4

Clinical practice experience provides opportunities for students to implement objectives identified in NURS 2020 and NURS 2030. Students care for acutely ill clients across the life span having immune, neurologic, endocrine, and psychiatric-mental health dysfunctions. Provides opportunities for delivery of care to increasing numbers of clients, and guided practice in refining interpersonal and decision-making skills required of the graduate nurse. Offered spring as needed.

**CoRequisite:** NURS 2020 and NURS 2030

## NURS 2230 - Nursing Assessment Theory

**Credit Hours:** 3.00

In this course, students review the components of holistic assessment of adult clients. Health history and physical assessment are examined with a cultural context. Therapeutic communication and evidence-based practice are emphasized. The nursing process is presented as the framework for practice. This course must be taken concurrently with Nursing 2230 block (NURS 2230 and NURS 2231) .

**Prerequisite:** NURS 1101 and BIOL 2810 and BIOL 2811
**CoRequisite:** NURS 2231

## NURS 2231 - Nursing Assessment Clinical

**Credit Hours:** 2.00

In this laboratory course, the students demonstrate application of theory content from NURS 2230. Throughout the semester, the student develops a novice level of competence in health history and physical assessment skills. This course must be taken concurrently with NURS 2230 block (NURS 2230 and NURS 2231).

**Prerequisite:** NURS 1101 and BIOL 2810 and BIOL 2811
**CoRequisite:** NURS 2230

## NURS 2240 - Nursing Interventions Theory

**Credit Hours:** 2

Nursing students are prepared to provide therapeutic nursing interventions to clinically stable adult clients with minor health deviations. The nursing process provides the framework for the student nurse to further develop as a professional nurse.

**Prerequisite:** NURS 2230 and NURS 2231
**CoRequisite:** NURS 2241

**General Education Attribute**

- Competency-Quantitative Application

## NURS 2241 - Nursing Interventions Clinical

**Credit Hours:** 1

In this laboratory course, the students demonstrate application of content from NURS 2240. Throughout the semester, the student develops a novice level of competence in implementing nursing interventions. This course must be taken concurrently with NURS 2240 course block (NURS 2240 and NURS 2241).

**CoRequisite:** NURS 2240

## NURS 2245 - Basic Nursing Care Clinical

**Credit Hours:** 2

In this clinical course, students will apply the knowledge and skills gained in coursework thus far in the nursing curriculum. Time management and critical thinking skills are developed. Assessment, therapeutic communication, prioritization, patient safety and the nursing process are emphasized in a clinical setting with stable adult clients.

**Prerequisite:** NURS 2240 and NURS 2241

## NURS 2250 - Health Promotion

**Credit Hours:** 3

This course examines the role of the health care professional in health promotion across the life span. Health promotion, risk reduction and disease prevention will be explored in the context of current evidence-based practice. Environmental, sociocultural, and economic factors that influence health care practices are emphasized.

**Prerequisite:** BIOL 3313 and BIOL 3340

## NURS 3010 - Disaster Management

**Credit Hours:** 3

This course is designed to increase student's awareness of the essentials of disaster planning. Disaster management, triage, and hospital preparedness for natural and human-generated disasters will be explored. In addition, students will examine the social responsibilities of the multidisciplinary health team, the leadership and inter-professional coordination responsibilities, and legal and ethical issues that may arise during a disaster, mass casualty, and other public health emergency situations. (This course is open to all students). Offered Fall/Spring and as needed.

## NURS 3020 - Health Promotion for the Elderly

**Credit Hours:** 3

This course provides students with the opportunity to explore the concepts of health promotion for elderly populations. Course topics include theories of health promotion and aging, adaptation to the aging process, and factors that influence the health of elders. Finally, the concept of healthy aging will be situated within interdisciplinary team approach to health promotion strategies. Open to all students. Offered annually and as needed.

## NURS 3030 - Death and Grief

**Credit Hours:** 3

Explores the dying process from various conceptual and theoretical frameworks. Focuses on historical, ethical, socio-cultural and interpersonal perspectives on death. Students address their own mortality and develop a personal philosophy of death and grief. Opportunities are provided for students to interact with professional experts as well as individuals experiencing grief/death issues. Annually, and as needed. Open to all students.

## NURS 3040 - Creating a Wellness Lifestyle

**Credit Hours:** 2 TO 3

Introduces the student to the concepts of wellness and health promotion from a holistic perspective. Within this framework, students explore how to gain more control over their lives through effective stress management, management of time and change, and adequate self and social support. Assists students in increasing self-responsibility and negotiating the health care delivery system. Discusses health measures such as diet, exercise, and sleep as they relate to a wellness lifestyle. Explores the balance of caring for others and caring for self. Each student is guided in formulating an individualized wellness plan. Open to all students. Annually, and as needed.

## NURS 3050 - Integrative Therapies for Wellness

**Credit Hours:** 3

This course provides a framework for incorporating integrative therapies into the students work with people and facilitates the development of self-care. In this course the student explores integrative therapy use for both health promotion and treatment of established disease. Various practices that are grounded in research and used by multiple cultures are explored. Emphasis is placed on evidenced-based support, integration of therapies into traditional health care, health promotion, and the development of an understanding of the theoretical support of integrative therapies. Students will develop a sample plan f care that incorporates evidence-based integrative care with a specific population. Students will learn the value of integrative therapies and how to connect potential patients with qualified providers. They will also develop the ability to use these therapies for self-care. (Open to all students in the College of Health Sciences). Offered spring, summer and fall.

## NURS 3100 - Medical Nutrition

**Credit Hours:** 3

A course devoted to the comprehensive coverage of the science of nutrition and nutrition therapy. The concepts and fundamentals covered in this course include nutrition and health/lifestyle maintenance; nutrition principles and therapies regarding various disease state; digestion, absorption, and metabolism; and maintaining nutritional health throughout the life cycle.

## NURS 3320 - Pharmacology

**Credit Hours:** 3

This course presents the principles of pharmacotherapeutics. Specifically, this course addresses drug safety, classification, mechanisms of actions, interactions, side/adverse effects, contraindications and follow-up responsibilities. Designed to meet the needs of students enrolled in nursing and health-related majors, the collaborative roles and responsibilities of the interprofessional health care team members are emphasized.

## NURS 3330 - Adult Health I Theory

**Credit Hours:** 3

This course builds on previous learning to provide professional nursing care to patients with common adult health problems in acute care. Emphasis is placed on clinical judgment, decision-making skills, prioritization of nursing diagnoses, and application of evidence-based practice in planning care. Health problems are approached using a nursing framework to deliver safe, quality care to individuals and their families. This course must be taken concurrently with Adult Health Nursing I block (NURS 3330, NURS 3331).

**Prerequisite:** NURS 2245
**CoRequisite:** NURS 3331

## NURS 3331 - Adult Health I Clinical

**Credit Hours:** 4

In this clinical course, the students demonstrate application of content from NURS 3330 and previous courses in an acute care clinical setting with adult patients and families. Students continue to develop communication, clinical and professional judgement as a patient/family advocate. Health problems are approached using a nursing framework to deliver safe, quality care to individuals and their families. This course must be taken concurrently with Adult Health Nursing I block (NURS 3330, NURS 3331).

**CoRequisite:** NURS 3330

## NURS 3340 - Maternal Child Health Nursing Theory

**Credit Hours:** 3

This course builds on previous learning to provide professional nursing care to the childbearing family during ante-, intra- and post-partum stages in a variety of settings. Emphasis is placed on clinical judgment, decision-making skills, prioritization of nursing diagnoses, and application of evidence-based practice in planning care. Health problems are approached using a nursing framework to deliver safe, quality care to individuals and their families. This course must be taken concurrently with Maternal Child block of courses .

**Prerequisite:** NURS 2245 and PSYC 3317

## NURS 3342 - Maternity and Pediatrics Clinical

**Credit Hours:** 2

In this clinical course, students demonstrate application of content from NURS 3340 and NURS 3350 as well as previous courses. Patients include the childbearing family during ante-, intra- and post-partum stages as well as the newborn in a variety of settings and to children and their families in both acute and community settings. Students continue to develop therapeutic communication skills, clinical and professional judgement as a patient/family advocate. Health problems are approached using a nursing framework to deliver safe, quality care to individuals and their families. This course must be taken concurrently with the Pediatric and Maternity block of courses.

**Prerequisite:** NURS 2245 and PSYC 3317

## NURS 3350 - Pediatrics Nursing Theory

**Credit Hours:** 3

This course builds on previous learning to provide professional nursing care to children and their families in a variety of settings. Emphasis is placed on clinical judgement, decision-making skills, prioritization of nursing diagnoses, and application of evidence-based practice in planning care. Health problems are approached using a nursing framework to deliver safe, quality care to individuals and their families. This course must be taken concurrently with the Pediatric block of courses.

**Prerequisite:** NURS 2245 and PSYC 3317

## NURS 3400 - Transitioning to Contemporary Nursing Practice

**Credit Hours:** 3

The focus of this course is to transition the nursing student to a contemporary professional role. This transition will be facilitated by incorporating principles and concepts of professional socialization and delivery of professional nursing practice related to varied nursing roles.

## NURS 3410 - Health Policy and Advocacy in Nursing

**Credit Hours:** 3

This course will explore concepts of primary health policy and agenda-setting which impact diverse and vulnerable populations. Additionally, course will examine the political and economic effects of statutes, rules, regulations, and the

need to engage in influencing policy which impacts healthcare and professional nursing practice.

**General Education Attribute**

- Competency-Ethical Reasoning

## NURS 3420 - Healthcare Informatics

**Credit Hours:** 3

This course introduces the learner to basic informatics concepts, health information management systems, and technology to improve to improve interprofessional communication while addressing health equity including legal and ethical considerations. Emphasis will be on quality and safety concerns in providing patient care through clinical decisions.

**General Education Attribute**

- Competency-Information Literacy

## NURS 4010 - Comprehensive Treatment of Chemical Dependency

**Credit Hours:** 3

This course explores the effects of chemical dependency on the human body and provides in depth knowledge of the evidence-based treatment options. Knowledge gained in this course will prepare students to apply the concepts of treatment across the care continuum. Offered as needed.

## NURS 4400 - Nursing Leadership

**Credit Hours:** 3

Students will explore professional role development of leaders, change agents, & designer/managers of care within the context of nursing. Issues related to healthcare delivery, advocacy, evolving healthcare systems, organizational structure, quality improvement, financial management, & delegation/supervision are examined theoretical & practically.

**General Education Attribute**

- Competency-Ethical Reasoning
- Competency-Intensive Writing

## NURS 4415 - Research and Evidence-Based Practice

**Credit Hours:** 3

This course introduces students to the application of research in nursing practice. Ethical considerations in research will be explored.  Students will identify a clinical question, search and appraise evidence, as well as validate the credibility of resources. Based on the findings, a change in practice will be explored.

**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## NURS 4431 - Adult Health Nursing II Clinical

**Credit Hours:** 2

In this clinical course, the students demonstrate application of content from NURS 4433 and previous courses in an acute care clinical setting with adult patients and families facing complex illness. Students continue to develop communication, clinical and professional judgement as a patient/family advocate. Health problems are approached using a nursing framework to deliver safe, quality care to individuals and their families. This course must be taken concurrently with the Adult Health Nursing II block.

**Prerequisite:** NURS 3330 and NURS 3331 and NURS 3340 and NURS 3350 and NURS 3342

## NURS 4433 - Adult Health II Theory

**Credit Hours:** 2

In this course, students apply knowledge from previous courses to develop an evidence-based approach to professional nursing care for hospitalized adults facing complex illness or life-threatening events. Synthesis of pathophysiologic, pharmacologic and therapeutic concepts is required. The role of the nurse in inter-professional health care teams is emphasized. This course must be taken as part of the Adult Health Nursing II block.

**Prerequisite:** NURS 3330 and NURS 3331 and NURS 3340 and NURS 3350 and NURS 3342

## NURS 4435 - Pathophysiology

**Credit Hours:** 4

Pathophysiology is the study of disruption of homeostasis in the human body. This interprofessional course provides an in-depth study of alterations in physiological, cellular and biochemical processes that manifest as disease for students interested in healthcare. Emphasis is on the inter-relationships among organ systems. Content builds upon knowledge from basic sciences to facilitate transfer of knowledge to clinical practice.

## NURS 4440 - Community Health Nursing Theory

**Credit Hours:** 2

In this course, students apply knowledge to develop an evidence-based approach to professional nursing care in the community. Health promotion, risk reduction, and disease management will be analyzed using clinical judgment and the nursing process to provide care to diverse individuals, families, inclusive population groups, and communities.

**General Education Attribute**

- Competency-Intercultural Fluency

## NURS 4442 - Community/Psych Health Nursing Clinical

**Credit Hours:** 2

In this clinical course, students demonstrate application of theory content from previous courses in acute and community mental health settings. Students build on their knowledge and skills to develop a broader perspective on the use of therapeutic use of self in promoting maximum levels of behavioral, physical, and spiritual health in individuals and their families. This course must be taken concurrently with Community Health Nursing and Psychiatric & Behavioral Health Nursing.

## NURS 4453 - Psychiatric and Behavioral Health Nursing Theory

**Credit Hours:** 3

This course prepares students to provide care to children, adolescents and adults experiencing psychiatric/behavioral health problems and coping deficits in acute and community settings. Emphasis on the psychological development, psychopathology, patient education, treatment modalities and therapeutic nurse-patient relationships.

**General Education Attribute**

- Competency-Keystone Experience

## NURS 4498 - Nursing Capstone

**Credit Hours:** 3.00

This experiential learning course engages students in application, synthesis and evaluation of knowledge and skills obtained in their academic studies. The course also provides the opportunity to begin transition from student to graduate nurse. Professional growth and contribution to the nursing profession is emphasized. Students complete a 135 hr clinical practicum with a Registered Nurse preceptor and develop an evidence-based project related to their clinical experience.

**Prerequisite:** Specialty course blocks related to the specialty chosen. For example, if the capstone is in behavioral health nursing, the Psychiatric/Behavioral Health block must have been completed.

## NURS 4600 - Nursing Inquiry

**Credit Hours:** 3

Students will explore the principles of research. The course exposes RN students to ethical and practical aspects associated with conducting nursing research. Students will utilize select databases to explore new and existing knowledge. Students will critique current research to determine its applicability to professional nursing practice.

**General Education Attribute**

- Competency-Applied Methodologies

## NURS 4610 - Leadership in Professional Nursing

**Credit Hours:** 3

The course focuses on the role of the RN as a leader in a changing healthcare environment. Theories/principles of leadership are explored & applied to nursing practice. RN students apply concepts of motivation, change, communication, empowerment, ethics, & clinical thinking in a proposed change to practice applicable to diverse healthcare systems.

## NURS 4620 - Health Promotion in Nursing

**Credit Hours:** 3

This course focuses on the health promotion of individuals and groups from an epidemiological perspective. Nursing and health promotion theories are used as the organizing framework. Cultural and diversity factors will be addressed. RN students will develop an evidenced-based, interprofessional health promotion care plan for families.

**General Education Attribute**

- Competency-Intensive Writing

## NURS 4630 - Epidemiology & Population Health in Community Health Nursing

**Credit Hours:** 3

This course utlizes epidemiology principles of nursing and health related theories relevant to addressing health promotion at the community level. RN Students will explore concepts of social justice, health disparities, globalization, environmental factors, and genetics on the health of communities when conducting a community assessment.

**General Education Attribute**

- Competency-Intercultural Fluency

## NURS 4900 - Nursing Evidence-Based Practice: Capstone I

**Credit Hours:** 3

Students will design a capstone project that reflects the application, synthesis, and evaluation of concepts and nursing practice issues, including concepts of health promotion, studied throughout the program. Emphasis will be placed on the application of educational experience for professional growth and contribution to the nursing profession.

**Prerequisite:** NURS 3400 and NURS 3410 and NURS 3420 and NURS 4600 and NURS 4630
**General Education Attribute**

- Competency-Intensive Writing

## NURS 4901 - Nursing Evidence-Based Practice: Capstone II

**Credit Hours:** 3

Students will present a project proposal that reflects the application, synthesis, and evaluation of concepts and nursing practice issues, including concepts of health promotion, studied throughout the program. Emphasis is placed on applying educational experience to professional growth and contribution to the nursing profession.

**Prerequisite:** NURS 4900
**General Education Attribute**

- Competency-Quantitative Application
- Competency-Intensive Writing

## PFPL 1010 - Wealth Building and Personal Financial Planning

**Credit Hours:** 3

Explores the personal financial planning process and its effect on achieving financial goals and improving personal financial wellness. Emphasizes personal financial data gathering, financial goal setting, risk management and insurance, investment strategies, income tax planning, retirement planning, and estate planning.

**General Education Attribute**

- Wellness & Personal Health

## PFPL 4300 - Retirement Planning

**Credit Hours:** 3

Explores retirement plans, retirement planning strategies, and sources of retirement income. Emphasizes qualified and non-qualified plans, capital needs analysis, taking distributions from retirement plans, and Social Security. Examines Medicare and employee benefits.

## PFPL 4400 - Estate Planning

**Credit Hours:** 3

Focuses on the efficient conservation and transfer of wealth. The course takes an in-depth look at the legal, tax, financial, and non-financial aspects of the estate planning process and covers wills, trusts, probate, advanced directives, and charitable giving.

## PFPL 4750 - Financial Plan Development

**Credit Hours:** 3

Engages students in critical thinking and decision-making within the personal financial planning process. Refines and develops skills needed for personal financial planners when working with individuals, families, and business owners. Students are required to prepare and submit a comprehensive written personal financial plan.

**Prerequisite:** FINA 4000 and ACC 3200 and PFPL 4400 and PFPL 4300

## PFPL 4950 - Personal Financial Planning Internship

**Credit Hours:** 3 TO 12

The student is placed with a business and will perform personal financial planning-related tasks. The internship experience offers a practical training ground for students that supplements academic training by permitting them to apply the theories, concepts and techniques learned through coursework.

**General Education Attribute**

- Competency-Keystone Experience

## PGMT 1000 - Introduction to Professional Golf Management

**Credit Hours:** 3

This course provides students with an overview of the PGA of America and the California campus/PGMT educational program. Students will be introduced to the PGA's qualifying level and the California campus/PGMT curriculum, which will enable them to become more informed about the educational requirements to become future PGA members and what is expected in California campus/PGMT Level I. In addition, students will be introduced to the working intricacies of the PGA of America.

## PGMT 1500 - Teaching of Golf I

**Credit Hours:** 3

This course provides the golf student with the theory and techniques of teaching the golf swing. Students will utilize technology to evaluate the golf swing and develop and deliver golf lesson plans. The course utilizes the classrooms in Hamer Hall as well as California Universitys indoor practice facility in Gallagher Hall and outdoor golf practices at Cedarbrook Golf Course.

**Prerequisite:** PGMT 1000

## PGMT 2000 - Intermediate Topics in Professional Golf Management

**Credit Hours:** 3

This course will provide students with a detailed examination of the PGA of America and the California campus/PGMT educational program. Students will be introduced to PGMT Level II, which will enable them to become more informed about the educational requirements to be completed in preparation for the California campus/PGMT Level II checkpoint.

**Prerequisite:** PGMT 1000

## PGMT 2100 - Golf Shop Operations

**Credit Hours:** 3

This course will provide the student with the basics of the operations and management of the golf shop. Topics include: methods of merchandising, scheduling of play, implementing course regulations, development and management of the golf operation's team, time management as well as personnel management, business planning, and forecasting.

**General Education Attribute**

- Competency-Applied Methodologies
- Competency-Intensive Writing

## PGMT 2500 - Golf Operations Management

**Credit Hours:** 3

This course provides the student with the content needed for the PGAs PGM Program Level II checkpoint. Golf Business Operations and Customer Relations are examined in their entirety within this course and focus on key concepts relating to: interaction strategies and interpersonal skills within a business context, moments of truth, policy and procedure development, yield management evaluation, supervising and delegation of staff, and techniques for motivating both customers and employees.

**Prerequisite:** PGMT 1000

## PGMT 2600 - Golf Performance Coaching and Technology

**Credit Hours:** 3

This course teaches student how to use golf swing technology to collect and analyze data for the purpose of improving a golfers? ability. Enhancing student proficiency in using launch monitors, force pressure plates, 2D video, and 3D analysis software are key components of the course. Students will also learn how to use the acquired data to develop golf lesson programs and a physical exercise routine designed to improve overall player performance. Various communication platforms will be used to help students effectively deliver golf instruction in-person and online.

**Prerequisite:** PGMT 1500

## PGMT 3000 - Advanced Topics in PGM

**Credit Hours:** 3

This course provides the student with the content needed for the PGM Level III checkpoint. Inventory, merchandising, food and beverage, and PGA membership are some of the topics covered.

**Prerequisite:** PGMT 1000 and PGMT 2000

## PGMT 3100 - Turfgrass Management

**Credit Hours:** 3

The course will provide the student with an overview and introduction to not only the science of turfgrass, but also the role turf management plays in the golf operation. Topics include grass selection, mowing, fertilization, irrigation, supplementary cultural practices and the management of botanical pests.

## PGMT 3500 - Food and Beverage Management

**Credit Hours:** 3

This course provides the student with an overview of the principles and techniques involved in establishing and maintaining a successful, profitable food and beverage operation at a golf facility. Some of the topics the course will examine include: (1) menu development, (2) menu descriptive copy, (3) principles and techniques of restaurant design, (4) staffing and training, (5) cost control measures, (6) beverage control and legal aspects of beverage control, (7) kitchen equipment and safety, (8) sanitation, (9) improving and enhancing customer service, and (10) the legal aspects of food and beverage operations.

## PGMT 4050 - Expanded Golf Operations

**Credit Hours:** 3

The course enables the PGM student to evaluate, design, implement and enhance the operations of a golf facility. The student will be introduced to the various elements of developing or enhancing existing golf facilities.

