

# University Catalog

## 2019-2020



University of  
**Pittsburgh**  
Johnstown

## Academic Calendar



University of Pittsburgh

# ACADEMIC CALENDAR • 2019–20

Dates highlighted in yellow apply to all schools, on all University campuses. Those in blue apply only to the Pittsburgh campus.

Official dates for degrees awarded apply to all schools, on all University campuses. Specific dates affecting the professional programs in the Schools of Dental Medicine, Law, Medicine, Pharmacy, and Joseph M. Katz Graduate School of Business, as well as graduate programs with specialized accreditation requirements may be obtained from the appropriate Dean's Office.

\* Employees covered by the collective bargaining agreements will be governed by the terms of those agreements.

NOTE: THE UNIVERSITY RESERVES THE RIGHT TO MAKE SUCH CALENDAR CHANGES AS IT DEEMS NECESSARY

☒ All Campus WIP

☒ Main Campus WIP

Mix-in: All, None

## July 2019

Begins	Date	Ends	Campus
7/4/2019	Thursday Independence Day (University closed)	7/4/2019 Thursday	All Campuses
7/10/2019	Wednesday Fall Term deadline for continuing students to register	7/10/2019 Wednesday	Pittsburgh Campus
7/17/2019	Wednesday Staff Council	7/17/2019 Wednesday	Pittsburgh Campus

## August 2019

Begins	Date	Ends	Campus
8/12/2019	Monday Office of International Services (OIS) Graduate and Professional Student Orientation	8/12/2019 Monday	Pittsburgh Campus
8/17/2019	Saturday International Undergraduate Student Orientation	8/19/2019 Monday	Pittsburgh Campus
8/19/2019	Monday New and Transfer Undergraduate Student Orientation	8/25/2019 Sunday	Pittsburgh Campus
8/19/2019	Monday Residence halls open	8/19/2019 Monday	Pittsburgh Campus
8/20/2019	Tuesday New Graduate and Professional Student Orientation	8/20/2019 Tuesday	Pittsburgh Campus

<b>8/21/2019</b>	Wednesday	New and Transfer Undergraduate Student Convocation	8/21/2019	Wednesday	Pittsburgh Campus
<b>8/21/2019</b>	Wednesday	Staff Council	8/21/2019	Wednesday	Pittsburgh Campus
<b>8/22/2019</b>	Thursday	New Faculty Orientation	8/22/2019	Thursday	Pittsburgh Campus
<b>8/23/2019</b>	Friday	New Teaching Assistant Orientation	8/23/2019	Friday	Pittsburgh Campus
<b>8/26/2019</b>	Monday	Fall Term classes begin	8/26/2019	Monday	All Campuses
<b>8/26/2019</b>	Monday	Fall Term enrollment period ends for all students	8/26/2019	Monday	All Campuses

## September 2019

Begins		Date	Ends		Campus
<b>9/2/2019</b>	Monday	Labor Day (University closed)	9/2/2019	Monday	All Campuses
<b>9/6/2019</b>	Friday	Fall Term add/drop period ends	9/6/2019	Friday	All Campuses
<b>9/7/2019</b>	Saturday	Fall Term extended drop period begins (Undergraduate Students Only)	9/7/2019	Saturday	All Campuses (Guidelines)
<b>9/10/2019</b>	Tuesday	Faculty Assembly	9/10/2019	Tuesday	Pittsburgh Campus
<b>9/13/2019</b>	Friday	Fall Term extended drop period ends (Undergraduate Students Only)	9/13/2019	Friday	All Campuses
<b>9/17/2019</b>	Tuesday	Constitution Day	9/17/2019	Tuesday	Pittsburgh Campus
<b>9/18/2019</b>	Wednesday	Senate Council	9/18/2019	Wednesday	Pittsburgh Campus
<b>9/27/2019</b>	Friday	Family Weekend	9/28/2019	Saturday	Pittsburgh Campus