## PGMT 4100 - Teaching of Golf II

**Credit Hours:** 3

This course is designed to improve the golf instructional skills of golf professionals, especially those desiring to be quality coaches. Included in the course are such topics as teaching, coaching, training techniques, motivational strategies and the needs of special populations. Methods of recording student progress, management techniques for a successful instructional program, and the use of audio-visual and other electronic teaching tools are examined.

## PGMT 4150 - Trends and Issues in the Golf Industry

**Credit Hours:** 3

An analysis of professional golf industry trends as well as grow the game initiatives from historical, contemporary, and futuristic viewpoints with implications for global expansion and overall participation.

**Prerequisite:** PGMT 1000

## PGMT 4951 - Professional Golf Management Internship I

**Credit Hours:** 3

This course is one of the professional golf management student internship experiences. Students will secure internship sites based on their unique educational needs and experiences. Internship students will work directly with PGA golf professionals in one or more work settings.

## PGMT 4952 - Professional Golf Management Internship II

**Credit Hours:** 3

This course exposes the student to proper golf course management techniques, including daily expectations while working on a golf course and proper protocol. It also provides the student with the unique professional educational experience by combining theoretical and hands-on training. The course will be completed at a recognized PGA facility chosen in conjunction with the faculty and the student. The student will spend a minimum of 455 hours or 13 weeks at the internship site in order to satisfactorily complete this requirement.

**Prerequisite:** PGMT 1000

## PGMT 4953 - Professional Golf Management Internship III

**Credit Hours:** 3

This course is one of the professional golf management student internship experiences. Students will secure internship sites based on their unique educational needs and experiences. Internship students will work directly with PGA golf professionals in one or more work settings.

## PGMT 4954 - Senior Internship in Professional Golf Management

**Credit Hours:** 3

This course is one of the professional golf management student's internship experiences. Students will be assigned to an internship site based on their unique educational needs and experience. Internship students will work directly with PGA golf professionals in one or more work settings.

## PGMT 4955 - PGMT Capstone Internship

**Credit Hours:** 3

This course is part of the professional golf management student's keystone internship experience. Students will be assigned to an internship location based on their unique educational needs and experience. Internship students will work directly with PGA Golf Professionals.

**General Education Attribute**

- Competency-Keystone Experience

## PHIL 1000 - Critical Thinking

**Credit Hours:** 3

This course is an introduction to informal logic (sometimes called critical thinking), covering a variety of topics bearing on the understanding and rational assessment of claims and arguments.

**General Education Attribute**

- Discoveries-Art/Humanities

## PHIL 1020 - Introduction to Formal Logic

**Credit Hours:** 3

An introduction to basic formal principles and techniques for distinguishing correct from incorrect reasoning.

## PHIL 1040 - Introduction to Philosophy

**Credit Hours:** 3

An introduction to such major philosophical issues as the nature of knowledge, reality, religion and morals.

**General Education Attribute**

- Discoveries-Art/Humanities

## PHIL 1060 - Philosophy and Pop Culture

**Credit Hours:** 3

This course is an introduction to the academic discipline of Philosophy via the medium of contemporary American popular culture as well as a course focused on the philosophical evaluation of pop culture itself. Students will acquire a basic understanding of the philosophical method and how to employ it in critiquing aspects of pop culture.

## PHIL 1080 - Philosophy Goes to the Movies

**Credit Hours:** 3

This course will explore and evaluate various philosophical themes and problems through the use of popular films chosen for their philosophical content. This course is intended as an introduction to the discipline of philosophy through the use of movies.

## PHIL 2000 - Religion, Wisdom, and Meaning

**Credit Hours:** 3

The study of the seven world religions with their specific origins and doctrines.

**General Education Attribute**

- Discoveries-Art/Humanities
- Competency-Intercultural Fluency

## PHIL 2100 - Introduction to Ethics

**Credit Hours:** 3

This course is designed to introduce students to normative ethical theories and controversial moral issues. Theories may include deontology, utilitarianism, feminist ethics, and virtue ethics, among others. Issues may include abortion, recreational-drug legalization, gender privilege, racial-justice issues, and LGBTQ issues, among others.

**General Education Attribute**

- Discoveries-Art/Humanities
- Competency-Ethical Reasoning

## PHIL 3000 - Formal Logic

**Credit Hours:** 3

An introduction to the syntax and semantics of truth-functional and first-order languages, this course also covers proof theories for such languages as well as metatheoretical results..

**General Education Attribute**

- Competency-Quantitative Application

## PHIL 3100 - Ancient Ways of Wisdom

**Credit Hours:** 3

What is true happiness? Ancient sages from the East and West have offered us profound insights into this pivotal question. The task of this course is to introduce students to these ancient ways of wisdom found in philosophies such as Buddhism, Taoism, Stoicism and Epicureanism.

**General Education Attribute**

- Competency-Intercultural Fluency

## PHIL 3200 - Contemporary Issues in Theoretical Ethics

**Credit Hours:** 3

This course is designed to acquaint students with a variety of theoretical issues in normative ethics and meta ethics, especially the questions: what are the general principles, if any, of morality; why be moral at all; and how, if at all, is it possible to have moral knowledge or reasonable moral belief?

**General Education Attribute**

- Competency-Ethical Reasoning
- Competency-Intensive Writing

## PHIL 3210 - Engineering Ethics

**Credit Hours:** 3

This course will explore the relationship between ethics and engineering and apply moral theory to engineering issues encountered in industry.

**General Education Attribute**

- Competency-Ethical Reasoning
- Competency-Intensive Writing

## PHIL 3220 - Biomedical Ethics

**Credit Hours:** 3

This course focuses on ethical issues related to the practice of medicine and the conduct of medical research. It provides students with a broad ethical framework from which they can arrive at a better understanding of a variety of ethical issues in this field.

**General Education Attribute**

- Discoveries-Art/Humanities
- Competency-Ethical Reasoning
- Competency-Intensive Writing

## PHIL 3240 - Environmental Ethics

**Credit Hours:** 3

This course introduces students to issues in environmental ethics. A survey of traditional ethical theories provides a background to contemporary debates in this field, such as the moral status of individual living things; the ethical significance of species, wilderness, and ecosystems; and moral responsibilities concerning global warming.

**General Education Attribute**

- Competency-Ethical Reasoning
- Competency-Intensive Writing

## PHIL 3260 - Ethics and Criminal Justice

**Credit Hours:** 3

This course briefly surveys ethical theory along with a detailed focus on ethical issues within the criminal justice profession. Topics include deontological, consequential, and virtue theories in ethics, theoretical conceptions of retributive justice, and professional codes of ethics in policing, the law, corrections, and probation.

## PHIL 3300 - Philosophy of Art

**Credit Hours:** 3

This course examines the nature and basis of criticism in the fine arts and literature, the nature and function of art, aesthetic standards, the concept of beauty, artistic creativity, and the meaning of truth in literature and the arts.

**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## PHIL 3320 - Philosophy and Film

**Credit Hours:** 3

An introduction to the philosophy of film, which is an aspect of the philosophy of art. Of particular interest is the relationship between film and philosophy.

**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## PHIL 3340 - Philosophy and Literature

**Credit Hours:** 3

This course will explore philosophical concepts and theories through the medium of contemporary literature. Traditional disputes in Philosophy, e.g., free will vs. determinism, dualism vs. materialism, realism vs. anti-realism, will be explored, leading to a greater understanding and appreciation of both philosophy and literature.

**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## PHIL 3360 - Topics in Philosophy, Art, and Theory

**Credit Hours:** 3

A focused course in the Philosophy of Art or Art Theory. Addresses topics of contemporary artistic/philosophical significance.

**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## PHIL 3400 - Philosophy of Human Nature

**Credit Hours:** 3

This course will explore the basic question, "What does it mean to be human?" Related questions include, "What is our place in the universe?" and "What kind of lives should we live?" This course will provide a wide spectrum of perspectives, from Ancient Greek philosophy to contemporary neuro-philosophy.

**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## PHIL 3420 - Philosophy and Feminism

**Credit Hours:** 3

In this course, we will focus on four main topics: the nature and varieties of feminism; the case for feminism in the U.S.; the relationship between feminism and social-justice movements involving race, sexual orientation, and gender identity; and matters concerning sexist language, dating etiquette, etc.

**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## PHIL 3440 - Philosophy and the Meaning of Life

**Credit Hours:** 3

This course explores the meaning of life, distinguishing significantly different versions, and critically examines several different answers, both religious and secular, to these questions. The emphasis is on helping students to develop and defend their own answers. We may also touch on related issues such as whether human life is absurd.

**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## PHIL 3500 - Philosophy of Knowledge

**Credit Hours:** 3

A course in the philosophical sub-discipline of epistemology, including theories of the nature, sources, and scope of knowledge.

**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## PHIL 3520 - Philosophy of Mind

**Credit Hours:** 3

The philosophy of mind is a sub-discipline of metaphysics concerned with the fundamental nature of mental phenomena. Various theories of mind will be discussed: i.e. dualism, behaviorism, functionalism, etc., along with related issues of personal identity, mental content, mental causation, and consciousness.

**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## PHIL 3540 - Philosophy of Religion

**Credit Hours:** 3

This course considers the nature of religion, speculations and arguments about the nature and existence of God, the possibility of religious knowledge, claims to religious experience and revelation, the problem of evil, the belief in immortality, and the meaning of religious language.

**General Education Attribute**

- Competency-Information Literacy

- Competency-Intensive Writing

## PHIL 3560 - Philosophy of Language

**Credit Hours:** 3

A course in philosophical theories of what makes sentences true or false.

**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## PHIL 3580 - Philosophy of Science

**Credit Hours:** 3

This course attempts to answer the question: Should we believe what science tells us? It includes a critical inquiry into the nature of scientific theories and explanations, as well as an investigation into methods of theory confirmation. Other issues may include whether theoretical entities are real or only useful fictions, reductionism, etc.

## PHYS 1078 - Current Questions in Science

**Credit Hours:** 3

The course will explore current and sometimes controversial topics in science. Topics will vary, and will be related to the natural science discipline prefix including concepts in chemistry, physics, geology, meteorology and climate science, geography, and mathematics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## PHYS 1178 - Discovering Physical Sciences

**Credit Hours:** 3

The course will explore the basic principles of physical science which describe the world we live in and the universe that surrounds us. Topics will vary related to the physical science discipline prefix including concepts in chemistry, physics, geology, meteorology and climate science, geography, and mathematics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## PHYS 1200 - Solar System Astronomy

**Credit Hours:** 3

Explores the nature of the Sun, the planets, and the major moons. Examines the motions of the Earth, moon, and the planets and their effects on the appearance of the sky. Includes constellation identification through the use of the planetarium or software.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## PHYS 1220 - Frontiers of Astronomy

**Credit Hours:** 3

This course is designed for non-science majors and is concerned with a different part of the new revolution in astronomy showing how much there is that is fresh and young in the oldest science. Topics include evolution histories of stars, galaxies, the universe, and the solar system.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## PHYS 1250 - Stellar Astronomy

**Credit Hours:** 3

This is an introductory lecture course on the fundamentals of astronomy. An emphasis is placed on observing and understanding celestial objects in our solar system, galaxy and universe. Extensive use of a planetarium highlights the in-person experience while the online offering uses a desktop planetarium such as stellarium.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## PHYS 1278 - Discovering Environmental Sciences

**Credit Hours:** 3

The course will explore and apply scientific principles that describe and explain interesting current topics in the environmental sciences. Topics will be related to the environmental science discipline prefix including concepts in biology, meteorology and climate science, geology, geography, chemistry and physics.

**General Education Attribute**

- Discoveries-Natural Science & Technology

## PHYS 1500 - General Physics I

**Credit Hours:** 3

This course is the first course in a two-semester sequence of algebra-based physics for students seeking an understanding of physics at a relaxed mathematical level. The course is an analytical study of classical mechanics, including energy, momentum and mechanical waves, and thermodynamics. PHYS 1510 Laboratory must be taken concurrently.

**CoRequisite:** PHYS 1510

**General Education Attribute**

- Discoveries-Natural Science & Technology

## PHYS 1510 - General Physics I Laboratory

**Credit Hours:** 1

This course is the laboratory which accompanies the first course in a two-semester sequence of algebra-based physics. Topcis will include Newton's Laws governing force, work, energy, momentum, and gravitation; linear and rotational motion, fluid mechanics, harmonic motion, waves, and heat flow. PHYS 1500 lecture must be taken concurrently.

**CoRequisite:** PHYS 1500

**General Education Attribute**

- Discoveries-Natural Science & Technology

## PHYS 1600 - General Physics II

**Credit Hours:** 3

This course is the second course in a two-semester sequence of algebra-based physics for students seeking an understanding of physics at a relaxed mathematical level. Emphasizes electricity, magnetism, and optics.

**Prerequisite:** PHYS 1500 and PHYS 1510
**CoRequisite:** PHYS 1610

**General Education Attribute**

- Competency-Quantitative Application

## PHYS 1610 - General Physics II Laboratory

**Credit Hours:** 1

This course is the laboratory which accompanies the second course in a two-semester sequence of algebra-based physics. Topics will include current flow, electrical potential, electromagnetic and electrostatic fields, and optics.

**CoRequisite:** PHYS 1600

**General Education Attribute**

- Competency-Quantitative Application
- Competency-Applied Methodologies

## PHYS 2500 - University Physics I

**Credit Hours:** 4

This course is the first course in a two-semester sequence of calculus-based physics for students seeking an understanding of physics at a rigorous mathematical level. The course is an analytical study of classical mechanics, including energy, momentum and mechanical waves, and thermodynamics.

**Prerequisite:** MATH 1230 or MATH 1410 and MATH 2410 or MATH 2320 or MATH 2310 and PHYS 2510

## PHYS 2510 - University Physics I Laboratory

**Credit Hours:** 1

This course is the laboratory which accompanies the first course in a two-semester sequence of calculus-based physics. Topcis will include Newton's Laws governing force, work, energy, momentum, and gravitation; linear and rotational motion, fluid mechanics, harmonic motion, waves, and heat flow.

**Prerequisite:** MATH 1230 or MATH 1410 and MATH 2410 or MATH 2320 or MATH 2310 and PHYS 2500

## PHYS 2600 - University Physics II

**Credit Hours:** 4

This course is the second course in a two-semester sequence of calculus-based physics for students seeking an understanding of physics at a rigorous mathematical level. Emphasizes electricity, magnetism, and optics. PHYS 2610 Laboratory must be taken concurrently.

**Prerequisite:** MATH 2410 or MATH 2320 or MATH 2310 and PHYS 2500 and PHYS 2510 and MATH 2420 and PHYS 2610
**General Education Attribute**

- Competency-Quantitative Application

## PHYS 2610 - University Physics II Laboratory

**Credit Hours:** 1

This course is the laboratory which accompanies the second course in a two-semester sequence of calculus-based physics. Topics will include principles of current flow, electrical potential, electromagnetic and electrostatic fields, and optics.

**CoRequisite:** PHYS 2600

**General Education Attribute**

- Competency-Quantitative Application
- Competency-Applied Methodologies

## PLE 2402 - Principles of Ecology

**Credit Hours:** 0 TO 3

Examines the interaction of organisms and their biotic and abiotic environment, population dynamics and interactions, community structure and function, and ecosystem energetics and biogeochemistry. Two lecture and three laboratory hours weekly. Offered Fall and Spring, annually.

## PLE 4405 - Ecological Applications

**Credit Hours:** 3

Case history approach to the analysis and possible resolution of both terrestrial and aquatic environmental problems. Students analyze problems from a number of perspectives, including the biological, in an assessment of the problem. Incorporates sample design, cost considerations, data collection, and analysis into the assessment. Overall assessment of problems and possible resolutions will be conveyed both orally and in a written format. Intended as a capstone for students in the Applied Ecology Program, but appropriate for other students who meet prerequisites. Satisfies the writing intensive and second values flags of the university general education requirements.

**Prerequisite:** BIOL 2248

## PLE 4410 - Field Methods in Environmental Biology

**Credit Hours:** 0 OR 3

A field-based course designed to give students hands-on experience in the various methods needed in environmental studies. The course will focus on the environmental assessment of terrestrial and aquatic habitats and the impacts of perturbations on flora, fauna, and natural landscapes. Summer, on demand.

**Prerequisite:** BIOL 2248

## PLE 4420 - Forest Ecology

**Credit Hours:** 3

This course concerns the study of the ecology, management, and conservation of forest ecosystems focusing on the eastern deciduous forest biome. Overnight field trips will be taken to study the major regional forest types

**Prerequisite:** BIOL 2248

## PLE 4422 - Wildlife Management

**Credit Hours:** 3

A brief review of wildlife conservation will be followed by a review of ecological principles including population ecology. Application of these principles in management of wetlands, farmlands, range lands and forest lands for wildlife precedes more specialized aspects such as exotic, urban, nongame, and endangered wildlife programs.

**Prerequisite:** BIOL 2248

## PLE 4427 - Field Botany

**Credit Hours:** 0 OR 3

Field-based course emphasizing the identification and natural history of common vascular plants native to western Pennsylvania and methods used to study them. Course will be taught at a time when the spring flora is conspicuous.

**Prerequisite:** BIOL 2248

## PLE 4473 - Freshwater Ecology

**Credit Hours:** 0 OR 3

Field-oriented study of the physics, chemistry, and biology of standing and flowing inland waters.

**Prerequisite:** BIOL 2248 Completion of two semesters of introductory biology or permission of instructor.

## PLE 4475 - Wetland Ecology

**Credit Hours:** 0 OR 3

Wetlands are an important transitional habitat from terrestrial to aquatic systems. They provide services that are critical to the health and functioning of the ecosystem, but in many ways wetlands defy easy definition. This class will investigate the different types of wetlands, the properties that define wetlands, the benefits they supply to the ecosystem and society, and the history and present status of ecosystem management.

**Prerequisite:** BIOL 2248

## PLE 4482 - Behavioral Ecology

**Credit Hours:** 4

Behavior is studied from an evolutionary and ecological perspective. Current models of foraging, mating and social behavior are evaluated through lecture, readings, observations and experiments. Three hours lecture and three hours laboratory.

**Prerequisite:** BIOL 1400

## PLE 4490 - Disease Ecology

**Credit Hours:** 3

This course integrates the field of ecology, epidemiology, parasitology and traditional disease biology to better understand the occurrence, dynamics and consequences of diseases. Students will learn how epidemiological and ecological concepts and theories apply to disease systems.

**Prerequisite:** BIOL 2248

## PLE 4728 - Ornithology

**Credit Hours:** 3

Deals with the biology of birds. Lectures cover topics such as classification; internal and external adaptations for flight, migration, nesting, feeding habits, behavior, ecology, and physiology. Two lectures and three laboratory or field trip hours per week. Prerequisite: Junior or higher standing in biology or permission from the instructor.

**Prerequisite:** BIOL 2248

## PLE 4775 - Herpetology

**Credit Hours:** 3

Students will study the ecology and evolution of amphibians and reptiles. Topics to be studied include behavior, morphology, physiology, taxonomic diversity, systematic practice, evolutionary biology, and conservation biology. Course includes a substantial field component. Taught summer session, Pymatuning Laboratory of Ecology

**Prerequisite:** BIOL 2248

## POLI 1000 - Introduction to Politics

**Credit Hours:** 3

This course introduces students to key ideas, institutions, processes, and actors in politics. Students consider approaches to analyzing and evaluating political issues.

**General Education Attribute**

- Discoveries-Social Sciences

## POLI 1100 - Introduction to American Politics

**Credit Hours:** 3

This course is a comprehensive introduction to American politics and constitutional government.

**General Education Attribute**

- Discoveries-Social Sciences

## POLI 1210 - Civil Discourse & Difficult Conversations

**Credit Hours:** 3

Explores conversations on controversial subjects with emphasis on recognizing conflict and engaging in constructive modes of interaction. Topics include civil discourse as the foundation for democratic institutions, sustainable relationships and collaborative decision-making. Students will construct, arrange and deliver oral presentations.

**General Education Attribute**

- Foundations-Oral Communication

## POLI 3000 - Ideas and Issues in American Politics

**Credit Hours:** 3

Students critically examine major political ideas and issues and the shifting ways they impact, and are impacted by, the American political system.

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing

**General Education Attribute**

- Discoveries-Social Sciences

## POLI 3100 - Congress and the Legislative Process

**Credit Hours:** 3

Examines the legislative process in American representative government with primary concern given to the structure, operation, and development of the U.S. Congress.

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing
**General Education Attribute**

- Competency-Information Literacy

- Competency-Intensive Writing

## POLI 3110 - The American Presidency

**Credit Hours:** 3

Examines the evolution, politics, and paradoxes of the American presidency. Special attention will be given to theories of presidential power, the presidency's place within in the constitutional system of separated powers, presidential rhetroric, and a range of historical and contemporary dynamics that shape the office.

**Prerequisite:** POLI 1000  or POLI 1100 or Sophomore Standing

## POLI 3140 - Parties, Elections, and the Media

**Credit Hours:** 3

An examination of parties, electoral behavior, and the news media in U.S. politics. This course follows the history and nature of the two-party system, the mechanics and significance of elections and voter behavior, and the impact of media in influencing citizens' understanding of political participation, insitutions, and elections.

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing

## POLI 3230 - Politics of Poverty

**Credit Hours:** 3

What is the politics of poverty in the modern United States? How has economic hardship been debated in our politics and reflected in public policy? In what ways has popular culture perpetuated myths and framed our perceptions about poverty? This course examines poverty through the lens of politics, social and public policy, and popular culture, and is designed to provide context for the pivotal legislation, socio-political movements, and elections that have shaped the politics of poverty in America. To this end, policies such as AFDC, TANF, Medicaid, SNAP, and the ACA; social movements; and major presidencies, elections, and socio-political dynamics, will be considered. Offered fall or spring annually.

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing

## POLI 3250 - Crime, Politics, and Policy

**Credit Hours:** 3

Course treats the ways in which government treats crime as a public policy matter, with a predominant focus on legislative and executive branch activity. Topics may vary somewhat from year to year. Examples of policies to be examined and evaluated include: reducing the incidence of crime, the politics of imprisonment, punitive and restorative justice, decriminalization, drugs and crime, death penalty, gun control, hate crimes, "zero tolerance" approaches, pornography, corporate crime, organized crime, and terrorism. The constitutional and legal framework of policies will also be considered.