## October 2019

Begins		Date	Ends		Campus
<b>10/8/2019</b>	Tuesday	Faculty Assembly	10/8/2019	Tuesday	Pittsburgh Campus
<b>10/16/2019</b>	Wednesday	Senate Council	10/16/2019	Wednesday	Pittsburgh Campus
<b>10/25/2019</b>	Friday	Homecoming Activities	10/27/2019	Sunday	Pittsburgh Campus
<b>10/25/2019</b>	Friday	Fall Term deadline for students to submit Monitored	10/25/2019	Friday	

		Withdrawal forms to Dean's Office			All Campuses
<b>10/25/2019</b>	Friday	Final Exam Conflict Form Submission Deadline	10/25/2019	Friday	All Campuses <b>(Guidelines)</b>
<b>10/25/2019</b>	Friday	Spring Term enrollment appointments begin (Veteran Students)	10/25/2019	Friday	All Campuses
<b>10/28/2019</b>	Monday	Spring Term enrollment appointments begin (Non-Veteran Students)	10/28/2019	Monday	All Campuses

## November 2019

Begins		Date	Ends		Campus
<b>11/5/2019</b>	Tuesday	Faculty Assembly	11/5/2019	Tuesday	Pittsburgh Campus
<b>11/8/2019</b>	Friday	Last day for Spring Term enrollment appointments	11/8/2019	Friday	All Campuses
<b>11/9/2019</b>	Saturday	Spring Term open enrollment begins	11/9/2019	Saturday	All Campuses
<b>11/13/2019</b>	Wednesday	Senate Council	11/13/2019	Wednesday	Pittsburgh Campus
<b>11/24/2019</b>	Sunday	Thanksgiving Recess for students (no classes), all schools	12/1/2019	Sunday	All Campuses
<b>11/28/2019</b>	Thursday	Thanksgiving Recess for faculty and staff (University closed)	11/29/2019	Friday	All Campuses

## December 2019

Begins		Date	Ends		Campus
<b>11/24/2019</b>	Sunday	Thanksgiving Recess for students (no classes), all schools	12/1/2019	Sunday	All Campuses
<b>12/2/2019</b>	Monday	Classes resume (all schools)	12/2/2019	Monday	All Campuses
<b>12/3/2019</b>	Tuesday	Faculty Assembly	12/3/2019	Tuesday	Pittsburgh Campus
<b>12/6/2019</b>	Friday	Fall Term: Last day for undergraduate day classes	12/6/2019	Friday	All Campuses
<b>12/6/2019</b>	Friday	Spring Term deadline for continuing students to register	12/6/2019	Friday	All Campuses
<b>12/7/2019</b>	Saturday	CGS, Saturday Only, graduate, and evening classes meet during this period; final exams held during last scheduled class	12/14/2019	Saturday	Pittsburgh Campus
<b>12/7/2019</b>	Saturday	Reading Day	12/7/2019	Saturday	All Campuses
<b>12/9/2019</b>	Monday	Final examination period for undergraduate day classes	12/14/2019	Saturday	Pittsburgh Campus
<b>12/11/2019</b>	Wednesday	Senate Council	12/11/2019	Wednesday	Pittsburgh Campus



<b>12/14/2019</b>	Saturday	Fall Term Ends: Official date for degrees awarded in Fall Term	12/14/2019	Saturday	All Campuses
<b>12/15/2019</b>	Sunday	Residence halls close	12/15/2019	Sunday	Pittsburgh Campus
<b>12/15/2019</b>	Sunday	Winter Recess for students (no classes), all schools	1/5/2020	Sunday	All Campuses
<b>12/17/2019</b>	Tuesday	Fall Term grades must be approved by instructors by 11:59 p.m.	12/17/2019	Tuesday	Pittsburgh Campus
<b>12/23/2019</b>	Monday	Winter Recess for faculty, staff, & designated offices. Responsibility centers & research projects staffed as necessary*	1/1/2020	Wednesday	All Campuses

## January 2020

<b>Begins</b>	<b>Date</b>	<b>Ends</b>	<b>Campus</b>
<b>12/15/2019</b>	Sunday	Winter Recess for students (no classes), all schools	1/5/2020 Sunday All Campuses
<b>12/23/2019</b>	Monday	Winter Recess for faculty, staff, & designated offices. Responsibility centers & research projects staffed as necessary*	1/1/2020 Wednesday All Campuses
<b>1/2/2020</b>	Thursday	All University offices and buildings reopen	1/2/2020 Thursday All Campuses
<b>1/4/2020</b>	Saturday	Residence halls reopen	1/4/2020 Saturday Pittsburgh Campus
<b>1/6/2020</b>	Monday	Spring Term classes begin	1/6/2020 Monday All Campuses
<b>1/6/2020</b>	Monday	Spring Term enrollment period ends for all students	1/6/2020 Monday All Campuses
<b>1/17/2020</b>	Friday	Spring Term add/drop period ends	1/17/2020 Friday All Campuses
<b>1/18/2020</b>	Saturday	Spring Term extended drop period begins (Undergraduate Students Only)	1/18/2020 Saturday All Campuses <b>(Guidelines)</b>
<b>1/20/2020</b>	Monday	Dr. Martin Luther King's birthday observance (University closed)	1/20/2020 Monday All Campuses
<b>1/24/2020</b>	Friday	Spring Term extended drop period ends (Undergraduate Students Only)	1/24/2020 Friday All Campuses

## February 2020

<b>Begins</b>	<b>Date</b>	<b>Ends</b>	<b>Campus</b>
<b>2/7/2020</b>	Friday	Summer Term enrollment appointments begin (Veteran Students)	2/7/2020 Friday All Campuses
<b>2/10/2020</b>	Monday	Summer Term enrollment appointments begin (Non-Veteran Students)	2/10/2020 Monday All Campuses
<b>2/28/2020</b>	Friday	Honors Convocation	2/28/2020 Friday All Campuses

## March 2020

<b>Begins</b>	<b>Date</b>	<b>Ends</b>	<b>Campus</b>
<b>3/6/2020</b>	Friday	Final Exam Conflict Form Submission Deadline	3/6/2020 Friday

					All Campuses (Guidelines)
3/6/2020	Friday	Spring Term deadline for students to submit Monitored Withdrawal forms to Dean's Office	3/6/2020	Friday	All Campuses
3/8/2020	Sunday	Spring Recess for students (no classes); offices and buildings remain open, except on Friday, Spring Holiday	3/15/2020	Sunday	All Campuses
3/13/2020	Friday	University's observance of Spring Holiday (University closed)	3/13/2020	Friday	All Campuses
3/20/2020	Friday	Fall Term enrollment appointments begin (Veteran Students)	3/20/2020	Friday	All Campuses
3/23/2020	Monday	Fall Term enrollment appointments begin (Non-Veteran Students)	3/23/2020	Monday	All Campuses

## April 2020

Begins		Date		Ends	Campus
4/3/2020	Friday	Last day for Fall Term enrollment appointments	4/3/2020	Friday	All Campuses
4/4/2020	Saturday	Fall Term open enrollment period begins	4/4/2020	Saturday	All Campuses
4/17/2020	Friday	Spring Term: Last day for undergraduate day classes	4/17/2020	Friday	All Campuses
4/18/2020	Saturday	CGS, Saturday Only, graduate, and evening classes meet during this period; final exams held during last scheduled class	4/25/2020	Saturday	Pittsburgh Campus
4/18/2020	Saturday	Reading Day	4/18/2020	Saturday	All Campuses
4/20/2020	Monday	Final examination period for undergraduate day classes	4/25/2020	Saturday	Pittsburgh Campus
4/23/2020	Thursday	Annual Graduate Commencement Convocation	4/23/2020	Thursday	Pittsburgh Campus
4/25/2020	Saturday	Spring Term Ends: Official date for degrees awarded in Spring Term	4/25/2020	Saturday	All Campuses
4/26/2020	Sunday	Annual Undergraduate Commencement Convocation	4/26/2020	Sunday	Pittsburgh Campus
4/26/2020	Sunday	Residence halls close (except for graduating seniors)	4/26/2020	Sunday	Pittsburgh Campus
4/29/2020	Wednesday	Spring Term grades must be approved by instructors by 11:59 p.m.	4/29/2020	Wednesday	Pittsburgh Campus