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing

## POLI 3300 - International Relations

**Credit Hours:** 3

Presents a framework for analyzing the behavior of states, the basic factors which motivate and affect international policies, and the techniques of resolving international conflicts.

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing

## POLI 3310 - Comparative Politics

**Credit Hours:** 3

Students use political science to study different countries. Topics include the state, national/ethnic identity, political economy of states and regions, democratic and non-democratic institutions, political violence, economic and political development, and globalization. Case studies of countries and regions help explain course material.

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing
**General Education Attribute**

- Competency-Intercultural Fluency

## POLI 3340 - The Politics of Empires

**Credit Hours:** 3

This course will explore the political ideas, traditions and institutions associated with the idea of empires and imperial organization in international order. It will also focus on how empires not only organize foreign policy and foreign affairs, but equally the social and economic lives and cultures of their citizens and subjects. The course will begin with an overview of political science thinking on the values and ethics associated with the idea of empire, and how much of this political thought views empire as the key to peace, progress and prosperity. The course then considers the evolution of the imperial idea throughout political history to its current manifestations in our own age. The classical expression of empire is will first be considered in the examination of the Egyptian, Greek and Roman empires. The course then subsequently will consider the Asian practice of empire in both its Islamic forms (Ottoman, Safavid and Mughal) and Chinese forms. Following this, the course will turn to a treatment of the great trading and colonization empires (British, French, Dutch) and their influence in determining the modern economic and Western international political order. The age of ideological empires will be the fourth section of the course and it will explore not only the Nazi and Communist empires, but those patterns of world and imperial international order influenced by the French Revolution and the liberal internationalism of the United States of America. The course will conclude with a consideration of imperial order and international organization in the current era of globalization and increasing economic integration. In studying the aforementioned, the student will not only meet the general objectives, but also the following political science objectives.

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing

## POLI 3350 - Politics of the World Economy

**Credit Hours:** 3

This course will be concerned with understanding the politics of the world economy. The emphasis will be on the contemporary structure of the international political economy, how it emerged, and what actions and policy responses by international institutions, governments, multinational corporations and labor unions continue to shape its order. Students will also gain knowledge of how their lives are impacted by the world economy and what future opportunity exists there.

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing

## POLI 3370 - American Foreign Policy and National Security

**Credit Hours:** 3

Students examine United States foreign policy and national security, emphasizing institutions, actors, and outcomes of the policymaking process and critical evaluation of key historical and contemporary issues. Topics include sources, goals, and tools of American policy, as well as ethical and practical issues facing decision-makers.

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing
**General Education Attribute**

- Competency-Ethical Reasoning

## POLI 3395 - International Diplomacy: Analysis and Practicum

**Credit Hours:** 3

This course explores the role and mechanisms of diplomacy through the study of international organizations and participation in model simulations. Students examine the background, operation, and challenges of the United Nations and other organizations and prep for conferences in New York and elsewhere.

## POLI 3400 - Ancient and Medieval Political Thought

**Credit Hours:** 3

Students explore fundamental ethical questions in politics by discussing and evaluating the writings of major figures from the ancient Greek, Roman and medieval periods. Students examine primary texts, consider the political and social context in which political theories emerge and evolve, and develop ethical reasoning skills.

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing
**General Education Attribute**

- Competency-Ethical Reasoning
- Competency-Intensive Writing

## POLI 3410 - Modern Political Thought

**Credit Hours:** 3

Students explore fundamental ethical questions in politics by discussing and evaluating the writings of major figures from the energence of the Renaissance to the 21st century. Students examine primary texts, consider the political and social context in which political theories emerge and evolve, and develop ethical reasoning skills.

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing
**General Education Attribute**

- Competency-Ethical Reasoning

## POLI 3510 - Constitutional Law

**Credit Hours:** 3

In this course, students analyze American constitutional law, focusing on the scope and distribution of congressional, presidential, judicial, and state governmental power. Topics include the separation of powers, judicial review, federalism, theories of constitutional interpretation, and the dynamics of Supreme Court decision-making.

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing
**General Education Attribute**

- Competency-Intensive Writing

## POLI 3520 - Civil Liberties

**Credit Hours:** 3

In this course, students analyze American constitutional law regarding individual and group freedoms. Topics include freedom of expression, religious freedoms, the right to bear arms, sexual and bodily autonomy, equal protection of the law, theories of constitutional interpretation, and the dynamics of Supreme Court decision-making.

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing

## POLI 3530 - International Law

**Credit Hours:** 3

This course examines the political foundations of public international law and the rules governing and stemming from state relations. The primary focus is on the role of law in world politics, the development and application of contemporary legal norms, and the political and socio-economic factors that create those laws and norms.

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing
**General Education Attribute**

- Competency-Ethical Reasoning

## POLI 3610 - Politics and Film

**Credit Hours:** 3

Explores the relationship between movies, political attitudes, and the real world of American politics and government. Examines Hollywood's depiction of the presidency, campaigns and candidates, the mass media, political culture, and the struggle for civil rights and social justice. Introduces students to seminal political films and relevant readings that help place the movies and their messages in the context of important political events.

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing

## POLI 3620 - Politics and Pop Culture

**Credit Hours:** 3

This course examines the effects of various forms of popular culture on politics within and across societies. Students will use their own experiences as consumers of popular culture as a foundation for exploring the roles played by mass-mediated popular culture in people's political lives. Students will also examine various approaches to analyzing politics.

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing

## POLI 3900 - Independent Study

**Credit Hours:** 1 TO 6

Independent Study

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing

## POLI 3990 - Special Topics in Politics

**Credit Hours:** 3

In this course, students examine a special subject or controversy in politics. Topics covered vary from semester to semester.

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing

## POLI 4900 - Public Policy Analysis

**Credit Hours:** 3

Students learn to apply techniques for researching, analyzing, and evaluating the viability and impact of public policy proposals. Students also learn to present their work in professional formats.

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing
**General Education Attribute**

- Competency-Applied Methodologies
- Competency-Keystone Experience

## POLI 4950 - Political Science Internship

**Credit Hours:** 3 TO 15

This course allows students to receive academic credit for one or more approved internship experiences related to politics or law.

**Prerequisite:** POLI 1000 or POLI 1100 or Sophomore Standing
**General Education Attribute**

- Competency-Keystone Experience

## PSYC 1000 - Introduction to Psychology

**Credit Hours:** 3

This course provides an introduction to the scientific study of behavior and mental processes. Topics covered in the course include the biological basis of behavior, research methods, learning, memory, human development, personality, social psychology, abnormal behavior, and the treatment of mental disorders.

**General Education Attribute**

- Discoveries-Social Sciences

## PSYC 1010 - Critical Thinking in Psychology

**Credit Hours:** 3

This introductory course uses basic concepts from psychology to challenge students to become more thoughtful when analyzing statements and opinions about human behavior. Students participate in discussions and make presentations in which they examine popular misconceptions and current issues relevant to psychology.

## PSYC 1020 - Careers in Psychology

**Credit Hours:** 3

This course focuses on introducing psychology majors to the broad range of career opportunities related to psychology. Students will explore personal interests and skills developed in the major that relate to career options with a bachelor's degree and career options that would require graduate school.

## PSYC 1300 - Psychology of Personal Growth and Wellness

**Credit Hours:** 3

This course emphasizes psychological wellness throughout the lifespan, enabling students to explore self-identity, social relationships, and environmental influences, while learning to handle stressors. Explores problems of personality, effective communication, conflict resolution, and the role of emotions in behavior, relationships, and health.

**General Education Attribute**

- Wellness & Personal Health

## PSYC 1420 - Medical Cannabis

**Credit Hours:** 3

This course introduces students to uses of medical cannabis, and how cannabis and related drugs work in the human body. Students will compare the benefits and risks of cannabis and related drugs in a wide range of medical conditions. Students will also learn to critique and contrast different kinds of health research, in order to make unbiased judgments about cannabis in medicine.

## PSYC 2100 - Social Psychology

**Credit Hours:** 3

The course examines the scientific approach toward understanding human social behavior. The course focuses on the perspective of the individual-how people think about, influence, and relate to one another within their situational and cultural contexts. Topics include social cognition, aggression, prejudice, altruism, persuasion, and relationships.

**General Education Attribute**

- Discoveries-Social Sciences
- Competency-Information Literacy

## PSYC 2200 - Lifespan Developmental Psychology

**Credit Hours:** 3

This course provides an overview of the biological, cognitive, and social factors that impact physical, cognitive, social, and emotional development throughout the lifespan. Presents the research methodology common to this field of psychology as well as the major theories and their application to stages of life from conception to death.

**General Education Attribute**

- Discoveries-Social Sciences

## PSYC 2330 - Stress Management

**Credit Hours:** 3

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.

## PSYC 3000 - Psychological Statistics

**Credit Hours:** 3

This course covers the application of descriptive and inferential statistical procedures in psychology, with an emphasis on the analysis and interpretation of experimental data. Topics include testing assumptions, computation and interpretation of various hypothesis tests, and the application of computer statistical packages.

**Prerequisite:** MATH 1010 or MATH 1020 or MATH 1030 or MATH 1040 or MATH 1110 or MATH 1220 or MATH 1230 or MATH 1410 or MATH 1510 or MATH 1610 or MATH 2120 or MATH 2310 or MATH 2320 or MATH 2410 or STAT 2000 or STAT 2010 or STAT 2020
**General Education Attribute**

- Competency-Quantitative Application

## PSYC 3010 - Research Methods in Psychology

**Credit Hours:** 3

This course examines research strategies for understanding psychological phenomena. Students formulate and evaluate research hypotheses, systematically collect data, organize and statistically analyze data, identify confounds and alternate explanations of findings, and prepare research reports using APA style.

**Prerequisite:** PSYC 3000
**General Education Attribute**

- Competency-Applied Methodologies
- Competency-Intensive Writing

## PSYC 3120 - Cross Cultural Psychology

**Credit Hours:** 3

This course examines the intersectionality of culture, race, ethnicity, and diversity in the field of psychology. Focuses on how issues of culture and diversity relate to the interpretation and perception of people's experience/beliefs/values as

well as how to apply this information in the field of psychology overall.

**Prerequisite:** PSYC 1000
**General Education Attribute**

- Competency-Intercultural Fluency

## PSYC 3200 - Child and Adolescent Developmental Psychology

**Credit Hours:** 3

This course describes and synthesizes the current knowledge about the psychological development of children, which includes cognitive, emotional, and social developmental factors from conception through adolescence. Using psychological research, multiple theoretical frameworks for understanding development will be examined.

**Prerequisite:** PSYC 1000

## PSYC 3240 - Psychology of Adulthood and Aging

**Credit Hours:** 3

This course examines the psychological impact of the continuing life processes that occur during early, middle, and late adulthood. Theoretical frameworks of adulthood and aging, and the strengths and weaknesses of developmental research, will be reviewed. The aging process is viewed as a continuation of the life cycle as opposed to an end-stage.

**Prerequisite:** PSYC 1000

## PSYC 3300 - Health Psychology

**Credit Hours:** 3

This course examines the psychological factors that help individuals develop and maintain healthy behaviors and that affect the course and treatment of illnesses. Contemporary research strategies used to understand health promotion, disease prevention, and management of illness are reviewed.

**Prerequisite:** PSYC 1000

## PSYC 3350 - Abnormal Psychology

**Credit Hours:** 3

This course surveys the most common behavior disorders across the lifespan including mood disorders, anxiety disorders, personality disorders, substance-related disorders, and schizophrenia. Ethical issues, sociocultural factors, diagnoses, causes, and treatment will be considered.

**Prerequisite:** PSYC 1000

## PSYC 3410 - Psychology of Sexual Behavior

**Credit Hours:** 3

This course provides an overview of current theory and research in the field of sex research. Emphasis is placed on the

importance of psychological theory in understanding aspects of sexual behavior while recognizing the wide range of influences (i.e., cultural, biological & evolutionary processes).

**Prerequisite:** PSYC 1000

## PSYC 3412 - Psychology of Gender Roles

**Credit Hours:** 3

This course explores how gender roles develop and how gender influences our daily lives. Aspects of life experience where gender plays an important role - including education, occupations, physical and mental health, politics, religion and the media - are discussed. Multicultural and cross-cultural perspectives are integrated throughout.

**Prerequisite:** PSYC 1000

## PSYC 3414 - Black Psychology

**Credit Hours:** 3

This course presents the psychological principles shaping the personality of Black people. Includes a critique of "traditional" psychology, racial myths, discriminatory thinking and behavior. The analysis of attitudes and behaviors which develop in prejudicial socio-economic, educational and political systems are examined.

**Prerequisite:** PSYC 1000

## PSYC 3420 - Psychology and Law

**Credit Hours:** 3

This course provides an overview of psychology's various roles in the civil and criminal justice systems, using a research-based focus on the application of psychology in the legal system. Topics explored include eyewitness testimony, criminal profiling, juries, discrimination, and family law. Current problems and practices will be presented.

**Prerequisite:** PSYC 1000
**General Education Attribute**

- Competency-Ethical Reasoning

## PSYC 3430 - Psychology of Creativity

**Credit Hours:** 3

This course introduces the psychological approach towards understanding and increasing creativity. Includes scientific techniques used to measure creativity, as well as practical applications of theories and research findings. Includes examples of creativity from different domains, including everyday problem solving, arts, and sciences.

**Prerequisite:** PSYC 1000

## PSYC 3440 - Sport Psychology

**Credit Hours:** 3

This course introduces students to applied sport and exercise psychology. Students study concepts and theories related to sport and exercise psychology, and practice applying this knowledge. Topics include youth sports, motivation, peak performance, and psychological strategies used to improve performance.

**Prerequisite:** PSYC 1000

## PSYC 3450 - Industrial-Organizational Psychology

**Credit Hours:** 3

This course focuses on the application of psychology in businesses and organizations and is an introduction to the field of Industrial and Organizational (I/O) Psychology. Topics include the hiring process, methods of assessing employee performance, employee attitudes and motivation, leadership and teams, and stress and health in the workplace.

**Prerequisite:** PSYC 1000

## PSYC 3460 - Psychology of Happiness

**Credit Hours:** 3

What is happiness? How can we achieve happiness? This course is an exploration of the new area of positive psychology which is concerned with using science to discover the factors which make like meaningful, create happiness, and enable individuals and communities to thrive. Positive psychologists see happiness as a skill which can be studied, taught and learned. This course will look at evidence from the biological, cognitive, social, and clinical areas of psychology in order to understand happiness, with the aim of using what we learn to improve our own lives.

## PSYC 3500 - Psychology of Personality

**Credit Hours:** 3

This course reviews major psychological theories of personality including psychodynamic, trait, behavioral, and humanistic theories. Each theory's major concepts are discussed, along with how the theory explains normal and maladjusted personality development. Theories are compared, evaluated, and applied to everyday and clinical examples.

**Prerequisite:** PSYC 1000

## PSYC 3510 - Theories of Psychotherapy

**Credit Hours:** 3

This course reviews major theories of psychotherapy and will analyze each theory's basic concepts, goals, and techniques, including how they influence the practice of psychotherapy. Factors relevant to all psychotherapies, such as the importance of ethics, the therapeutic relationship, and basic helping skills, are discussed.

**Prerequisite:** PSYC 1000

## PSYC 3520 - Clinical Skills in Psychology

**Credit Hours:** 3

This course introduces students to basic psychotherapeutic methods and skills, such as listening skills, relationship building, and ethics. Students will practice communication skills with peers under supervision.

**Prerequisite:** PSYC 1000
**General Education Attribute**

- Competency-Ethical Reasoning

## PSYC 3530 - Psychology of Assessment

**Credit Hours:** 3

This course addresses both the theory and practice of psychological assessment. Fundamental psychometric principles will be emphasized, along with applied uses of testing, such as intellectual assessment, and objective and projective personality testing.

## PSYC 3544 - Childhood Trauma: Theory, Research, & Practice

**Credit Hours:** 3

This course examines the impact of trauma and traumatic stress on children, adolescents, and families. Theoretical foundations, current research and literature, and developmental considerations of traumatic stress's impact on developing children are explored. Evidence-based treatments for childhood traumatic stress will be reviewed.

**Prerequisite:** PSYC 1000

## PSYC 3550 - Psychology of Substance Use

**Credit Hours:** 3

This course presents the major theories of substance use. The development and structure of substance use will be addressed. The characteristics of the normal and maladjusted personality are identified, with special concern for developmental patterns associated with substance use and addiction. Students will engage in clinical, practical, and experiential exercises that are designed to be exciting and challenging.

## PSYC 3560 - Group Psychotherapy

**Credit Hours:** 3

This course introduces students to the structure and process of group psychotherapy, the developmental process of group psychotherapy, and theoretical models of group work. Broader issues, such as the characteristics of effective group facilitators, micro-skills for group work, and ethical issues are also discussed.

**Prerequisite:** PSYC 1000

## PSYC 3600 - Cognitive Psychology

**Credit Hours:** 3

This course examines the mental processes and activities humans use in perceiving, recognizing, remembering, and understanding information, sometimes called "higher mental processes." Cognitive Psychology explores how humans acquire, store, transform and use knowledge to navigate our world of thought and action.

**Prerequisite:** PSYC 1000
**General Education Attribute**

- Discoveries-Social Sciences

## PSYC 3620 - Learning Theory

**Credit Hours:** 3

This course presents the major theories of learning focusing on classical and operant conditioning. The course provides both a historical perspective and application of learning theory to different areas of behavior.

**Prerequisite:** PSYC 1000

## PSYC 3700 - Drugs and Human Behavior

**Credit Hours:** 3

Covers the psychological, behavioral, and clinical effects of drugs, including stimulants, hallucinogens, narcotics, and other recreational drugs, as well as drug therapy for mental disorders. Students learn the history of drug development and regulation, and the societal, psychological, biological, and health impact of drug taking.

**Prerequisite:** PSYC 1000

## PSYC 3720 - Brain and Behavior

**Credit Hours:** 3

This course explores basic principles of the nervous system, including how brain cells function to gain a greater understanding of the biological processes regulating complex behaviors. Topics covered include motivated behaviors, sleep, learning and memory, and affective behaviors.

**Prerequisite:** PSYC 1000

## PSYC 3740 - Sensation and Perception

**Credit Hours:** 3

Sensation is the physical process in which the sensory receptors receive stimuli from the environment and transmit it to the brain. Perception is the process in which the brain organizes and interprets that information. This course focuses on visual and auditory processes of sensation and perception and their application to real world phenomena.

**Prerequisite:** PSYC 1000

## PSYC 3900 - Independent Study in Psychology

**Credit Hours:** 1 TO 3

Students explore an area of special interest in depth for variable credit under the supervision of a member of the department and with approval of the chairperson. Open to juniors and seniors.

## PSYC 3990 - Special Topics in Psychology

**Credit Hours:** 3

Focuses on a single, broad contemporary issue of current interest in psychology and related fields of study. Course content varies from semester to semester. May be taken three times for credit.

## PSYC 3995 - Research Seminar in Psychology

**Credit Hours:** 3

Students will be introduced to conducting, analyzing, writing, and presenting a research project in psychology as part of a faculty member's research team.

**Prerequisite:** PSYC 1000

## PSYC 4800 - Capstone Seminar in History & Systems

**Credit Hours:** 3

This course explores the evolution of all major perspectives of psychology, including structuralism, functionalism, behaviorism, gestalt, psychoanalysis, humanism, and the cognitive view. The contextual forces that shaped the discoveries and thinking of the times in relation to the development of psychology as a science are emphasized.

**Prerequisite:** PSYC 3010
**General Education Attribute**

- Competency-Intensive Writing
- Competency-Keystone Experience

## PSYC 4900 - Capstone Seminar in Psychology

**Credit Hours:** 3

This course applies psychological theory and practice from earlier courses to complex issues to develop students' expertise in thinking, writing, and presenting in psychology. Students explore applications in the field and strengthen career skills.

**Prerequisite:** PSYC 3010
**General Education Attribute**

- Competency-Intensive Writing
- Competency-Keystone Experience

## PSYC 4910 - Capstone Lab in Psychology

**Credit Hours:** 3

Students will conduct, analyze, write-up, and present a research project in psychology.

**Prerequisite:** PSYC 3010
**General Education Attribute**

- Competency-Intensive Writing

- Competency-Keystone Experience

## PSYC 4920 - Capstone Research Project in Psychology

**Credit Hours:** 3

Students will conduct, analyze, write-up, and present a research project in psychology under the supervision of a faculty member.

**Prerequisite:** PSYC 3010
**General Education Attribute**

- Competency-Intensive Writing
- Competency-Keystone Experience

## PSYC 4950 - Field Experience in Psychology

**Credit Hours:** 3 TO 6

Students work in agencies under a cooperating professional and university supervisor, meeting regularly to discuss ethics and issues raised in professional practice.

**General Education Attribute**

- Competency-Ethical Reasoning

## PSYC 4955 - Internship in Psychology

**Credit Hours:** 3 TO 12

This course provides practical observation and experiences for the student in an approved human services agency or facility where psychological principles and techniques are used. Students are graded on a satisfactory/unsatisfactory basis.

## PTA 1000 - Introduction to Physical Therapist Assistant

**Credit Hours:** 3

This course is an overview of the discipline of physical therapy and the role and function of the PTA within the physical therapist - physical therapist assistant team. Topics include common interventions and data assessment for physical therapy. Applied discipline-based social science knowledge and methods are also included.

**General Education Attribute**

- Discoveries-Social Sciences

## PTA 1010 - Basic Physical Therapy Procedures

**Credit Hours:** 1

Course provides an introduction to basic physical therapy patient care procedures in a laboratory format. Topics include body mechanics, positioning and draping, vital signs, basic exercise, transfer activities, wheelchair features and activities, ambulation aids and gait/stair training, infection control, data collection, MMT, and goniometry.