## May 2020

Begins		Date		Ends	Campus
5/3/2020	Sunday	Summer Term: Residence halls open	5/3/2020	Sunday	Pittsburgh Campus
5/4/2020	Monday	Summer Term enrollment period ends and classes begin	5/4/2020	Monday	All Campuses

<b>5/11/2020</b>	Monday	Summer 12-WEEK, 6-WEEK-1, 4-WEEK-1 sessions enrollment period ends and classes begin	5/11/2020	Monday	All Campuses
<b>5/13/2020</b>	Wednesday	Summer 4-WEEK-1 and 6-WEEK-1 sessions add/drop period ends	5/13/2020	Wednesday	All Campuses
<b>5/15/2020</b>	Friday	Summer Term add/drop period ends	5/15/2020	Friday	All Campuses
<b>5/18/2020</b>	Monday	Summer 12-WEEK session add/drop period ends	5/18/2020	Monday	All Campuses
<b>5/23/2020</b>	Saturday	Official date for degrees awarded in the School of Law and School of Dental Medicine	5/23/2020	Saturday	Pittsburgh Campus
<b>5/25/2020</b>	Monday	Memorial Day (University closed)	5/25/2020	Monday	All Campuses
<b>5/27/2020</b>	Wednesday	Summer 4-WEEK-1 session deadline for students to submit Monitored Withdrawal forms to Dean's Office	5/27/2020	Wednesday	All Campuses

## June 2020

<b>Begins</b>	<b>Date</b>	<b>Ends</b>	<b>Campus</b>
<b>6/5/2020</b>	Friday	Summer 6-WEEK-1 session deadline for students to submit Monitored Withdrawal forms to Dean's Office	6/5/2020 Friday All Campuses
<b>6/6/2020</b>	Saturday	Summer 4-WEEK-1 session ends: Final examinations scheduled during last class meeting	6/6/2020 Saturday All Campuses
<b>6/8/2020</b>	Monday	Summer 4-WEEK-2 session enrollment period ends and classes begin	6/8/2020 Monday All Campuses
<b>6/10/2020</b>	Wednesday	Summer 4-WEEK-1 session grades must be approved by instructors by 11:59 p.m.	6/10/2020 Wednesday Pittsburgh Campus
<b>6/10/2020</b>	Wednesday	Summer 4-WEEK-2 session add/drop period ends	6/10/2020 Wednesday All Campuses
<b>6/20/2020</b>	Saturday	Official date for awarding of degrees	6/20/2020 Saturday All Campuses
<b>6/20/2020</b>	Saturday	Summer 6-WEEK-1 session ends: Final examinations scheduled during last class meeting	6/20/2020 Saturday All Campuses
<b>6/22/2020</b>	Monday	Summer 6-WEEK-2 session enrollment period ends and classes begin	6/22/2020 Monday All Campuses
<b>6/24/2020</b>	Wednesday	Summer 6-WEEK-1 session grades must be approved by instructors by 11:59 p.m.	6/24/2020 Wednesday Pittsburgh Campus
<b>6/24/2020</b>	Wednesday	Summer 4-WEEK-2 session deadline for students to submit Monitored Withdrawal forms to Dean's Office	6/24/2020 Wednesday All Campuses
<b>6/24/2020</b>	Wednesday	Summer 6-WEEK-2 session add/drop period ends	6/24/2020 Wednesday All Campuses