## PTA 1100 - Introduction to Pathology

**Credit Hours:** 2

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 neurological impairments.

## PTA 2000 - Professional Issues in PTA

**Credit Hours:** 2

This course is an examination of the legal, ethical and professional aspects of a career in physical therapy. Important issues such as liability, malpractice, proactive acts, and reimbursement are discussed. Special attention is focused on the importance of research and preparation for the PTA National Physical Therapy Examination.

## PTA 2050 - Interventions in Cardiopulmonary Impairments

**Credit Hours:** 3

An examination of the anatomy, pathology, and pathophysiology of cardiovascular, respiratory, hematologic, lymphatic, and renal and urological systems. Based on the plan of care established by the physical therapist, students will apply current knowledge, theory, and clinical judgement. The laboratory emphasizes data collection and interventions.

## PTA 2100 - Physical Therapy Interventions for Neurological Impairments

**Credit Hours:** 4

This course examines the etiology, signs, and symptoms and effects of pathologies of the central and peripheral nervous systems. Development of patient goals and physical therapy interventions for specific neurological disorders are included. Specific treatment procedures are learned and practiced in the laboratory setting.

## PTA 2250 - Physical Therapist Assistant Interventions in Orthopedic Impairments

**Credit Hours:** 4

This course guides the physical therapist assistant student under direction of a physical therapist from fundamentals and theory through practice in orthopedic rehabilitation. Emphasis is placed on rehabilitation for all major joints to reduce pain and swelling, increase motion and strength, enhance balance and proprioception, and restore function.

**General Education Attribute**

- Competency-Information Literacy

## PTA 2300 - Physical Therapy Interventions Across the Lifespan

**Credit Hours:** 3

This course explores physical therapy interventions indicated for the normal and abnormal human development throughout the lifespan, including changes caused by pathologies. Particular attention is given to function in the school,

work, home, community and social environments through data collection, communication, assessment, and interventions.

## PTA 2400 - Physical Therapist Assistant Special Topics

**Credit Hours:** 3

This course discusses the role of the PTA in patient/client management in specialty populations and participation in health care environment, practice management, & wellness/prevention. Special conditions include women's health, bariatrics, wounds, cancer, prosthetics, and orthotics. Additional topics include reimbursement and research methods.

**Prerequisite:** PTA 1000 and PTA 1010 and PTA 1100 and PTA 4950 and PTA 2300 and PTA 2900
**General Education Attribute**

- Competency-Ethical Reasoning

## PTA 2600 - Pharmacology and Imaging for the PTA

**Credit Hours:** 2

This course will explore the mechanism of action, adverse effects, and physical therapy implications of drugs used to treat common cardiopulmonary, musculoskeletal, metabolic, and neurological conditions. In addition, this course will explore the essential information to be able to accurately recognize patients' medical imaging studies.

## PTA 2900 - Therapeutic Modalities

**Credit Hours:** 4

The course entails the study of mechanisms of pain management and its mediation, and the theory and practice of biophysical agents (superficial heat, electrotherapy, compression, traction, massage, etc.) The student will be able to explain the theory behind the use of biophysical agents and demonstrate the proper application.

## PTA 4950 - Physical Therapy Clinical Internship I

**Credit Hours:** 4

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.

## PTA 4955 - Physical Therapy Clinical Internship II

**Credit Hours:** 12

This clinical internship provides physical therapy assistant students with extensive and varied experience in areas such as patient care, administration, supervision of support personnel under physical therapist or physical therapist assistant supervision. The experience provides the experiential learning in developing entry-level PTA skills.

## QBA 1000 - QBA 1: Optimization

**Credit Hours:** 3

This course focuses on business problems involving finding maximum and minimum values with and without constraints. Topics include matrix algebra, linear programming, and derivatives, with focus on applications in business, economics, and the social sciences.

**Prerequisite:** MATH 1220 or ALEKS placement test
**General Education Attribute**

- Discoveries-Natural Science & Technology

## QBA 2000 - QBA 2: Statistical Analysis

**Credit Hours:** 3

This course introduces the business decision-making applications of statistics (including central tendency, dispersion, correlation, simple regression, and hypothesis testing). Emphasis is placed on data visualization and communication of results.

**Prerequisite:** MATH 1010 or MATH 1220
**General Education Attribute**

- Competency-Quantitative Application

## QBA 3000 - QBA 3: Analytics and Applications

**Credit Hours:** 3

This course introduces more advanced quantitative tools to inform complex business decision-making situations. Emphasis is placed on the application of the tools using real-world applications and case studies to practice concepts.

**Prerequisite:** QBA 2000
**General Education Attribute**

- Competency-Applied Methodologies

## RECR 1650 - Introduction to Recreation and Leisure

**Credit Hours:** 3

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 on leisure, leisure as a modifier of culture, and leisure as it relates to life stages and health.

**General Education Attribute**

- Wellness & Personal Health

## RECR 1950 - Leisure and Wellness Recreation

**Credit Hours:** 3

The course introduces students to methods for increasing a proactive lifestyle to greater wellness through leisure education. The class will address leisure in its historical and modern contexts as well as the relationships between leisure, work, health, and wellness in both individual and societal contexts.

## RECR 2200 - Youth Competitive Recreational Activities

**Credit Hours:** 3

This course focuses on the planning and management of competitive recreational activities for youth. The purpose of this course is to help prepare students for management positions in youth-serving recreation agencies by building competence in primary areas related to youth recreational activities that are competitive in nature.

## RECR 2250 - Recreation and Youth Development

**Credit Hours:** 3

This course provides a historical and contemporary analysis of youth culture in the United States. Through the investigation of various youth serving organizations, this course provides an understanding of free-time settings that can offer youth with the supports, opportunities, programs, and settings needed to successfully become adults.

## RECR 2300 - Camp Counseling and Administration

**Credit Hours:** 3

This course focuses on camp management and administration, emphasizing the role of organized camping and camp experiences as an important component of youth development. The purpose of this course is to help prepare students for careers in professional camp management and programming.

## RECR 2400 - Sustainable Communities and Ecosystems

**Credit Hours:** 3

A social science approach to dealing with relationship between humans and the organic and inorganic environment. Emphasis is placed on the physical, biological and cultural basis of society's adaptation to the environment.

## RECR 2460 - Scenic Areas of the U.S.

**Credit Hours:** 3

This course explores the physical settings, managerial framework and historical background of some of the more popular protected scenic areas of the United States. The course uses the management agency and ecosystem as major threads and examines inherent differences in philosophy, uses, and missions/goals of the various land management agencies.

## RECR 2500 - Non-Profit and Community Recreation

**Credit Hours:** 3

This course provides an analysis of the role of recreation programming and facilities in the community, with emphasis on the importance of inclusion of leisure services in community development.

## RECR 2700 - Introduction to Interpretative Services

**Credit Hours:** 3

This course prepares the student to develop interpretive services and outdoor education programs focused on the natural resources/environmental interpretation and historical/cultural interpretation. The course concentrates on interpretive knowledge, skills and abilities including displays and exhibits, interpretive walks, presentations, and trails.

## RECR 2750 - Sustainable Recreation & Green Parks

**Credit Hours:** 3

This course surveys the history, current status, case studies and best management practices for sustainable recreation and green parks. It examines the relationship of outdoor recreation and natural resources, especially the environmental impact of recreational pursuits on the resource base.

**General Education Attribute**

- Competency-Ethical Reasoning

## RECR 2800 - Adventure and Outdoor Recreation Outfitting

**Credit Hours:** 3

This course will be a theoretical and experiential examination and analysis of adventure and outdoor recreation outfitting and all of the related elements. The course is designed to give students a broad theoretical, as well as practical, background in teaching and learning experientially.

## RECR 2850 - Water-Based Recreation

**Credit Hours:** 3

This course provides an analysis of managerial and administrative practices and processes in water-based recreation agencies and departments, including: departmental organization, policy making, liability and negligence, personnel management and staffing, fiscal management, budgeting, finance, office management, programming and public relations.

## RECR 3610 - Parks & Recreation for Diverse Populations

**Credit Hours:** 3

Leisure and recreation services for special population groups will be examined and studied with a focus on access/inclusion, barriers to participation, disabling conditions and special population groups, program development and service delivery, and legislation.

**Prerequisite:** RECR 1650
**General Education Attribute**

- Competency-Intercultural Fluency

## RECR 3620 - Recreation Site Design and Management

**Credit Hours:** 3

This course will familiarize the student with the components of the park and recreation site design process. Instruction

will center on the specific tools and procedures necessary to enable the student to be an effective planner of recreation and park facilities. The student will gain an understanding of the complete planning process.

**Prerequisite:** RECR 1650

## RECR 3650 - Recreation Resource Management

**Credit Hours:** 3

This course explores the relationship between outdoor recreation 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.

**Prerequisite:** RECR 1650

## RECR 3740 - Commercial Recreation Management

**Credit Hours:** 3

This course provides an overview of the commercial recreation industry, specifically focusing on procedures involved in the developing, marketing and managing of the enterprise. The student is introduced to the methods used in starting a leisure business. The management skills necessary for effective management of an enterprise are also discussed.

**Prerequisite:** RECR 1650

## RECR 3780 - Recreation Management and Leadership

**Credit Hours:** 3

This course provides an analysis of managerial and administrative practices and processes in recreation, park and agency departments, including: departmental organization, policy making, liability and negligence, personnel management and staffing, fiscal management, budgeting, finance, records and reports, office management, and public relations.

**Prerequisite:** RECR 1650

## RECR 4150 - Challenges and Trends in Parks and Recreation

**Credit Hours:** 3

An integrative course for detailed study of current issues in parks and recreation with emphasis on unique and imaginative solutions to the challenges facing the recreation/parks profession.

**Prerequisite:** RECR 1650

## RECR 4780 - Professional Development in Recreation

**Credit Hours:** 3

The course provides students with the opportunity to gain practical experience in an agency in the leisure services delivery system while being supervised by an agency professional and a faculty member. Students will be able to apply

skills and knowledge as a volunteer at an agency that falls under their particular area of interest.

**Prerequisite:** RECR 1650

## RECR 4950 - Parks and Recreation Management Internship

**Credit Hours:** 1 TO 12

The student is placed with a parks and recreation venue of their choice. The internship experience offers a practical training ground for students that supplements academic training by permitting them to apply the theories, concepts and techniques learned through their other coursework to address actual problems in a work environment.

**Prerequisite:** RECR 1650
**General Education Attribute**

- Competency-Keystone Experience

## REFN 2000 - Real Estate Fundamentals

**Credit Hours:** 3

Introduces the broad area of real estate. Lays foundation of important principles for in-depth study. First in a two-sequence course (with REFN 2710) required to fulfill the educational requirement for licensure as a real estate salesperson in the state of Pennsylvania.

## REFN 2710 - Real Estate Practice

**Credit Hours:** 3

Introduces the practice of real estate brokerage, real estate appraisal, real estate finance, and real estate investments. Second in a two-sequence course (with REFN 2000) required to fulfill the educational requirement for licensure as a real estate salesperson in the state of Pennsylvania.

**Prerequisite:** REFN 2000

## REFN 3730 - Real Estate Finance

**Credit Hours:** 3

A study of the methods of financing the purchase of real estate.

**Prerequisite:** FINA 3000 and REFN 2000

## REFN 3740 - Real Estate Marketing and Brokerage

**Credit Hours:** 3

Examines real estate marketing and brokerage management. Topics include the regulatory environment, marketing, advertising, sales management, and personal selling.

**Prerequisite:** REFN 2000

## REFN 3770 - Real Estate MarketÂ

**Credit Hours:** 3

Students will learn about and explore the differing factors that cause a developer or entity to select a site and a project. Through the review of several economic indicators, paired with specific factors relating to a proposed specific land use type, students will learn how to review demand and supply and draw a conclusion as to the viability of a proposed real estate development project. Furthermore, they will be able to describe a competitive market area, as well as the comparable properties as a result of their analysis. Conditions related to each asset class will be reviewed and discusses. Students will be able to describe the differing qualitative and quantitative metrics that allow a developer to make the decision to move forward with the acquisition of land to develop or redevelop a property.

**Prerequisite:** REFN 2000

## REFN 3780 - Real Estate Development Infrastructure & Sustain

**Credit Hours:** 3

Students will navigate the real estate development process for new and rehabilitative properties by understanding the required infrastructure and the impact of the development on its environment. Students will be required to breakdown each component of the development process in an effort to build a land development and net operating pro forma, along with a total project sources and uses of funds. Over the period of the course, students will be required to research and analyze the factors required to complete a successful development program based upon site selection and constraints, acquisition price, permitting and successful development program based upon site selection and constraints, acquisition price, permitting and approval requirements and attracting investors and capital to fund the project that adequately cover the cost of the project development.

**Prerequisite:** REFN 2000

## REFN 4700 - Real Estate Valuation

**Credit Hours:** 3

Introduces the principles of real estate appraisal. Focuses primarily upon those appraisal techniques and analyses which concern the estimation of the value of residential and commercial properties.

**Prerequisite:** REFN 2000

## REFN 4710 - Real Estate Marketing and Investment Analysis

**Credit Hours:** 3

Provides the necessary background to evaluate prospective real estate investment analysis. Examines both financial and non-financial aspects of investing in real property including risk, market analysis, portfolio impacts, and income taxation consequences.

**Prerequisite:** REFN 2000

## REFN 4720 - Income Property Appraisal

**Credit Hours:** 3

Provides advanced instruction in income property appraisal. Addresses the techniques and analysis necessary to estimate the value of an income producing property.

**Prerequisite:** REFN 4700

## REFN 4750 - Real Estate Management

**Credit Hours:** 3

Provides instruction in the management of real property. Examines the maintenance, operation, and marketing of real estate.

**Prerequisite:** REFN 2000

## ROBO 1100 - Agile Robotics I

**Credit Hours:** 3

This course provides a basic introduction to the field of robotics technology with particular emphasis on first-generation agile robotics as characterized by remotely piloted mobile robots. Because of the multidisciplinary nature of robotics, the student is exposed to many facets of robotics including concepts from computer, electrical and mechanical disciplines with a focus on engineering processes. The laboratory component features activities to solidify lecture concepts and team-oriented, hands-on projects to solve basic robotic problems. Two two-hour studio sessions per week.

## ROBO 1200 - Agile Robotics II

**Credit Hours:** 3

This course continues from Agile Robotics I by delving into the details of second-generation agile robotics technology as characterized by mobile robots with autonomous behaviors. Course highlights include use of software tools, further details of robotic systems, application of robot control programming, motion planning and additional applied technician skills. The laboratory component provides discovery activities to solidify lecture concepts and team-oriented, hands-on projects to solve autonomous robotics problems. Two two-hour studio sessions per week.

**Prerequisite:** ROBO 1100

## ROBO 2100 - Robotic Teaming

**Credit Hours:** 3

Modeled from the third generation of agile robotics evolution, this course explores the concept of adding inter-robot communications to autonomous robotic platforms to support swarming behaviors. Swarming capability is a common requirement of both industrial and personal robotic systems to achieve collaborative tasks using a team approach. Two lecture-hours and three laboratory-hours per week.

**Prerequisite:** ROBO 1200 and CMSC 1380
**General Education Attribute**

- Competency-Applied Methodologies

## ROBO 2900 - Robotics System Project

**Credit Hours:** 3

This project-based course integrates learning objectives of the robotics engineering technology program along with project management principles. Under the approval of the instructor, students will identify and realize a semester-long project based on mobile robotic technologies. Three hours of lecture.

**Prerequisite:** ROBO 2100 and ENGL 3230 and PHYS 1500 and PHYS 1510

## SOCI 1000 - Introduction to Sociology

**Credit Hours:** 3

Explore how people interact in social contexts shaped by inequality, health, gender, climate, race, technology, and class. Discover knowledge produced by sociologists working in research, business, advocacy, human services, and education. If you really want to change the world, you must first understand it.

**General Education Attribute**

- Discoveries-Social Sciences
- Competency-Information Literacy

## SOCI 1210 - Civil Discourse & Difficult Conversations

**Credit Hours:** 3

Explores conversations on controversial subjects with emphasis on recognizing conflict and engaging in constructive modes of interaction. Topics include civil discourse as the foundation for democratic institutions, sustainable relationships and collaborative decision-making. Students will construct, arrange and deliver oral presentations.

**General Education Attribute**

- Foundations-Oral Communication

## SOCI 1420 - Cannabiz Policy and Compliance

**Credit Hours:** 3

This course introduces students to federal and state Cannabis policy as well as specific regulation and modes of compliance for the Cannabis Industry. Students will gain an understanding of the industry as a whole, and will learn about the opportunities and challenges the industry faces due to multiple legal contexts throughout the U.S. Specific for students seeking to enter the Cannabis workforce, this course provides a detailed state specific regulatory module focused on compliance for Growers, Processors, and Dispensaries.

## SOCI 2050 - Contemporary Social Problems

**Credit Hours:** 3

This course will cover a variety of perspectives on a broad range of contemporary social problems. While the specific topics will vary, the focus will be on the events and critical issues that shape social problems and on the variety of effects these problems have on individuals, groups, and society. Potential solutions will also be considered.

**General Education Attribute**

- Discoveries-Social Sciences
- Competency-Intercultural Fluency
- Competency-Ethical Reasoning

## SOCI 2100 - Social Inequalities: Who Gets What, and Why?

**Credit Hours:** 3

Why is life unfair? Sociology analyzes how patterns of inequality are produced, maintained, and challenged in relation to multiple social identities (ex: ability, class, gender, race, etc.). Using sociological research methods, issues of social stratification, hierarchy, power, and prestige are examined within U.S. and international societies.

**General Education Attribute**

- Discoveries-Social Sciences
- Competency-Intercultural Fluency
- Competency-Information Literacy

## SOCI 2300 - Sociology of Life Course

**Credit Hours:** 3

The life course perspective represents a sociological way of analyzing how society is organized by age norms and structures. This course applies the life course perspective to better understand how our lives progress through socially constructed stages of life - childhood, adolesence, adulthood, middle adulthood and late adulthood.

**General Education Attribute**

- Competency-Intensive Writing

## SOCI 2700 - Animals in Society: Social and Ethical Considerations

**Credit Hours:** 3

This course examines human society's relationship with non-human animals. Topics include: how society has classified and exploited animals, how animals serve human needs, the concept of speciesism as a form of stratification and the consideration of ethical issues surrounding the use of animals for human purposes.

## SOCI 2800 - Sociological Research Methods

**Credit Hours:** 3

In today's information-based society, we need to become educated consumers of findings reported from social scientific research. Students engage in various research exercises at the instructor's discretion. These may include surveys, article and literature reviews, interviews, public observations, and more, along with periodic assessments.

**Prerequisite:** SOCI 1000
**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## SOCI 3010 - Race and Ethnic Relations

**Credit Hours:** 3

Provides a sociological background of racial and ethnic identity. Examines contemporary data of inter-ethnic and inter-racial group relations. Considers proposals for alleviating and resolving interracial, inter-ethnic, and intercultural misunderstandings, problems, and their implications.

**Prerequisite:** SOCI 1000 or SOCI 2050 or SOCI 2100 or SOCI 2300
**General Education Attribute**

- Competency-Intercultural Fluency

## SOCI 3020 - Gender and Sexuality

**Credit Hours:** 3

This course explores the social construction of gender and sexuality. It will examine the ways in which gender and sexuality are social phenomena that change over time and vary across cultures.

**Prerequisite:** SOCI 1000 or SOCI 2050 or SOCI 2100 or SOCI 2300
**General Education Attribute**

- Competency-Intercultural Fluency

## SOCI 3030 - Queer Communities

**Credit Hours:** 3

Why are communities formed around gender and sexuality identities? Examines the social construction of gender and sexuality identities, how those identities are impacted by social institutions, and the development of queer communities. Critical examination of the development of queer communities in the U.S. compared to select global examples as well.

**Prerequisite:** SOCI 1000 or SOCI 2050 or SOCI 2100 or SOCI 2300
**General Education Attribute**

- Competency-Applied Methodologies

## SOCI 3040 - Disability Studies

**Credit Hours:** 3

This course is designed to introduce students to the sociological study of disability. Students will critically deconstruct the social, cultural, moral and political meanings attached to contemporary understandings of disability. A wide range of topics and issues confronting people with disabilities will be explored.

**Prerequisite:** SOCI 1000

## SOCI 3050 - Aging and Society

**Credit Hours:** 3

This class is designed to provide students with a comprehensive overview of the sociological study of aging. Focus will be placed on the influence of cultural, structural, and historical factors as well as the assigned roles, statuses, and

perceptions associated with the aging process.

**Prerequisite:** SOCI 1000 or SOCI 2050 or SOCI 2100 or SOCI 2300

## SOCI 3110 - Family and Intimate Relationships

**Credit Hours:** 3

Deals with development of the family, intimate relationships, and the home in its historical, economic, and legal context. Considers the various factors influencing the organization, disorganization, and reorganization of the family and intimate relationships, as well as the modern trends in the basic institution.

**Prerequisite:** SOCI 1000
**General Education Attribute**

- Competency-Intercultural Fluency

## SOCI 3111 - Youth and Society

**Credit Hours:** 3

Students will explore various cultural practices of socialization and learn about theories and methods used to study children and adolescents. Focus will be placed on how different agents of socialization and placement within the gender, racial and social class hierarchy shape the intimate experiences of youth.

**Prerequisite:** SOCI 1000 or SOCI 2050 or SOCI 2100 or SOCI 2300

## SOCI 3120 - Healthcare and Society

**Credit Hours:** 3

This course examines individual and societal responses to illness and disease, the social inequalities that structure the experience of illness and access to healthcare, challenges to biomedical authority and expertise, the work sites in which healthcare practice is articulated, and the role of sociology in medical research and healthcare.

**Prerequisite:** SOCI 1000 or SOCI 2050 or SOCI 2100 or SOCI 2300
**General Education Attribute**

- Competency-Intercultural Fluency

## SOCI 3140 - Sociology of Sport

**Credit Hours:** 3

Sport is ubiquitous, pervading society and individual lives. As a social phenomenon, sport operates per its own norms, values, and beliefs. Sociology offers a holistic and empirical approach to the study of sport. Gather new insights about how sport interacts and intersects with various sociological factors, including gender, race, class, and more.

**General Education Attribute**

- Competency-Intercultural Fluency

## SOCI 3150 - Work and Society

**Credit Hours:** 3

This course critically examines the historical, social, and cultural contexts that shape the lives of workers. It explores the historical nature and theories of work, the intersection of work in regard to class, race, ethnicity, and gender, inequality and work, and how work affects our families and personal lives.

**Prerequisite:** SOCI 1000 or SOCI 2050 or SOCI 2100 or SOCI 2300
**General Education Attribute**

- Competency-Intercultural Fluency

## SOCI 3200 - Identity, Self, and Social Interaction

**Credit Hours:** 3

This course will introduce students to the study of human social interaction at the micro level of social reality. Students will analyze the social construction of identity in everyday life. This course reviews theoretical and empirical research stemming from symbolic interactionist, constructionist, and ethnomethodological traditions.

**Prerequisite:** SOCI 1000 or SOCI 2050 or SOCI 2100 or SOCI 2300

## SOCI 3220 - Sociology of Death and Dying

**Credit Hours:** 3

Provides an exploration of the sociological issues related to death, dying, and bereavement. Topics examined include: social definitions and attitudes, societal rituals and responses, and theoretical perspectives on death, dying, and bereavement. Societal and ethical concerns regarding end-of-life decisions will be addressed.

**Prerequisite:** SOCI 1000 or SOCI 2050 or SOCI 2100 or SOCI 2300
**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Ethical Reasoning

## SOCI 3230 - Politics of Poverty

**Credit Hours:** 3

What is the politics of poverty in the modern United States? How has economic hardship been debated in our politics and reflected in public policy? In what ways has popular culture perpetuated myths and framed our perceptions about poverty? This course examines poverty through the lens of politics, social and public policy, and popular culture, and is designed to provide context for the pivotal legislation, socio-political movements, and elections that have shaped the politics of poverty in America. To this end, policies such as AFDC, TANF, Medicaid, SNAP, and the ACA; social movements; and major presidencies, elections, and socio-political dynamics, will be considered.

## SOCI 3240 - Sociology of Victims

**Credit Hours:** 3

This course will examine theory and research regarding victims of crime, which include intimate violence, stranger violence, sexual assault, workplace violence, and school violence. The victim-offender relationships, the process and consequences of victimization, community and institutional responses, and victim restitution will also be examined.

**Prerequisite:** SOCI 1000

## SOCI 3245 - Sociology of Technology

**Credit Hours:** 3

This course explores the ways in which society and its social structures shape the design and use of technology, and how technology influences cultural and social experience. Various technologies are examined in relation to the social contexts in which they develop. Sociological underpinnings of norms, values, and inequalities are examined.

**Prerequisite:** SOCI 1000

## SOCI 3300 - Social Movements

**Credit Hours:** 3

Students apply theoretical ideas to case studies to enhance knowledge and evaluate tactics and strategies of social movements. There is also focus on the ethical considerations of tactics and strategies as they relate to violence, nonviolence, and technology. Empirical case studies will explore how social movements emerge, grow and decline.

**Prerequisite:** SOCI 1000
**General Education Attribute**

- Competency-Ethical Reasoning
- Competency-Intensive Writing

## SOCI 3310 - Power and Social Change

**Credit Hours:** 3

Through the learning and application of theory at the macro, meso, and micro levels of analysis, this course examines the ways in which power encourages or discourages social change. There is a particular emphasis on popular education, globalization, the technology revolution, social media, and social movements.

**Prerequisite:** SOCI 1000 or SOCI 2050 or SOCI 2100 or SOCI 2300
**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Ethical Reasoning

## SOCI 3340 - Sociology Conflict Resolution

**Credit Hours:** 3

Analyzes social conflict and introduces the dynamics of conflict resolution. Emphasizes examining theories and methods of active nonviolent conflict resolution in small group and large organizational settings. Includes violence, types of noncooperation, negotiation, adjudication, and mediation. Uses cross-cultural data extensively.

## SOCI 3350 - Charismatic Leaders

**Credit Hours:** 3

Charismatic leaders emerge from social contexts like science, the military, art, economic/political systems, and religion. Charismatic leadership is rare, revolutionary, and unstable. Assess charismatic leaders' qualities, successes/failures at reaching their promised goals, and their relationship with their followers.

**Prerequisite:** SOCI 1000

## SOCI 3400 - Sociology of Deviance

**Credit Hours:** 3

This course focuses on the process by which individuals or groups in societies become labeled as deviant, the reaction of society to deviance and the methods by which various agencies and individuals attempt to regulate, control and treat deviance. Attention is given to the assumption of deviant identities and formation of deviant subcultures.

**Prerequisite:** SOCI 1000
**General Education Attribute**

- Discoveries-Social Sciences
- Competency-Information Literacy

## SOCI 3420 - Sociology of Crime

**Credit Hours:** 3

This course provides a sociological approach to the study of crime and those it effects. Focus is directed to understanding the macro and micro social construction of crime and criminals as well as recognizing and understanding the social causes of criminal behavior, attending to the roles of race/ethnicity, social class, locality, and gender.

**Prerequisite:** SOCI 1000
**General Education Attribute**

- Competency-Intercultural Fluency

## SOCI 3450 - Sociology of Addiction, Excess, and Exploitation

**Credit Hours:** 3

This course will examine societal addictions, exploitations, and excesses in relation to their specific defining variables, patterns and practices, and historical and contemporary influences, inhibitions, and acceptances. Attention focuses on how socio-cultural forces influence use and participation through use of sociological tools and theories.

**Prerequisite:** SOCI 1000

## SOCI 3460 - Sociology of Child Abuse and Neglect: A Societal Perspective

**Credit Hours:** 3

This course will examine the socially constructed variables that contribute to both the socialization and abuse of children (adults, community, social, political, and cultural contexts). The meanings and perceptions of childhood, inequality, abuse and neglect will be discussed in relation to their historical and contemporary underpinnings.

**Prerequisite:** SOCI 1000

## SOCI 3470 - Sociology and the Sociopath

**Credit Hours:** 3

This course will examine the societal variables that serve as catalysts and consequences for the development of the sociopath. Sociopath and sociopathic characterisitics are analyzed within specific and malleable historical, cultural, social, and contemporary contexts, as well as in response to future social changes, challenges, and innovations.

**Prerequisite:** SOCI 1000
**General Education Attribute**

- Competency-Ethical Reasoning

## SOCI 3500 - Sociological Theory

**Credit Hours:** 3

This course provides a foundation in sociological theory by examining the work of classic sociologists whose theoretical contributions shaped the historical development of the discipline. Some contemporary social theorists, as well as various sociological schools of thought, will be explored.

**Prerequisite:** SOCI 1000 or SOCI 2050 or SOCI 2100 or SOCI 2300
**General Education Attribute**

- Competency-Intensive Writing

## SOCI 3900 - Independent Study

**Credit Hours:** 3

This course is for students who have a desire to complete an independent research project outside the classroom requirements of any specific course in the curriculum. Students will work with faculty and be encouraged to present their papers, research or poster presentations at professional academic conferences.

**General Education Attribute**

- Competency-Intensive Writing
- Competency-Keystone Experience

## SOCI 3990 - Special Topics in Sociology

**Credit Hours:** 3

Students immerse in concentrated study of emerging topics or specific issues in sociology. The focus may be an area outside current sociology offerings, or a distinctive area touched on more generally in the current curriculum. The particular topics and content vary by semester and instructor.

**Prerequisite:** SOCI 1000

## SOCI 4000 - Applied Qualitative Research Methods

**Credit Hours:** 3

Provides an overview of qualitative research methods and techniques. Students complete group ethnography projects to

master concepts and techniques of qualitative research design, including literature reviews, field research, interviewing, content analysis, visual methods, and qualitative data analysis software for academic and applied research.

**Prerequisite:** SOCI 1000
**General Education Attribute**

- Competency-Applied Methodologies
- Competency-Keystone Experience

## SOCI 4400 - Sociology of Structural and Institutional Violence: School, Workplace, and Eldercare

**Credit Hours:** 3

This course examines violence as it impacts the social and structural institutions of school, workplace, and eldercare. The nature and extent, causes and consequences, and proposed remedies will be explored in relation to their social contexts and historical and contemporary, socially-defined, underpinnings.

**Prerequisite:** SOCI 1000

## SOCI 4950 - Internship in Sociology

**Credit Hours:** 3 TO 15

The internship course provides students with opportunities to demonstrate knowledge and skills developed through Sociology and General Education. This course is characterized by reflective thinking and the ability to synthesize information and ideas, to integrate knowledge, and to express ideas gained.

**Prerequisite:** SOCI 1000
**General Education Attribute**

- Competency-Keystone Experience

## SOWK 1000 - Introduction to Social Work

**Credit Hours:** 3

This course explores the social, political, economic and historical dimensions of poverty and welfare services in the U.S. It complements other beginning courses in the social sciences by integrating this knowledge in a fashion which aids in the comprehension of welfare services while establishing a basis for movement toward higher-level courses.

## SOWK 1500 - Interviewing and Engaging: Skills for Professionals

**Credit Hours:** 3

This class introduces students to effective interviewing skills to enhance oral communication with diverse client systems. Communication techniques that enhance effective client interactions are explored. Student competence is assessed through 20 hours of volunteer service, video recordings of oral communication skills, and in class activities.

**General Education Attribute**

- Foundations-Oral Communication

## SOWK 2000 - Diversity in a Changing World

**Credit Hours:** 3

This course provides an analysis of the historical, economic, and political relations of American religious, ethnic, and racial minorities in terms of social change and social structure. Sources of prejudice, discrimination, and oppression are examined as well as strategies to enhance social justice.

**General Education Attribute**

- Competency-Intercultural Fluency

## SOWK 2500 - Human Behavior in the Social Environment: Life Course

**Credit Hours:** 3

This course is designed to provide the perspectives, frameworks and theories necessary to understand human behavior in the social environment from a social work perspective. This course emphasizes ecological, systems, and life course perspectives to work effectively with diverse individuals and families across the lifespan.

**General Education Attribute**

- Discoveries-Social Sciences

## SOWK 3000 - Human Behavior and the Social Environment II

**Credit Hours:** 3

Human Behavior and the Social Environment II: Groups, Organizations and Communities is the second of a two-semester content area that is designed to provide perspectives, frameworks and theories necessary to understand human behavior in the social environment from a social work perspective. Approaches presented emphasize diversity and difference and the systemic impacts of oppression and discrimination at the group, organizational and community levels. The nature of systems, environmental transactions, and goodness-of-fit are stressed as the basis for understanding groups, organizations and communities from a social work perspective. A strengths-based, empowerment perspective is also used throughout the course to better understand reciprocal relationships at the group, organization and community levels.

## SOWK 3100 - Social Work Practice with Individuals

**Credit Hours:** 3

This course focuses on the development of generalist practice skills, attitudes, and knowledge needed to work one-on-one with clients in a variety of social work practice settings. Students learn problem assessment, caseload management, and intervention strategies with special emphasis on the application of the NASW Code of Ethics.

**Prerequisite:** SOWK 1000 and SOWK 2000 and SOWK 2500
**General Education Attribute**

- Competency-Ethical Reasoning

## SOWK 3200 - SW Practice w/Groups

**Credit Hours:** 3

This course is the second in a four-course practice methods sequence. It builds on the skills developed in Social Work Practice with Individuals, utilizing the ecological-systems approach to assessment and problem solving. The course

covers the history of social work with families, the stages of family development, assessment of goals and objectives for families, and the principles and values for intervention and problem solving with families.

**Prerequisite:** SOWK 1000 and SOWK 2000 and SOWK 2500

## SOWK 3250 - Social Work Practice with Families

**Credit Hours:** 3

This course is the third in a four-course practice methods sequence. It builds on the skills developed in Social Work Practice with Individuals, utilizing the ecological-systems approach to assessment and problem solving. The course covers the history of social group work, the stages of group development, assessment of goals and objectives for groups, and the principles and values for intervention and problem solving with groups.

**Prerequisite:** SOWK 1000 and SOWK 2000 and SOWK 2500

## SOWK 3300 - Let's Talk About Sex

**Credit Hours:** 3

This course presents accurate information and open discussion regarding the ways in which sexuality contributes to overall health and is affected by it. This course emphasizes social work perspectives on policies, practices and self-care that promote sexual health and well-being among diverse clients.

**General Education Attribute**

- Wellness & Personal Health

## SOWK 3350 - Social Work and Aging

**Credit Hours:** 3

This course examines the development and current status of policies and services related to the elderly, the service delivery systems, and implications for social work practice concepts for working with the elderly.

## SOWK 3400 - Social Welfare Policy

**Credit Hours:** 3

This course examines the history and philosophy of social welfare policy and the basic process of policy development. Students develop effective professional writing skills by applying a conceptual framework to analyze and evaluate policies and their consequences on clients and communities.

**Prerequisite:** SOWK 3100
**General Education Attribute**

- Competency-Intensive Writing

## SOWK 3500 - Policy Practice in SW

**Credit Hours:** 3

In this class, students learn about the social change process, strategies, reactions to change, the impact of change on

social policy and social welfare institutions.

**Prerequisite:** SOWK 3100

## SOWK 3600 - Human Sexuality and Social Work Practice

**Credit Hours:** 3

Humans evolve as sexual beings from a continual interplay among biological, cultural and psychosocial factors. This course provides content on enhancing personal well being, establishing psychologically healthy relationships, making responsible sexual choices, protecting reproductive health, preventing sexual dysfunction and trauma. Included in the course is accurate information and open discussion regarding the ways in which sexuality both contributes to and affects overall health and well-being. The course covers diverse groups and the human lifespan including sexuality and sexual expression among the elderly.

## SOWK 3700 - Social Work Practice in the Rural Environment

**Credit Hours:** 3

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.

**Prerequisite:** SOWK 1000

## SOWK 3800 - Trauma Informed SW Prac

**Credit Hours:** 3

This seminar focuses on selected topics of particular significance or current importance and interest to the social work profession. Students can receive credit for more than one seminar provided that each seminar focuses on a different topic. Open to sophomores, juniors, and seniors only. This course provides knowledge, skills and values needed to engage in family work as a generalist social worker. This course is a special interest course in the social work curriculum that provides opportunities to explore the role and function of the generalist social worker learning about trauma-informed practice. Trauma across the lifespan is essential knowledge for social workers because it is a risk factor increasing the overall quality of life for both those who experience or work with populations who have been a survivor of traumatic experiences. Given that most people from poorer countries migrate to more prosperous countries, individual who are from the lower socioeconomic income are increasingly vulnerable. As articulated by CSWE: ?A reciprocal interaction exists between social, political, and legal systems and the individuals and families traumatized. It affects the systems? capacity to respond effectively to the needs of affected individuals or families and the capacity of the systems themselves to adjust and recover. Inequities embedded in these systems lead to accumulated disadvantages in access to tangible and intangible sources of social support. The resulting inequality contributes to the over representation of individuals who are traumatized among the populations affected by major social problems, such as homelessness, substance abuse, low educational attainment, joblessness, and chronic poor health.?

**Prerequisite:** SOWK 1000

## SOWK 3900 - Child Welfare

**Credit Hours:** 3

In this class, students learn about societal efforts to insure the welfare of children, the rights of children and parents, child welfare policies, programs, and service delivery problems. Students examine historical and current practices, working with natural parents, supportive services, substitutes, and residential care.

**Prerequisite:** SOWK 1000

## SOWK 4000 - Social Work Practice with Organizations and Communities

**Credit Hours:** 3

This course focuses on planning, assessment, organizing, and administrative skills that enable social workers to create change at the organizational and community levels.

**Prerequisite:** SOWK 3400
**General Education Attribute**

- Competency-Intensive Writing

## SOWK 4100 - Social Work Research Methods

**Credit Hours:** 3

This course prepares students to apply social work research methods to social work practice. Students learn the components of the research process in addition to interpretation and analysis of quantitative and qualitative data to implement at the generalist practice level with clients.

**Prerequisite:** SOWK 3100
**General Education Attribute**

- Competency-Quantitative Application
- Competency-Information Literacy

## SOWK 4200 - SW Practice and Aging

**Credit Hours:** 3

This course examines the development and current status of policies and services related to the elderly, the service delivery systems, and implications for social work practice concepts for working with the elderly.

**Prerequisite:** SOWK 1000

## SOWK 4300 - Juvenile Delinquency & SW Prac

**Credit Hours:** 3

Students in this course learn to recognize the causes, prevention and treatment of deviancy among youth. This course explores the impact of sex, race, poverty, urban/rural context and other social factors on deviance. Students examine the juvenile court system, its nonadversary role, changing attitudes toward treatment and questions regarding change.

**Prerequisite:** PSYC 1000

## SOWK 4400 - Social Work Practice in Mental Health

**Credit Hours:** 3

This course builds on psychosocial study, assessment, and treatment introduced in Social Work Practice with Individuals. It acquaints students with DSM-IV-R terminology and its uses for generalist social-work practice. It also explores the scope and depth of individual psychopathology, community concerns, prevention, and intervention approaches.

## SOWK 4500 - SW Seminar in Special Topics

**Credit Hours:** 3

This seminar focuses on selected topics of particular significance or current importance and interest to the social work profession. Students can receive credit for more than one seminar provided that each seminar focuses on a different topic.

**Prerequisite:** SOWK 2500

## SOWK 4800 - Social Work Field Practicum

**Credit Hours:** 12

This course provides a supervised placement of 450 hours in a practice setting under the supervision of a social worker. The application of theoretical knowledge and skills, along with demonstrated competencies in working with various client systems, is emphasized.

**Prerequisite:** SOWK 3200 and SOWK 3250
**General Education Attribute**

- Competency-Keystone Experience

## SOWK 4900 - Social Work Field Seminar

**Credit Hours:** 3

This capstone seminar is paired with a supervised placement in a practice setting (SOWK 4800) under the supervision of a MSW social worker. This seminar is focused on professional reflection and synthesis of prior coursework with praxis in a field setting. The application of theoretical knowledge and skills, along with demonstrated competencies in working with various client systems, is emphasized. Ethical professional practice is emphasized.

**Prerequisite:** SOWK 3200 and SOWK 3250

## SPAN 1000 - Colors, Images and Sounds of Hispanic Culture

**Credit Hours:** 3

Provides students with basics of Hispanic cultures and histories through colors, images and sounds from daily life, dance and music, film and painting, literature and theater, and other forms of fine arts, folk arts and popular arts. Taught in English. No prerequisite.

## SPAN 1001 - Elementary Spanish I

**Credit Hours:** 3

This course is designed for the student without previous knowledge of Spanish who wishes to achieve a command of language fundamentals. Acquisition of speech skills in the classroom is reinforced in the language laboratory. Progressively greater emphasis is placed on reading and writing.

**General Education Attribute**

- Discoveries-Art/Humanities

## SPAN 1002 - Spanish Two

**Credit Hours:** 3

This course is for the student with a basic knowledge of Spanish who desires to achieve a command of language fundamentals and culture. The acquisition of speech skills in the classroom is reinforced in the language laboratory. Progressively greater emphasis is placed on reading and writing.

**Prerequisite:** SPAN 1001
**General Education Attribute**

- Competency-Intercultural Fluency

## SPAN 2001 - Spanish III

**Credit Hours:** 3

This course reviews the essentials of Spanish grammar and culture 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.

**Prerequisite:** SPAN 1002
**General Education Attribute**

- Competency-Intercultural Fluency

## SPAN 3000 - Stories and Voices of Hispanic Culture

**Credit Hours:** 3

A critical study of representative Hispanic literary works emphasizing themes relevant to all cultures. Taught in English.

**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Intensive Writing

## SPAN 3001 - Spanish IV

**Credit Hours:** 3

This course reviews the essentials of Spanish grammar and culture 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.

**Prerequisite:** SPAN 2001
**General Education Attribute**

- Competency-Intercultural Fluency

## SPAN 3002 - Latino Cultures in the U.S.

**Credit Hours:** 3

Taught in English, this course will provide students with a basic knowledge of Hispanic culture, history and civilization within the U.S. An emphasis will be placed on comparing the cultures and values of Hispanic societies among themselves as well as to those of non-Hispanics in the U.S.

## SPAN 3004 - Spanish for Law Enforcement

**Credit Hours:** 3

This course focuses on the applied aspects of the Spanish language in a law enforcement context. Significant emphasis will be on practical exercises such as arrest situations, assisting victims of crimes, conducting searches, undertaking criminal interviews and interrogations, reading Miranda rights, and understanding Hispanic culture.

**Prerequisite:** SPAN 2001
**General Education Attribute**

- Competency-Ethical Reasoning

## SPAN 3005 - Spanish for Business

**Credit Hours:** 3

This course focuses on the applied aspects of the Spanish language in a business and international trade context. Significant emphasis will be on practical communicative activities that involve business scenarios, learning about business integrity and values that are recognized in the Hispanic community.

**Prerequisite:** SPAN 2001

## SPAN 3006 - Medical Spanish

**Credit Hours:** 3

This course focuses on the applied aspects of the Spanish language in a health care context. Significant emphasis will be on practical vocabulary such as obtaining patient information, evaluating patients, conducting physical examinations, explaining diagnoses, implementing and explaining treatment.

**Prerequisite:** SPAN 2001

## SPAN 3007 - Spanish for Social Services

**Credit Hours:** 3

This course focuses on the applied aspects of the Spanish language in a social work context. Significant emphasis will be on practical vocabulary such as obtaining client information, evaluating and speaking with clients, financial aid

screenings, applying for work permits, issues of child abuse and parents, physical injuries, and disabilities.

**Prerequisite:** SPAN 2001

## SPAN 3008 - Spanish for Educators

**Credit Hours:** 3

This course focuses on the applied aspects of the Spanish language in teacher education. Significant emphasis will be on practical vocabulary such as communicating with parents and students, classroom management, managing behavioral issues, teaching various subject areas, enforcing school rules, and cooperation between school and parent.

**Prerequisite:** SPAN 2001
**General Education Attribute**

- Competency-Ethical Reasoning

## SPAN 3009 - Spanish for the Professions

**Credit Hours:** 3

Students will apply skills in Spanish language and cultures to professional community contexts. Students will develop and complete a project related to their academic field of interest and will complete a capstone research project related to the specific project selected.

**Prerequisite:** SPAN 2001

**General Education Attribute**

- Competency-Information Literacy
- Competency-Intensive Writing

## SPAN 3100 - Spanish Conversation, Composition, and Phonetics

**Credit Hours:** 3

Students acquire a command of the Spanish 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:** SPAN 3001
**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Intensive Writing

## SPAN 3200 - Hispanic Short Stories

**Credit Hours:** 3

A study of representative short stories by Spanish and Latin American writers. All readings and oral and written discussion in Spanish.

**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Intensive Writing

## SPAN 3300 - Introduction to Spanish Phonetics and Pronunciation

**Credit Hours:** 3

Introduces the Spanish phonetic and phonological systems. Includes a comparative analysis between English and Spanish, and among major variations of the Spanish language spoken across Europe and the Americas. Introduces corrective phonetics. Provides basic knowledge and skills to navigate through the diverse Spanish-speaking world.

**Prerequisite:** SPAN 2001
**General Education Attribute**

- Competency-Intercultural Fluency

## SPAN 3400 - Hispanic Film

**Credit Hours:** 3

This course, taught in Spanish, will examine major Spanish and Latin American films with English subtitles. It offers a special and important perspective to approach the contemporary history and culture of Hispanic countries.

**Prerequisite:** SPAN 2001, equivalent, or instructor's approval.
**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Information Literacy

## SPAN 3440 - Translation

**Credit Hours:** 3

Reviews basic translation theory and introduces advanced translation techniques. Includes Spanish to English translation as well as English to Spanish.

**Prerequisite:** SPAN 2001

**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Intensive Writing

## SPAN 3460 - 20th Century Spain 1939 to the Present

**Credit Hours:** 3

This course involves the study of the revitalization of today's Spanish society following the repression of the post-war years. It traces the various faces of that revolution of Spanish culture when the Spaniards decided to forget the war and the desperate state of Spain and focus on new forms of artistic expression. Taught in English.

## SPAN 3470 - Romanticism in Latin America

**Credit Hours:** 3

This course examines the new art and cultural trends of post independence Latin America. It explores the role of painting, music, and literature in the process of construction of a national identity: the "Americanista" ideology. It will study the origins of the romantic movement, which breaks all classical rules. Taught in English.

**General Education Attribute**

- Competency-Intercultural Fluency

## SPAN 3480 - Mexico and the Chicano Movement in the 20th Century

**Credit Hours:** 3

This course surveys a general introduction to the political, social, and cultural changes in the Mexican society from the pre-Columbian times to the present through art and literature. The course explores the concern that Mexican intellectuals have with social and political issues. Taught in English.

**General Education Attribute**

- Competency-Intercultural Fluency

## SPAN 3500 - Studies in Hispanic Language and Culture

**Credit Hours:** 3

In-depth examination of contemporary Hispanic literature and cultural issues including but not limited to such topics as Hispanic Women Writers, Latino Cultures in the U.S. and relationships between Hispanic nations and the U.S. Course is taught in Spanish.

**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Intensive Writing

## SPAN 3600 - Immersion in Hispanic Language and Culture

**Credit Hours:** 3

This course consists of a trip to a Spanish speaking country for two-five weeks with the usual number of semester hours. Students will experience total immersion in the Spanish language and culture in daily life and activities including but not limited to classes, lectures, visits, excursions, etc.

**Prerequisite:** SPAN 2001, equivalent, or approval.
**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Information Literacy

## SPED 1000 - Disability in Popular Media

**Credit Hours:** 3

This is a discussion-based class designed to develop an awareness of disabilities as they are portrayed in modern popular media. This course specifically investigates representations of disability in mainstream media, as well as the impact that such portrayals have on people with disabilities and on people without disabilities.

## SPED 1050 - Foundations of Special Education

**Credit Hours:** 3

This course is designed to provide information and skills necessary for accommodating exceptional learners in a variety of school arrangements. The primary focus is foundations and characteristics of special education and students with exceptionalities and collaboration/consultation for the successful inclusion of students with exceptionalities into the inclusionary classroom.

## SPED 2000 - Assessment and Positive Behavior Interventions

**Credit Hours:** 3

This course is required for all education or related services majors and is intended to provide future teachers with the fundamental knowledge, skills, and disposition: how to administer, score, and interpret both norm-referenced and criterion-referenced assessment devices; how to design appropriate learning environments to promote positive learning and reduce interfering behaviors; and how to design and implement schoolwide and classroom positive behavior interventions and supports.

## SPED 2050 - Introduction to Special Education with Field Observation

**Credit Hours:** 3

The Special Education Field Experience I is a course taken by candidates majoring in Special Education. Candidates spend 45 hours in a school setting to gain experience with students with disabilities. This will be a collaborative experience between the candidate, the university supervisor, and the collaborating teacher. The collaborating teaching will be certified in special education and have at least two years experience teaching students with disabilities. While fully immersed in the school-based setting, the candidate will observe a variety of special education placements during the semester. The observations will focus on instructional techniques, assessments, and classroom management related to each student's IEP and identified disability.

**Prerequisite:** SPED 1050

## SPED 2100 - Teaching Students with Disabilities

**Credit Hours:** 3

This course focuses on the Practice of prevention and intervention in dealing with students who demonstrate academic deficiencies. It will prepare in-service and pre-service educators with the skills and knowledge to deliver and support instruction to students with disabilities in the classroom setting. Offered each semester.

**Prerequisite:** SPED 1050

## SPED 2400 - Managing Inclusive Environment

**Credit Hours:** 3

This course addresses classroom approaches to managing disruptive behaviors in inclusive settings. It emphasizes current research and effective practice on a continuum from proactive through intervention strategies. The course addresses issues of physical environment, daily routines, rules and appropriate consequences both natural and logical. This course is taken at the pre-candidacy level of a teacher candidate's program.

## SPED 2950 - Pre-Field

**Credit Hours:** 3

This field experience provides students with an experience in the introduction of students with disabilities in a public school or alternative setting. Students participate in the education process by assisting in the planning, instruction, and classroom management of students under the supervision of a certified special educator in a public school or other approved educational setting.

## SPED 3000 - Introduction to Applied Behavior Analysis

**Credit Hours:** 3

Focuses on principles of applied behavior analysis in the assessment and treatment of behavioral excesses or deficiencies. Students will design programs to increase skill acquisition or reducing inappropriate behavior for either groups or individuals in special education, clinical settings, or rehabilitation settings.

**General Education Attribute**

- Competency-Applied Methodologies
- Competency-Intensive Writing

## SPED 3010 - Special Learning Disabilities and Emotional Behavior DisordersÂ

**Credit Hours:** 3

This course focuses on the nature of specific learning disabilities and emotional and behavioral disorders and familiarizes the student with the classification systems and theoretical models. This course also emphasizes the history, etiology, characteristics, assessment and treatment/instructional approaches as they pertain to children and adolescents in classroom settings.

**Prerequisite:** SPED 1050 and SPED 2000 and SPED 2050

## SPED 3020 - Intellectual and Physical Disabilities

**Credit Hours:** 3

This course will cover biological, psychosocial, and educational implications of intellectual, physical disabilities and health impairments. This course provides information on etiology, assessment, programs, and educational strategies for students with intellectual, physical disabilities, and health impairments. Additionally, the course will address instruction, curricular adaptation, collaboration, advocacy, special services, equipment, and procedures for schools and community programs in working with students with these types of disabilities.

**Prerequisite:** SPED 1050 and SPED 2000 and SPED 2050

## SPED 3030 - Intellectual Disabilities

**Credit Hours:** 3

This is a comprehensive study of the biological, psychosocial, and educational implications of intellectual disabilities, including a consideration of etiology; assessment and diagnosis; educational programs, including preschool and post school; adult social and vocational adjustment; national and local programs, and research.

**Prerequisite:** SPED 1050 and SPED 2000 and SPED 2050

## SPED 3040 - Physical Disorder and Health Impairments in the Special Education Classroom

**Credit Hours:** 3

This course is designed for undergraduate students who will serve students with physical disabilities, health impairments, and multiple disabilities. Therefore, this course provides identification and treatment of students with physical disabilities and health impairments, plus instruction, curricular adaptation, collaboration, advocacy, special services, equipment, and procedure for school and community programs for them. Survey of characteristics identification and intervention strategies related to physical disabilities, special health care needs, special services, equipment, and procedures for school and community programs. The course includes discussion, simulation, presentation, and survey reports pertaining to education, related services, and accommodations and modifications for individuals with physical disabilities and health impairments.

**Prerequisite:** SPED 1050 and SPED 2000 and SPED 2050

## SPED 3050 - Early Intervention in Special Education

**Credit Hours:** 3

This course introduces the field of Early Childhood Special Education with a focus on the young child with disabilities. It emphasizes early intervention rationale, history, and identification of at-risk children. Relationship-building teaming with families approaches included. Also included are mandates of the Individuals with Disabilities Improvement Act (IDEIA).

**Prerequisite:** SPED 3000 and SPED 3010 and SPED 3020 and SPED 3030 and SPED 3040

## SPED 3060 - Special Reading and Writing Instruction

**Credit Hours:** 3

This course will introduce students to the Science of Reading and provide students with specific data-based strategies used to teach reading and written expression to exceptional learners.

**Prerequisite:** SPED 3050

## SPED 3070 - Special Mathematics Instruction

**Credit Hours:** 3

Provides students with specific data-based strategies to teach mathematics to students with disabilities.

**Prerequisite:** SPED 3050

## SPED 3080 - Special Education: Field-Based Skills

**Credit Hours:** 3

This 45-hour field experience will be a collaborative experience between the student, university supervisor, and collaborating teacher. Students will observe, assist, tutor, instruct, assess, and/or manage students. Within the experience, students will reflect and self-critique their current skills, knowledge, and disposition related to all .

**Prerequisite:** SPED 3050
**General Education Attribute**

- Competency-Intensive Writing

## SPED 3090 - Assessment and Prescriptive Teaching

**Credit Hours:** 3

This course provides information about supervised practice using formal and informal assessment instruments commonly utilized in Special Education. It addresses instruments and procedures associated with the identification and programming process, along with curriculum-based assessment for progress monitoring.

**Prerequisite:** SPED 3050
**General Education Attribute**

- Competency-Quantitative Application

## SPED 3490 - Special Education Field Experience III

**Credit Hours:** 3

The Special Education Field Experience in Low Incidence Disabilities is a course taken by students majoring in Special Education. Students spend 45 hours in a school/agency setting to gain experience with students with low incidence disabilities. This will be a collaborative experience between the student, university supervisor, and collaborating teacher/professional. The collaborating teacher/professional certified in special education with at least two years experience with students/adults with disabilities. While fully immersed in the field-based setting, university students may observe, assist, tutor, instruct, assess, and/or manage students/adults. Within the experience students will reflect and self-critique their current skills, knowledge, and disposition related to all students/adults with disabilities they encounter.

## SPED 3600 - Instructional Planning

**Credit Hours:** 3

This course examines in depth research-validated strategies, and their underlying theories, for planning and implementing instruction appropriate for students with special needs, including English Language Learners. It enables special education teacher-candidates to develop expertise in selecting and designing effective curriculum materials and in planning and delivering specialized explicit instruction that best reflects the unique needs of each exceptional student.

## SPED 3995 - Nature of Autism Spectrum Disorder

**Credit Hours:** 3

This introductory course provides a foundation in understanding and addressing the unique and complex challenges individuals on the autism spectrum face in their learning, development, and social experiences.

**Prerequisite:** SPED 3050
**General Education Attribute**

- Competency-Information Literacy

## SPED 4000 - History, Theory, and Exceptionalities

**Credit Hours:** 3

This course is designed to provide information and skills necessary for individuals interested in the philosophy found within special education identification and practices. The course also serves to provide information regarding the definition, prevalence, etiology, characteristics, and ethical educational practices.

**Prerequisite:** SPED 3060 and SPED 3070 and SPED 3080 and SPED 3090
**General Education Attribute**

- Competency-Ethical Reasoning

## SPED 4010 - Assistive Technology for the Exceptional Learners

**Credit Hours:** 3

Overview of a wide range of assistive technology(AT) for individuals with mild to severe disabilities. Students will learn about the use of the devices, definition of AT, legal mandates of AT, identification of funding resources, how to assess assistive technology needs, how to integrate AT in the IEP, and how to deliver online instruction.

**Prerequisite:** SPED 3060 and SPED 3070 and SPED 3080 and SPED 3090

## SPED 4020 - Trauma Informed Practices

**Credit Hours:** 3

This course addresses positive behavior support strategies and trauma-informed practices for managing student behaviors. Students will learn universal strategies for all students, targeted strategies for students at-risk of Emotional and Behavioral Disorders, and intensive interventions for students with Emotional and Behavioral Disorders.

**Prerequisite:** SPED 3060 and SPED 3070 and SPED 3080 and SPED 3090

## SPED 4040 - Transition Planning and Instruction

**Credit Hours:** 3

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.

**Prerequisite:** SPED 4000 and SPED 4020

## SPED 4050 - Advanced Evidence Based Practices and Methods for High Incidence Disabilities

**Credit Hours:** 3

This course is about designing effective instruction for students with high incidence disabilities. It involves identifying, designing, and implementing evidence based practices and strategies to facilitate student success as well as determining their effectiveness. Field Experience is an Instructional Project.

**Prerequisite:** SPED 4000 and SPED 4020

## SPED 4060 - Advanced Evidence Based Practices and Methods for Low Incidence Disabilities

**Credit Hours:** 3

This course is about designing effective instruction for students with low-incidence disabilities. It involves identifying, designing, and implementing evidence-based practices and strategies to facilitate student success and determine their effectiveness. Field Experience is an Instructional Project.

**Prerequisite:** SPED 4000 and SPED 4020

## SPED 4070 - Classroom Administration, Collaboration, and IEP Development

**Credit Hours:** 3

This course examines the process of developing Individualized Education Plans (IEP's) for exceptional students, and provides supervised practice in completing state IEP forms. It presents best practice for collaborating with all members of the IEP team and emphasizes the role of the family. Field Experience is an Instructional Project.

**Prerequisite:** SPED 4000 and SPED 4020

## SPED 4100 - Nature of Autism Spectrum Disorder

**Credit Hours:** 3

This introductory course provides a foundation in understanding and addressing the unique and complex challenges individuals on the autism spectrum face in their learning, development, and social experiences.

**Prerequisite:** SPED 3000 and SPED 3010 and SPED 3020 and SPED 3030 and SPED 3040

## SPED 4190 - Evidence Based Practice for Special Education

**Credit Hours:** 3

Evidence-Based Practices for K-12 Inclusion is offered to K-12 majors the semester prior to their student teaching experience and is a methodology course for pre-service education teachers. The purpose of the course is to prepare pre-service teachers to provide evidence-based language arts and math instruction to students with high and low incidence disabilities in inclusion settings. An emphasis is placed on results of research and proven methods of instruction for teaching reading and math to students with cognitive, physical, social, behavioral, and language-based disabilities. The course stresses a behavioral approach to teaching, as well as the development and implementation of intervention strategies for various populations of students with exceptionalities in inclusion settings. Additional topics include modifications and adaptations of materials, effective teaching, learning strategies, lesson planning, assessment, and individualized education programs.

## SPED 4200 - Comm, Beh, and Inst. ASD

**Credit Hours:** 3

This course offers preparation in the design and delivery of communication, behavior and instructional supports for diverse learners with Autism Spectrum Disorders (ASD) and includes data-based assessment and intervention; Applied Behavior Analysis (ABA), functional communication, Augmentative Alternative Communication (AAC); environmental supports; structured teaching; differentiated instruction, cognitive, developmental and sensory-based approaches.

**Prerequisite:** SPED 3000 and SPED 3995

## SPED 4210 - Introduction to Dyslexia

**Credit Hours:** 3

This course examines the topic of dyslexia as a language-based learning disability that is neurobiological in origin. The course will compare and contrast the behaviors, characteristics, and brain-based processes that typically and atypically developing readers exhibit while listening, speaking, reading, writing, and spelling. Characteristics of effective intervention programs will be examined. Related conditions and assistive technology will also be discussed.

## SPED 4240 - Student Teaching

**Credit Hours:** 6

This course (and its mirrored second section SPED 4250) provides for observation and participation in teaching students with disabilities as well as the performance of a teacher's work tasks.

**Prerequisite:** SPED 4070
**General Education Attribute**

- Competency-Keystone Experience

## SPED 4250 - Student Teaching

**Credit Hours:** 6

This course (and its mirrored second section SPED 4240) provides for observation and participation in teaching students with disabilities as well as the performance of a teacher's work tasks.

**Prerequisite:** SPED 4070
**General Education Attribute**

- Competency-Keystone Experience

## SPED 4260 - Clinical Practice for High Incident Disabilities

**Credit Hours:** 1

This practicum places teacher candidates into field settings involving people with high incidence disabilities who use an individualized curriculum. Teacher candidates will match instruction with learner, goal, and curriculum characteristics; identify and implement appropriate instructional strategies and sequences; and evaluate the effectiveness of instruction.

## SPED 4270 - Clinical Practice for Low Incident Disabilities

**Credit Hours:** 1

This practicum places teacher candidates into field settings involving people with low incidence disabilities who use an individualized independence curriculum. Teacher candidates will match instruction with learner, goal, and curriculum characteristics; identify and implement appropriate instructional strategies and sequences; and evaluate the effectiveness of instruction.

## SPED 4300 - Life Transit and Partnership

**Credit Hours:** 3

This seminar is designed to offer rigorous exploration and critical analysis of contemporary issues influencing the lifelong learning, development and sociocultural experiences of people on the autism spectrum. The course addresses core professional competencies in autism related knowledge and practice: (1) Transition, vocational and independent living, (2) Sexuality, (3) Family support and partnerships, (4) School and community partnerships; (5) professional literacy and leadership.

**Prerequisite:** SPED 3000 and SPED 3995

## SPED 4400 - Navigate the Social World

**Credit Hours:** 3

This seminar is designed to provide preparation in methods to enhance socialization, communication and imagination in diverse learners with ASD. The course merges the theoretical understanding of the "triad of impairments" as defining features of autism with practical modes of assessment and intervention.

**Prerequisite:** SPED 3000 and SPED 3995

## SPED 4410 - Field Experience

**Credit Hours:** 3

This field experience provides students with an intensive experience in the instruction of students with disabilities in a public school or alternative setting. Students participate in the education process by assisting in the assessment, planning, instruction, and classroom management of students under the supervision of a certified special educator in a public school or other approved educational setting. This course must be taken in conjunction with the Special Education Block.

## SPED 4500 - Foundations of Behavior Analysis and the Competent Learner Model

**Credit Hours:** 3

This interdisciplinary course will provide you with the foundational concepts, principles and methods of Behavior Analysis which form the building blocks of the Competent Learner Model (CLM). You will acquire knowledge and competencies needed to provide quality behavior analytic services in a variety of settings and specialized training to utilize the CLM tools to support your work. This course is designed for students and professionals interested in becoming a Board Certified Behavior Analyst (BCBA)/Board Certified assistant Behavior Analyst (BCaBA) and a CLM Certified Instructor/Coach and is appropriate for students and professionals in the fields of education, psychology

behavior analysis and other human service fields who work in current of future CLM implementations.

**Prerequisite:** SPED 3000

## SPED 4600 - ABA/CLM Instructional Methods, Procedures, and Tools

**Credit Hours:** 3

This interdisciplinary course will provide you with the key evidence based instructional methods for making learning valuable to all learners and ensuring consistent participation during all instructional conditions. You will acquire knowledge and competencies needed to provide professional quality behavior analytic services in a variety of settings and specialized training to utilize the Competent Learner Model (CLM) tools to support your work. This course is designed for students and professionals interested in becoming a Board Certified Behavior Analyst (BCBA)/Board Certified assistant Behavior Analyst (BCaBA) and a CLM Certified Instructor/Coach and is appropriate for students and professionals in the fields of education, psychology behavior analysis and other human service fields who work in current of future CLM implementations.

**Prerequisite:** SPED 4500

## SPED 4630 - Instructional Strategies II

**Credit Hours:** 3

This course studies the research-based interventions for individuals with special needs including English Language Learners in the subject areas of mathematics, science, and social studies. Interventions include application of the universal design for learning with adaptations in the areas of instructional strategies, curriculum, materials, assessment, and classroom environment.

## SPED 4700 - ABA/CLM Program Curricula Design and Monitoring

**Credit Hours:** 3

Applied Behavior Analysis/Competent Learner Model (ABA/CLM) Program Curriculum Design and Monitoring is the third competency-based course in a five to seven course sequence Leading to the ABA/CLM Advanced Competency Certificate. This interdisciplinary course will provide you with an in-depth practice using ABA/Direct Instruction(DI)/Precision Teaching (PT) design principles for developing individualized programming for your learners/clients. In addition, you will identify and analyze the strength of ABA/DI/PT design elements in CLM and other curricular resources and monitor fidelity of instructional delivery related to adherence to adherence to the evidence-based design. This knowledge and practice will serve as basis for making good design decisions when customizing curricula to learner needs and monitoring the effects of individualized programming. You will acquire knowledge and competencies needed to provide professional quality behavior analytic services in a variety of settings and specialized training to utilize the Competent Learner Model (CLM) tools to support your work. This course is designed for students and professionals interested in becoming a Board Certified Behavior Analyst (BCBA)/Board Certified assistant Behavior Analyst (BCaBA) and a CLM Certified Instructor/Coach and is appropriate for students and professionals in the fields of education, psychology behavior analysis and other human service fields who work in current of future CLM implementations.

**Prerequisite:** SPED 4600

## SPED 4800 - Contingencies to Engineer Learning

**Credit Hours:** 3

Contingencies to Engineer Learning is the fourth competency-based course in a five to seven course sequence Leading to the ABA/CLM Advanced Competency Certificate. This interdisciplinary course will provide you with the skills and tools to critically analyze elements of learner performance and elements of the learning environment to determine functional relationships and utilize evidence-based contingencies to alter the trajectory and pace of developing and weakening repertoires. You will acquire knowledge and competencies needed to provide professional quality behavior analytic services in a variety of settings and specialized training to utilize the Competent Learner Model (CLM) tools to support your work. This course is designed for students and professionals interested in becoming a Board Certified Behavior Analyst (BCBA)/Board Certified assistant Behavior Analyst (BCaBA) and a CLM Certified Instructor/Coach and is appropriate for students and professionals in the fields of education, psychology behavior analysis and other human service fields who work in current of future CLM implementations.

**Prerequisite:** SPED 4500

## SPED 4900 - Professional and Ethical Standards

**Credit Hours:** 3

Professional and Ethical Standards is the fifth competency-based course in a five to seven course sequence Leading to the ABA/CLM Advanced Competency Certificate. This interdisciplinary course will provide you with the Behavior Analytic professional and ethical standards and skills to practice, supervise and coach others and adhere to the CLM Service Delivery and Coaching Standards.You will acquire knowledge and competencies needed to provide professional quality behavior analytic services in a variety of settings and specialized training to utilize the Competent Learner Model (CLM) tools to support your work. This course is designed for students and professionals interested in becoming a Board Certified Behavior Analyst (BCBA)/Board Certified assistant Behavior Analyst (BCaBA) and a CLM Certified Coach and is appropriate for students and professionals in the fields of education, psychology behavior analysis and other human service fields who work in current of future CLM implementations.

**Prerequisite:** SPED 3000

## SPED 4920 - Special Math Instruction II

**Credit Hours:** 3

This course builds upon the content of Special Mathematics by providing students with mechanisms to deliver standards-based mathematics instruction to adolescents with disabilities.

## SPT 1000 - Introduction to Sport Management

**Credit Hours:** 3

This course is designed to provide an introduction and overview of the competitive and dynamic sports industry today. Students will learn the skills and competencies required to pursue diverse career opportunities in sport and become acquainted with professional resources to support their future endeavors.

**General Education Attribute**

- Competency-Information Literacy

## SPT 1010 - Introduction to Sport Management Practical Application

**Credit Hours:** 1

Integrates coursework from Introduction to Sport Management (SPT 1000) with planned and supervised professional experiences. Experiences will take within and outside regularly scheduled class meeting times.

## SPT 1211 - Health and Personal Performance

**Credit Hours:** 3

This course focuses on wellness and health promotion. Emphasis is on healthy behaviors in each of the five "Dimensions of Health:" mental, physical, social, emotional, environmental. The course stresses skills and application of health knowledge for optimal wellness and disease prevention. Active learning experiences included.

**General Education Attribute**

- Wellness & Personal Health

## SPT 2050 - Sport Ethics & Integrity

**Credit Hours:** 3

This course offers a foundation for ethical decision making and moral significance of sport. Students will apply ethical reasoning and critical thinking skills to help solve dilemmas and conflicts in sport. Issues ranging from fair play, sportsmanship, discrimination, accessibility, and performance enhancement will be explored.

**General Education Attribute**

- Discoveries-Social Sciences
- Competency-Ethical Reasoning

## SPT 2250 - Contemporary Issues in North American Sport

**Credit Hours:** 3

This course will enable students to critically examine and analyze contemporary issues in sport from an interdisciplinary perspective. Current issues, trends, and challenges will be presented with the intent of provoking thought and stimulating debate so that students may identify their role in the resolution of issues within the sports industry.

**General Education Attribute**

- Competency-Intercultural Fluency

## SPT 2600 - Strategic Sports Communications

**Credit Hours:** 3

Provides a conceptual, strategic, and technical overview of sports communications across all levels of sport. Students will apply effective communication skills, both written and orally, to different audiences. An emphasis on media relations, print and electronic content creation, social media, and other trending technologies will be covered.

**General Education Attribute**

- Competency-Intensive Writing

## SPT 3000 - Peak Performance in Sport

**Credit Hours:** 3

This course is focused on enhancing individual performance and well-being through sport and physical activity. Topics include motor skill learning, motivational techniques, arousal regulation, team dynamics and cohesion, aggression, overcoming injury and addictive/unhealthy behaviors, exercise adherence, and psychological skills training.

**General Education Attribute**

- Wellness & Personal Health
- Competency-Applied Methodologies

## SPT 3100 - Sports Branding & Sponsorship

**Credit Hours:** 3

This course will explore the multi-billion dollar world of sports marketing, branding, and sponsorship from the viewpoint of the team, the brand, and other major stakeholders. Students will learn how teams and brands work together to achieve their marketing goals and connect with fans.

**General Education Attribute**

- Competency-Intensive Writing

## SPT 3110 - Sales Techniques in the Sport Industry

**Credit Hours:** 3

The sport industry requires students who are trained in all aspects of sport business, including the critical area of sport sales. This course will provide practical professional sales techniques and philosophies utilized in several areas of sport including personal selling, ticket sales and sponsorships. Subsequently, the dynamics associated with building and fostering relationships necessary for consumer loyalty and a vibrant sport organization will be thoroughly examined.

## SPT 3150 - Facility and Event Management

**Credit Hours:** 3

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.

## SPT 3160 - Facility & Event Management Practical Application

**Credit Hours:** 1

Integrates coursework from Facility & Event Management (SPT 3150) with planned and supervised professional experiences. Experiences will take within and outside regularly scheduled class meeting times.

## SPT 3200 - Administration of Intercollegiate Athletic Programs

**Credit Hours:** 3

This course reviews the many administrative tasks an athletic administrator encounters in the administration of an intercollegiate athletic program and department. The course is designed for students majoring in sport management studies, business administration, or students who might be interested in a career in athletic administration at the collegiate level.

## SPT 3260 - Public Policy in Sport and Recreation

**Credit Hours:** 3

This course delivers the information that future sport management professionals will need to have confidence in understanding public policy in regards to sport and recreation. Through inquiry, analysis, examination and problem solving, sport management students can make better decisions as managers which benefit themselves, their employer, and the community they serve, both now and in the future. The immediate relevance of public policy in sport to students' professional lives will enable them to make constructive judgments and informed commentaries on the system and processes, from practical and critical social perspectives. The course enables students to examine and justify their own opinions and attitudes around sport-related issues thus preparing them as informed leaders in sport management. Offered spring, annually.

## SPT 3270 - Gender in Sports

**Credit Hours:** 3

Gender in sports provides students with a comprehensive, multidisciplinary analysis of the problems, patterns, and processes associated with the involvement of women in sports. Students will be exposed to obvious and subtle issues in the sport domain that contribute to different opportunities and experiences for individuals based on gender.

**General Education Attribute**

- Discoveries-Social Sciences

## SPT 3300 - Global and International Sport

**Credit Hours:** 3

This course examines the organization, governance, business activities, and cross-cultural context of modern sport on an international level.

## SPT 3500 - Thy & Technique Of Coaching

**Credit Hours:** 3

Examines theories and techniques of coaching sports. Covers rules and regulations, fundamentals, organizational principles, specific conditioning programs scouting, technical tactics, and other topics.

## SPT 3650 - Sport Leadership

**Credit Hours:** 3

This course is designed to provide an examination of effective leadership skills from multiple angles and perspectives. Students will examine general concepts in leadership by reviewing theory, principles, traits, and skills required of a leader in the field of sport management.

## SPT 4000 - Legal Aspects of Sport

**Credit Hours:** 3

An introduction to basic skills and competencies required to successfully manager in the sport management industry. The course utilizes general management theory and principles, which make direct application to the sport management field.

## SPT 4050 - Economics & Financial Management in Sport

**Credit Hours:** 3

This course explores conventional and innovative methods of revenue acquisition and financial management of sport organizations. Topics include financial accountability and budgeting of leagues and organizations, competitive balance, anti-trust regulation, economic impact of events, stadium/venue financial management, and player salaries.

**General Education Attribute**

- Competency-Quantitative Application

## SPT 4100 - Governance in Sport

**Credit Hours:** 3

This course is a study of the growth and development of sport throughout the world, as well as how the governing bodies involved affect the structure, organization and delivery of sport.

## SPT 4235 - Risk Management for Sports Professions

**Credit Hours:** 3

This course is designed to examine risk management in sports and recreation. It will provide a comprehensive knowledge base for those sports management professionals charged with the responsibility of ensuring the safety of participants and spectators. The course covers a wide range of risk management and safety issues including: legal concerns, emergency action plans, waivers, facilities, equipment, aquatics, supervision, and training. Students will receive clear and detailed explanations of issues to consider before making an informed decision on risk management.

## SPT 4250 - Organization and Administration of Sport

**Credit Hours:** 3

This course provides the foundation necessary to plan, evaluate, organize, and administrate sport-related programs in a variety of settings. Specific areas of concentration include mission statements, needs assessment, program planning and development, goals and objectives, and program assessment and evaluation in school, university, community, and other professional settings.

## SPT 4290 - Sports Management

**Credit Hours:** 3

Provides students with an understanding of how the principles and concepts of management theory can be applied to sports administration. Every other semester.

**Prerequisite:** MGMT 3200.

## SPT 4300 - Sport Management Senior Seminar

**Credit Hours:** 3

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.

## SPT 4420 - Athletic Administration

**Credit Hours:** 3

This course is based on the fundamental belief that by studying and examining the complex dynamics that makeup effective spot administration, one can become a more effective athletic administrator. The course focuses on wide-ranging concepts in sports administration at both the scholastic and collegiate levels through a review of theory, principles, traits, and skills that are essential to successful athletic administration. Offered fall, annually.

## SPT 4950 - Internship in Sport Management

**Credit Hours:** 9

This course is the Sport Management student's capstone experience. Students will attain an internship site based on their unique educational needs, experience, and professional aspirations. Internship students will work directly with Sport Management professionals in one or more work settings.

**General Education Attribute**

- Competency-Keystone Experience

## STAT 2000 - Statistics for Health and Social Sciences

**Credit Hours:** 3

This course is intended to provide just-in-time algebra reviews necessary to complete statistical analysis for various health and social science related problems. Topics include: frequency distributions, percentiles, measures of central tendency and variability, normal distribution, populations, samples, confidence intervals, and hypothesis tests.

**Prerequisite:** MATH 1030
**General Education Attribute**

- Foundations-Quantitative Reasoning

## STAT 2010 - Statistics for Business

**Credit Hours:** 3

This course emphasizes the identification of appropriate statistical methods as well as the proper interpretation and presentation of results. Topics include: descriptive statistics, probability concepts, the normal probability distribution, confidence intervals, hypothesis tests, and simple/multiple linear regression. Statistical software is used.

**Prerequisite:** MATH 1040 or MATH 1220 or MATH 2310 or ALEKS placement test
**General Education Attribute**

- Foundations-Quantitative Reasoning
- Discoveries-Natural Science & Technology

## STAT 2020 - Elements of Statistics

**Credit Hours:** 3

This course introduces the basic concepts of statistics through intuitive approaches and stresses applications. Topics include: descriptive measures, regression, elementary probability, the normal distribution, sampling, the Central Limit Theorem, hypothesis testing, estimation, and statistical software packages.

**Prerequisite:** MATH 1010 or MATH 1220 or ALEKS placement test
**General Education Attribute**

- Foundations-Quantitative Reasoning
- Discoveries-Natural Science & Technology

## STAT 3000 - Applied Statistical Methods

**Credit Hours:** 3

This course focuses on the use of descriptive statistics, probability, introductory statistical inference, and data analysis in an applied setting. Students will be required to use appropriate software packages and calculators with statistical functionality in the course.

**Prerequisite:** MATH 2320 or MATH 2410
**General Education Attribute**

- Competency-Quantitative Application
- Competency-Applied Methodologies

## STAT 3010 - Mathematical Probability and Statistics

**Credit Hours:** 3

In this course, students study the basic concepts of mathematical probability, emphasizing applications to solving practical problems. Topics include random variables, probability laws, expected value, probability mass functions, probability densities, sampling distributions, techniques of estimation, and an introduction to hypothesis testing.

**Prerequisite:** MATH 2420
**General Education Attribute**

- Competency-Quantitative Application

## STAT 3760 - Linear Regression

**Credit Hours:** 3

This course in regression analysis begins with simple linear regression, associated one-way analysis of variance tables, and diagnostic measures. It continues with more complicated regression models including general regression models, multiple regression, generalized linear models and a brief introduction to nonlinear estimation.

**Prerequisite:** STAT 2020 or STAT 3000 or STAT 3010

## STAT 3800 - Introduction to Actuarial Science

**Credit Hours:** 3

This course introduces students to the career of actuarial science. Actuaries will be invited to give guest lectures on their careers. This course will prepare students to take the first professional actuarial test. This exam covers insurance applications that utilize calculus and statistics.

**Prerequisite:** STAT 3010 and MATH 3430
**General Education Attribute**

- Competency-Quantitative Application
- Competency-Applied Methodologies

## STAT 3990 - Special Topics in Statistics

**Credit Hours:** 3

This course will focus on a specific topic in Statistics suitable for advanced students. The content will vary from semester to semester according to interests of the students and faculty. Students may repeat this course up to three times for different topics.

**Prerequisite:** STAT 3010

## STAT 4010 - Statistical Inference

**Credit Hours:** 3

This course emphasizes statistical inference and presents basic concepts through intuitive approaches. It stresses applications and includes sampling variance, nonparametric tests of hypotheses, multiple and partial correlation, multiple regression analysis, analysis of variance, and experimental design.

**Prerequisite:** STAT 2020 or STAT 3000 or STAT 3010
**General Education Attribute**

- Competency-Quantitative Application
- Competency-Applied Methodologies

## STAT 4030 - Advanced Statistical Inference

**Credit Hours:** 3

This course provides a further study of statistical inference. It re-introduces content from an introductory statistics course and develops the content in theory further. It adds an in-depth look at several statistical methods from introductory courses and introduces Bayes estimation and testing.

**Prerequisite:** STAT 4010

## TED 1000 - Introduction to Tech ED

**Credit Hours:** 3

This course initiates the professional development of each technology education student. Activities will afford each student the opportunity to become well grounded in the philosophy, theory and practice of technology education curriculum and pedagogy. Following extensive modeling activities within a campus-based classroom/laboratory environment, all students will participate in similar activities at selected K-12 schools for 15 hours of field experience.

## TED 1050 - Communicating Designs

**Credit Hours:** 3

This course is intended to promote the competencies, skills and sensibilities needed for the successful development and realization of contemporary products. A design/problem-solving model will include elements of design and appearance, ergonomics, idea modeling, anthropometrics, form, function and visualization. These elements will be coupled with basic engineering drawing skills, including freehand drawing, orthographic projection and basic descriptive geometry, axonometric drawings and developments. Emphasis will be placed on documentation of design work using manual drafting, CAD and freehand sketching.

## TED 1111 - Information Systems

**Credit Hours:** 3

This course provides a broad overview of information systems, specifically print, acoustic, light, audiovisual and electronic media as they relate to the realm of communications. The student will experience individualized and group laboratory activities in the combined areas of generating, assembling, processing, disseminating and assimilating of a communicative message.

## TED 1200 - Engineering Materials

**Credit Hours:** 3

This laboratory-based course is an introduction to material properties and product design. Design engineering requires knowledge of the selection, properties, uses and impacts of materials choices, and processing methods. A process of research, design, creation, use and assessment of products will be used. The lab activities of the course will focus on the safe and efficient processing of polymer materials.

## TED 3105 - Teaching of Tech ED

**Credit Hours:** 0 TO 3

Students will use their technical skills and knowledge in the area of communication, transportation, manufacturing, construction, bio-related technologies and develop curriculum plans, design laboratories, and instructional activities appropriate for teaching technology in the secondary school. In addition, enhancing technical skills, teaching techniques, program assessment, and evaluating student learning will be emphasized along with safety, liability, school law and the integration of math, science, technology, and social science in learning activities.

## TED 4500 - Teaching Technology in the Secondary School

**Credit Hours:** 0 TO 3

Students will use their technical skills and knowledge in the area of communication, transportation, manufacturing,

construction, bio-related technologies and develop curriculum plans, design laboratories, and instructional activities appropriate for teaching technology in the secondary school. In addition, enhancing technical skills, teaching techniques, program assessment, and evaluating student learning will be emphasized along with safety, liability, school law and the integration of math, science, technology, and social science in learning activities.

## TED 4510 - Teaching Technology in the Elementary School

**Credit Hours:** 0 TO 3

This course is designed for students who are technology education majors. It is designed to offer each student the opportunity to design and build teaching/learning activities that integrate concepts related to mathematics, science, communication and social science with technology.

## THEA 1000 - Introduction to the Theatre

**Credit Hours:** 3

A study of the art of theatre from playscript 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.

**General Education Attribute**

- Discoveries-Art/Humanities

## THEA 1010 - Voice and Speech

**Credit Hours:** 3

A practical and useful course for the performer or anyone who wants a flexible, strong, controlled voice. The focus of the course is the natural way in which the body produces vocal sounds and primarily studied for clear and articulate speech, which is free of regional qualities, affectation, imitation and annoying physical habits. An introduction to phonetics (IPA) and to voice production and control, with exercises to develop adequate quality, loudness, pitch, rate, and articulation will be utilized to achieve desired results. An Introduction to the Estill Voice Craft will be introduced to demonstrate the production of various vocal qualities.

## THEA 1200 - Entertainment Audio I

**Credit Hours:** 3

Entertainment Audio I introduces students to the foundational knowledge necessary for successful careers in theater sound design and/or audio engineering. Specific topics of focus in this course include: acoustic/psychoacoustic principles of sound, analog/digital audio cables and connectors, proper configuration of analog/digital audio equipment and sound systems, microphone design/implementations, mixing console design and operation, proper understanding of gain-staging and signal path, and signal processor function/implementations.

## THEA 1260 - Makeup I

**Credit Hours:** 3

This course teaches techniques for modeling the face and body with makeup, hair and three dimensional prostheses. A full range of theatrical techniques from street and fashion to character and fantasy makeups will be explored. Qualified students will create three dimensional prosthesis from face and body casts.

## THEA 1310 - Fundamentals of Acting

**Credit Hours:** 3

An introduction to the basic tools of the actor's craft and personal discipline for the student through the use of acting exercises, sensitivity exercises, theater games and improvisation.

## THEA 1400 - Script Analysis

**Credit Hours:** 3

Students will read and analyze several plays and musical theatre scores and librettos, give regular reports, write research papers supporting their analysis, and contribute to class discussion regarding the nature and needs of various scripts. Class work will include analysis of a scripts historical, structural and biographical qualities, as well as possible production needs for performance, directing, design and technical requirements.

## THEA 1410 - Stagecraft

**Credit Hours:** 3

Introduction to the theory and practice of stagecraft, involving basic set construction, painting, and production technologies. Practical experience for students majoring in performance media.

## THEA 1430 - Drafting and Rendering for the Theatre

**Credit Hours:** 3

This entry level drafting and rendering course prepares students for more advanced tasks and topics in future design courses. It will create a foundation of necessary skills and good practices and illustrate the ways designers communicate with directors, production staff and other stakeholders. This course incorporates both hand and digital rendering as well as computer aided drafting using VectorWorks, employing conventions typical to theatrical design work.

## THEA 1450 - Estill Voice Training for Performers I

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of voice utilizing the Estill Voice Model and the techniques/methodologies of Estill Voice Training. Vocal goals and materials are specifically chosen to strengthen the technical and performing abilities of the individual student, whether singing or non-singing.

## THEA 1500 - Introduction to Theatrical Design

**Credit Hours:** 3

This course is an overview of the process of theatrical design specifically, scenic, lighting, sound, and costumes. Students will explore a variety of theatrical styles and historical periods. Particular emphasis is placed on the design tools including; script analysis, research, rendering, and drafting.

**General Education Attribute**

- Competency-Information Literacy

## THEA 2010 - Voice and Interpretation

**Credit Hours:** 3

Methods of analysis and presentation for effective oral reading and performance of non-literature and dramatic literature, prose, and poetry will be explored.

## THEA 2030 - Musical Theatre Performance I

**Credit Hours:** 3

Building upon the skills acquired in MUSI 1040, Musical Theatre Performance I will begin the specific and focused study of the voice as it relates to musical theatre performance. Not only will the course provide continued focus on the voice and its use in both speaking and singing, but it will incorporate the study of selected musical theatre repertoire and its application of the Cohen method of acting. Using the Estill Voice Model™, students will study in greater depth the anatomy and physiology of the vocal mechanism, demonstrate voluntary control of vocal structures, and apply these skills and knowledge to both spoken text and sung lyrics. Likewise, students will develop a working philosophy and vocabulary that emphasizes maintaining vocal health and utilizing vocal tools to achieve artistry in musical theatre performance.

## THEA 2110 - Lighting 1

**Credit Hours:** 3

The basic theory and practice of lighting for the stage, film, and television. Practical experience for students majoring in performance media is stressed.

**General Education Attribute**

- Competency-Quantitative Application
- Competency-Applied Methodologies

## THEA 2200 - Entertainment Audio II

**Credit Hours:** 3

Entertainment Audio II builds upon topics introduced in Entertainment Audio I by focusing upon digital audio integration within audio and sound design workflows. Specific topics of focus in this course include: Analog-to-Digital Conversion, Digital Audio Transmission Through Ethernet (DANTE) Integration/Operation, Musical Instrument Digital Interface (MIDI) integration/operation, Digital Mixing console integration/operation, remote digital mixing and instrument miking techniques. This course culminates with students preparing a professional sound design for a short, one-act production. Working in small groups, students will showcase their creativity in sound design and live-sound reinforcement to their classmates and department faculty.

**Prerequisite:** THEA 1200

## THEA 2210 - Theatrical Foundations: Physical Theatre and Creative Movement

**Credit Hours:** 3

This course introduces physical and experimental theater inviting students into the role of creative practitioners by

physically investigating the creative elements that can be applied to all aspects of theatre, developing the skills of organic movement, physical experimentation, focused play, observation, collaboration, group trust and cohesion.

## THEA 2250 - Costume Construction

**Credit Hours:** 3

Basic pattern drafting and sewing techniques applied to the construction of costumes.

## THEA 2260 - Makeup 2

**Credit Hours:** 3

This course builds upon the basic techniques learned in THEA 1260 Makeup 1. Students will explore advanced topics including creating prosthesis, applying bald caps and other advanced topics. They will also learn about period makeup and hair styles and create and realize characters using script analysis, research and rendering.

**Prerequisite:** THEA 1260
**General Education Attribute**

- Competency-Applied Methodologies
- Competency-Information Literacy

## THEA 2310 - Intermediate Acting

**Credit Hours:** 3

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:** THEA 1310

## THEA 2450 - Estill Voice Training for Performers II

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of voice utilizing the Estill Voice Model and the techniques/methodologies of Estill Voice Training. The student will build upon the foundational concepts acquired in THEA 1450. Vocal goals and materials are specifically chosen to further strengthen the technical and performing abilities of the individual student, whether singing or non-singing.

**Prerequisite:** THEA 1450

## THEA 2550 - Puppetry

**Credit Hours:** 3

The planning and production of puppet plays.

## THEA 2720 - Properties Design for the Theatre

**Credit Hours:** 3

This course will explore the tools, materials and techniques used for the creation of props for theatrical productions. Emphasis will be placed on the planning process of creating commonly needed props such as food props, weaponry and paper props. Techniques will include casting, painting and 3D printing.

**General Education Attribute**

- Competency-Quantitative Application
- Competency-Applied Methodologies

## THEA 3010 - Voice & Speech II: Stage Dialects

**Credit Hours:** 3

A practical and useful course for the performer who seeks to effectively, consistently, and safely produce common stage dialects other than Standard American English. This course will build upon concepts acquired in THEA 1010 to expand the students knowledge of International Phonetic Alphabet to include speech sounds utilized in dialects other than their own. The Estill Voice Model will be utilized for identifying a generalized vocal quality of the dialects under study that is consistent and vocally healthy in production. Application of the speech sounds and qualities to various appropriate texts will further illustrate the acquisition of the dialect under study.

**Prerequisite:** THEA 1010

## THEA 3020 - Theatre History I

**Credit Hours:** 3

The study of theatre history and criticism from the Ancients through the Renaissance.

**General Education Attribute**

- Competency-Intercultural Fluency

## THEA 3030 - Musical Theatre Performance II

**Credit Hours:** 3

Musical Theatre Performance II will provide continued development of skills and concepts necessary for performing vocally in musical theatre as introduced in Musical Theatre Performance I. The course will offer increased exposure and study of selected musical theatre repertoire, further application of the Cohen method of acting, and rigorous application the Estill Voice Model™ to both speaking and singing. The course will place great emphasis on using the voice to create character and achieve a higher level of artistry in performance.

## THEA 3040 - World Drama

**Credit Hours:** 3

World dramatic literature, from ancients to moderns, studied as blueprints for theatrical presentation.

**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Intensive Writing

## THEA 3060 - Modern Drama

**Credit Hours:** 3

19th, 20th and 21st Century plays studied as blueprints for theatrical presentation.

**General Education Attribute**

- Competency-Intercultural Fluency
- Competency-Intensive Writing

## THEA 3090 - Readers Theatre

**Credit Hours:** 3

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.

## THEA 3110 - Lighting II

**Credit Hours:** 3

Lighting 2 will continue to build and practice the fundamentals learned in Lighting 1 as well as expand on those concepts. A large portion of this class will be dedicated to programming on the ETC ION. Other topics include: advanced power & theory, Moving lights, NEC/NFPA Standards, Color Theory, and different styles of design.

**General Education Attribute**

- Competency-Quantitative Application
- Competency-Applied Methodologies

## THEA 3120 - Theatre History II

**Credit Hours:** 3

The study of theatre history and criticism from the Restoration through the 20th Century.

## THEA 3200 - Fundamentals of Directing

**Credit Hours:** 3

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.

**Prerequisite:** THEA 1310

## THEA 3270 - Stage Management

**Credit Hours:** 3

This course will examine the role of the Stage Manager as a key artist within the theatrical event. The course will provide a practical application of the essential communication, organization, planning and leadership skills necessary to manage a theatrical event. Lastly the course will review current professional stage management practices.

## THEA 3280 - Scene Painting

**Credit Hours:** 3

The practice of scenery painting for the theater. Students work with a variety of paints, texturing materials and application techniques. Particular emphasis is placed on the enlargement of existing art works to a size suitable for stage use.

## THEA 3310 - Advanced Acting

**Credit Hours:** 3

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:** THEA 1310

## THEA 3400 - Advanced Theatrical Design

**Credit Hours:** 3

Explore a areas of production design including scenic, costume, lighting, sound and projections in collaboration with other students using various methods of communication including rendering and model making. Survey the history of theatrical design.

**Prerequisite:** THEA 1500

## THEA 3410 - Stagecraft II

**Credit Hours:** 3

Advanced practice and principles of scenery and property construction. Practical experience with plastics, metals, drafting and advanced woodwork is stressed.

**Prerequisite:** THEA 1410

## THEA 3450 - Estill Voice Training for Performers III

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of voice utilizing the Estill Voice Model and the techniques/methodologies of Estill Voice Training. Vocal goals and materials are specifically chosen to strengthen the technical and performing abilities of the individual student, whether singing or non-singing.

**Prerequisite:** THEA 2450

## THEA 3500 - Practicum: Performance

**Credit Hours:** 1 TO 5

This variable credit course is intended to provide the student with performance experience in theatre. This includes student actors, singers, dancers, musicians or other performers

## THEA 3510 - Finding Your Voice: Vocal Skills for the Theatre Performer

**Credit Hours:** 3

This course is designed for any student interested in developing versatility and strength in the creation of a character's voice. Students will develop a working philosophy and vocabulary that emphasizes maintaining vocal health and utilizing vocal tools to achieve artistry in theatrical performance. Areas of study include: tools to eliminate poor vocal qualities and habits, work with the International Phonetic Alphabet for the production of proper speech sounds, and the Estill Voice Technique for vocal strength and health.

## THEA 3520 - Practicum: Directing and Choreography

**Credit Hours:** 1 TO 5

This course provides practical experience to students in the roles of director, assistant director or choreographer. They will work on the conceptualization, rehearsal process and the technical implementation of a production.

## THEA 3530 - Practicum: Design

**Credit Hours:** 1 TO 5

This variable credit course is intended to provide the student with practical design experience in theatre. Students will create realized or theoretical designs in areas including but not limited to scenic, lighting, costume, sound, projection, properties, makeup or puppetry design. Students will complete a design including all requisite paperwork. They will work with faculty, staff and other students on the production team to revise work and implement feedback. Students serving as assistant designers would also register for this practicum.

## THEA 3540 - Practicum: Management

**Credit Hours:** 1 TO 5

This variable credit course is intended to provide the student with practical management experience in theatre. Students will take leadership roles including but not limited to stage manager, assistant stage manager, scenic charge artist, wardrobe supervisor, props coordinator, technical coordinator, technical director, assistant technical director, master carpenter, master electrician or other management position as assigned. Students will complete all the requisite paperwork, calendars, budgets, drafting, etc. and present it to advisor at the end of the process. They will learn how to collaborate with and manage their peers. They will work with faculty, staff and other students on the production team to revise work and implement feedback.

## THEA 3560 - Practicum: Technical Production

**Credit Hours:** 1 TO 5

This variable credit course is intended to provide the student with practical experience in theatre. Students will serve as a production or run crew member in an assigned area including scenery, lighting, costumes, etc.

## THEA 3570 - Practicum: Touring Theatre

**Credit Hours:** 1 TO 5

This variable credit course is intended to provide the student with practical experience in touring theatre. Students will participate in aspects or touring theatre in performance, directorial, technical or other roles. They will work with faculty, staff and other students on the production team to revise work and implement feedback. A grade may be assigned retroactively within the student's next regularly enrolled semester provided an agreement is made between the student and the instructor before the assignment is undertaken.

## THEA 4020 - Estill Voice Training: Levels 1 & 2 Combined Intensive

**Credit Hours:** 1 TO 3

This course will provide a focused experience for vocal performers to explore and optimize voice production for musical and theatrical performance utilizing the Estill Voice Model TM. By examining the acoustic, physiologic, and perceptual correlates of voice and by learning to enhance control of the vocal structures that influence vocal quality, the students will acquire tools offered by the Estill Voice Trainingsystem for adding color, strength, clarity and stamina to the performing voice.

## THEA 4030 - Musical Theatre Performance III

**Credit Hours:** 1 TO 3

Musical Theatre Performance III will provide continued development of skills and concepts necessary for performing vocally in musical theatre, but with advanced application of both the Cohen acting method the Estill Voice Model™. In addition to refining technique and achieving even greater artistry in performance, the course will serve as a final phase of preparation for transition into professional musical theatre.

## THEA 4040 - Cultural Studies in Theatre

**Credit Hours:** 3

Performative elements are present in every society; regardless of its complexity and sophistication. The impact of these performative elements influences a society and its people. This course will focus on a specific region of the globe and study its theatre; specifically the impact its performative elements had on the society and, subsequently, the society had on its performative elements.

## THEA 4310 - Acting in Musical Theatre

**Credit Hours:** 3

This is the final course in the acting sequence and is directed solely to the performance of musical theatre. This course combines physical and vocal acting methods utilized in previous coursework with a repertoire specific study in order to create a more well-rounded musical theatre performer. Students aspiring to careers in musical theatre require a firm understanding of the specific needs of the character within a given style of musical theatre.

**Prerequisite:** THEA 1310

## THEA 4450 - Estill Voice Training for Performers IV

**Credit Hours:** 1

This course is designed for private instruction in the mechanics and artistry of voice utilizing the Estill Voice Model and the techniques/methodologies of Estill Voice Training. Vocal goals and materials are specifically chosen to strengthen the technical and performing abilities of the individual student, whether singing or non-singing. This level of study builds upon concepts gained in previous levels and challenges the student to explore more challenging material.

**Prerequisite:** THEA 3450

## THEA 4800 - Digital Performance

**Credit Hours:** 3

This capstone course for the upper-class person uses emerging technologies to convey thematic ideas within live theatrical productions. The course will provide background and framework for students to create and present original live performance pieces employing multiple forms of media. Creativity, collaboration and technical innovation will culminate in a live public performance.

## THEA 4900 - Theatre Capstone

**Credit Hours:** 3

This capstone course will demonstrate, in a practical manner, students' ability to fulfill a role in a theatrical production. Grading is based on the quality and timely completion of the assigned production duties and on materials and critical analysis compiled in a production binder.

**General Education Attribute**

- Competency-Keystone Experience

## TOUR 1001 - Introduction to Tourism Studies

**Credit Hours:** 3

This course will introduce students to the global tourism industry. It discusses the industry's scale, scope, and organization from a supply and demand perspective. Fundamental business concepts are applied to the major tourism industry sectors.

## TOUR 2050 - Geography of Tourism

**Credit Hours:** 3

This course covers the geography of tourism in selected worldwide destinations with an emphasis on form and function is covered. Topics include an analysis of resources for tourism, related land-use patterns, and developmental processes. Students focus on tourism as the consumption of places through the lens of geography as the science of places.

## TOUR 3850 - Dark Tourism

**Credit Hours:** 3

This course explores tourist consumption of death, tragedy, and suffering through dark tourism attractions and destinations. Students study the motivations, ethical challenges, and impacts of dark and extreme tourism on culture,

society, and economies.

**General Education Attribute**

- Competency-Ethical Reasoning

## TOUR 4000 - Impacts & Sustainability of Tourism

**Credit Hours:** 3

Sustainable tourism is tourism in a form that minimizes the negative consequences of tourism from an ethical framework of humans as the stewards of economic, environmental, and cultural resources This course teaches students to avoid, identify, assess, and manage the negative consequences of tourism for tourism destinations.

**General Education Attribute**

- Competency-Ethical Reasoning

## TRIO 1000 - First Year Seminar

**Credit Hours:** 1

First-Year Seminar helps students to achieve their educational goals through the utilization of a full range of institutional and community resources.

## TRIO 1940 - Career Planning

**Credit Hours:** 1

A self-discovery course that provides first and second year students the opportunity to develop career interests and goals. Students will gain an understanding of their interests and personal preferences by completing and critically analyzing various career inventories. Topics include the role of career planning in life planning, decision-making, sources of career information and the relationship between careers and a college education.

## TRIO 2000 - Career Readiness

**Credit Hours:** 1

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.

## TRIO 2100 - Critical Thinking and Reading

**Credit Hours:** 3

This course exposes students to in-depth readings and well-chosen oppositional readings to help them develop intellectually and ethically by recognizing competing arguments and making a reasoned, context-appropriate commitment to one position. Some of the oppositional readings include artists, statements, criticisms, biographies, web-based essays, peer-reviewed journal articles, and book chapters. These authentic authorial voices engage students in thinking through competing perspectives on an issue. Students will practice critical thinking and reading in order to: reconsider and revise views where honest reflection suggests that change is warranted and face their own biases,

prejudices, stereotypes, or egocentric tendencies. When students believe that their efforts are contributing significantly to their learning, learning becomes its own motivation.

## VETT 1010 - Introduction to Veterinary Technology

**Credit Hours:** 3

This course introduces students to the Veterinary Technology profession, medical terminology and record keeping. The technicians role in veterinary ethics, legal regulations, the veterinary team, and the human animal bond will be emphasized throughout the course. Common animal breeds, general principles of behavior, hospital care, handling equipment, and hospital management are presented. This course includes a 45 hour clinical experience observing in an animal hospital.

## VETT 1600 - Care and Management of Exotic and Laboratory Animals

**Credit Hours:** 3

This course will introduce students to the many facets of exotic and laboratory animal care and management. Emphasis will be placed on the laws and ethics governing animal research as well as the unique features of each species and how these features affect housing and nutritional needs. Registration for both the lecture and lab is required.

**Prerequisite:** VETT 1010
**General Education Attribute**

- Competency-Ethical Reasoning

## VETT 2020 - Small Animal Management and Clinical Procedures

**Credit Hours:** 0 TO 4

This course will focus on the fundamentals of veterinary nursing knowledge and skills for dogs and cats. Topics will include behavior, nutrition, handling, disease recognition, prevention and treatment as well as other topics associated with canine and feline health. The laboratory exercises will focus on the clinical skills associated with nursing in the small animal practice such as blood draws, catheter placement, bandaging, and CPR. Registration for both the lecture and lab is required. In addition, students will be required to participate in animal care rotations.

**Prerequisite:** BIOL 2720 and VETT 1010

## VETT 2100 - Veterinary Clinical Technology and Laboratory Procedures

**Credit Hours:** 4

This course illustrates the importance of laboratory procedures and clinical technology in veterinary medicine. The clinical examination of blood, urine, feces, and cytological samples will be used to demonstrate the diagnostic value of laboratory results. Registration for both the lecture and lab is required.

**Prerequisite:** BIOL 2710
**General Education Attribute**

- Competency-Applied Methodologies

## VETT 2200 - Large Animal Management and Clinical Procedures

**Credit Hours:** 0 TO 4

This course will focus on the fundamentals related to the veterinary technician and large animal practice. Topics will include anatomy and physiology, nutrition, handling, disease recognition, prevention and treatment as well as other topics associated to equine and production animals. Clinical procedures will be practiced in the laboratory portion of the course at area large animal facilities. Registration for both the lecture and lab is required. 45 hours of clinical experiences will be gained during this course.

**Prerequisite:** BIOL 2720 and VETT 1010

## VETT 2300 - Digital Diagnostic Imaging

**Credit Hours:** 4

This course emphasizes techniques involved in the acquisition, digital management, and manipulation of radiographic, electrocardiographic and ultrasound images. Focus will be placed on the skills necessary to produce images of diagnostic quality and the theory of how these images are produced. Students must register for both lecture and lab.

**Prerequisite:** VETT 1010

## VETT 2400 - Veterinary Pharmacy and Pharmacology

**Credit Hours:** 3

This course will familiarize the student with dosage, mechanisms of action, routes of administration, and known toxicities of the commonly used drugs in veterinary medicine. Emphasis will be placed on dosage calculations and drug dispensing as it relates to the veterinary technician.

**Prerequisite:** BIOL 2720 and VETT 1010

## VETT 2500 - Â  Surgical Nursing, Anesthesia, and Pain Management

**Credit Hours:** 0 TO 4

This course acquaints the student with pre-operative, surgical, and post-operative responsibilities of the veterinary technician. Topics include drug and fluid calculations, patient monitoring, and care of the surgical suite and surgical instruments. Laboratory procedures will include surgical preparation, anesthesia, surgical assisting, post-operative care and client communication. Registration for both the lecture and lab is required. Students will also be required to participate in animal care rotations. This course includes 45 hours of clinical experience.

**Prerequisite:** VETT 2020 and VETT 2100 and VETT 2400

## VETT 2920 - Clinical Experience

**Credit Hours:** 3

This course enables the student to apply knowledge and hone skills acquired in previous courses by spending 120 hours in the veterinary clinic setting. Experience will be gained in duties that are regularly performed by a licensed or certified veterinary technician under the guidance of veterinarians and qualified clinic personnel.

**Prerequisite:** VETT 2100
**General Education Attribute**

- Competency-Intensive Writing

## VETT 3010 - Contemporary Issues in Veterinary Medicine

**Credit Hours:** 3

This course will explore the trends and issues that relate to veterinary medicine. Emphasis will be placed on the role of the veterinary technician and the issues that directly affect the veterinary technician profession.

**Prerequisite:** VETT 1010
**General Education Attribute**

- Competency-Intensive Writing

## VETT 3020 - Animal Behavior for the Veterinary Technician

**Credit Hours:** 3

This course will familiarize the student with the role of the veterinary technician in regard to companion animal behaviors commonly encountered in practice. Topics addressed will be the underlying cause of common behaviors, companion animal communication, strategies for behavior modification, client communication, and creating a safe and comfortable environment for the patient, client and veterinary team.

**Prerequisite:** VETT 1010

## VETT 3030 - Shelter Medicine I

**Credit Hours:** 3

Shelter medicine has emerged as a veterinary specialty as a result of the realization that medicine and care of the animals within shelters is far different than caring for pets. This course will introduce the student to the basic principles in shelter medicine. Topics will include housing, husbandry, behavior, and infectious disease of various species of animals that inhabit animal shelters.

**Prerequisite:** VETT 1010

## VETT 3040 - Shelter Medicine II

**Credit Hours:** 3

Veterinary forensics has evolved with the field of shelter medicine. Veterinary personnel working in animal shelters often collaborate with law enforcement officers on crimes involving animals. This course will introduce the student to the field of veterinary forensics as it applies to shelter medicine. Topics will include animal abuse, cruelty and neglect, and veterinary forensics with emphasis on animal hoarding, animal fighting, and sexual abuse. Course topics will also focus on the interpretations of injury patterns, cause, manner, and mechanism of death.

**Prerequisite:** VETT 3020

## VETT 3100 - Principles of Domestic Animal Nutrition

**Credit Hours:** 3

This course will illustrate the aspects of animal nutrition with a focus on nutritional requirements and management of the domestic animals. The course will establish the understanding of basic nutrition by looking at energy and nutrients and how these are utilized in the body.

**Prerequisite:** BIOL 2720 or BIOL 3810 or BIOL 4860

## VETT 3210 - Animal Reproduction

**Credit Hours:** 3

The study of animal reproduction is of great importance in veterinary medicine. This course will cover reproduction in several companion species, both large and small, but will emphasize large animals where reproduction is of the utmost importance in production. In this course students will be familiarized with the many aspects of animal reproduction including topics such as cycle manipulation, embryo transfer, timed insemination, dystocia, and pregnancy support methods.

**Prerequisite:** VETT 2200

## VETT 3260 - Zoonotic Diseases

**Credit Hours:** 3

It has been postulated that approximately 75% of emerging diseases are zoonotic. This statement makes the role of the veterinary professional pivotal in preventing, and recognizing, diseases in both animal and human populations. This course will explore the type, transmission, immune response, recognition, prevention, and management of zoonotic diseases.

**Prerequisite:** VETT 1010

## VETT 3600 - Advanced Exotics

**Credit Hours:** 3

This course is designed to be a continuation of the introductory exotics and lab animal course. It will focus on medical techniques and procedures implemented for these species in zoos and wildlife settings. Class discussions will focus on different methodologies utilized in the medical care and management of these species. The course will further explore careers within these fields for a veterinary technician and provide aglimpse in "a day in the life of" with a hands-on experience at a wildlife facility or zoo.

**Prerequisite:** VETT 1600

## VETT 4500 - Case Studies in Veterinary Medicine

**Credit Hours:** 3

This course is intended to challenge student understanding from earlier courses in the veterinary technician program. The course will require students to apply previous knowledge and evaluate decisions from case study presentations.

**Prerequisite:** VETT 2500
**General Education Attribute**

- Competency-Keystone Experience

## VETT 4950 - Specialty Internship

**Credit Hours:** 3

There are many areas within veterinary medicine that lead to specialties. This course will enable students to explore these specialties and develop skills that will help prepare them if the student chooses to pursue certification in a veterinary technician specialty.

**Prerequisite:** VETT 2500

## WRLC 1000 - World Languages & Cultures

**Credit Hours:** 3

This course introduces world languages. Students will be exposed to the fundamentals of language study within a cultural context. Students will acquire a structured understanding of the basic fundamentals of the world's major language groups and learn about cultural and geographical diversity for each language introduced. Taught in English.

## Campus Map – California

https://map.concept3d.com/?id=1787#!ct/0,43407,67584,68216,68217?s/

## Campus Map – Clarion

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## Campus Map – Edinboro

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