## July 2020

<b>Begins</b>	<b>Date</b>	<b>Ends</b>	<b>Campus</b>
<b>7/2/2020</b>	Thursday	Summer 4-WEEK-2 session ends: Final examinations scheduled during last class meeting	7/2/2020 Thursday All Campuses
<b>7/2/2020</b>	Thursday	Summer Term and 12-WEEK session deadline for students to submit Monitored Withdrawal forms to Dean's Office	7/2/2020 Thursday All Campuses

<b>7/3/2020</b>	Friday	Independence Day (University Closed)	7/4/2020	Saturday	All Campuses
<b>7/6/2020</b>	Monday	Summer 4-WEEK-3 session enrollment period ends and classes begin	7/6/2020	Monday	All Campuses
<b>7/8/2020</b>	Wednesday	Fall Term deadline for continuing students to register	7/8/2020	Wednesday	Pittsburgh Campus
<b>7/8/2020</b>	Wednesday	Summer 4-WEEK-2 session grades must be approved by instructors by 11:59 p.m.	7/8/2020	Wednesday	Pittsburgh Campus
<b>7/8/2020</b>	Wednesday	Summer 4-WEEK-3 session add/drop period ends	7/8/2020	Wednesday	All Campuses
<b>7/17/2020</b>	Friday	Summer 6-WEEK-2 session deadline for students to submit Monitored Withdrawal forms to Dean's Office	7/17/2020	Friday	All Campuses
<b>7/22/2020</b>	Wednesday	Summer 4-WEEK-3 session deadline for students to submit Monitored Withdrawal forms to Dean's Office	7/22/2020	Wednesday	All Campuses

## August 2020

<b>Begins</b>	<b>Date</b>	<b>Ends</b>	<b>Campus</b>
<b>8/1/2020</b>	Saturday	Summer 12-WEEK, 6-WEEK-2, 4-WEEK-3 sessions end: Final examinations scheduled during last class meeting	8/1/2020 Saturday All Campuses
<b>8/5/2020</b>	Wednesday	Summer 12-WEEK, 6-WEEK-2, 4-WEEK-3 sessions grades must be approved by instructors by 11:59 p.m.	8/5/2020 Wednesday Pittsburgh Campus
<b>8/8/2020</b>	Saturday	Official date for awarding degrees	8/8/2020 Saturday All Campuses
<b>8/8/2020</b>	Saturday	Summer Term Ends: Final examinations scheduled during last class meeting	8/8/2020 Saturday All Campuses
<b>8/9/2020</b>	Sunday	Residence halls close	8/9/2020 Sunday Pittsburgh Campus
<b>8/12/2020</b>	Wednesday	Summer Term grades must be approved by instructors by 11:59 p.m.	8/12/2020 Wednesday Pittsburgh Campus
<b>8/17/2020</b>	Monday	Residence halls open	8/17/2020 Monday Pittsburgh Campus
<b>8/24/2020</b>	Monday	Fall Term classes begin	8/24/2020 Monday All Campuses
<b>8/24/2020</b>	Monday	Fall Term enrollment period ends for all students	8/24/2020 Monday All Campuses

## September 2020

<b>Begins</b>	<b>Date</b>	<b>Ends</b>	<b>Campus</b>
<b>9/4/2020</b>	Friday	Fall Term add/drop period ends	9/4/2020 Friday All Campuses
<b>9/5/2020</b>	Saturday	Fall Term extended drop period begins (Undergraduate Students Only)	9/5/2020 Saturday All Campuses (Guidelines)
<b>9/7/2020</b>	Monday	Labor Day (University closed)	9/7/2020 Monday All Campuses



<b>9/11/2020</b>	Friday	Fall Term extended drop period ends (Undergraduate Students Only)	9/11/2020	Friday	All Campuses
<b>9/17/2020</b>	Thursday	Constitution Day	9/17/2020	Thursday	Pittsburgh Campus

## October 2020

<b>Begins</b>	<b>Date</b>	<b>Ends</b>	<b>Campus</b>
<b>10/23/2020</b>	Friday	Fall Term deadline for students to submit Monitored Withdrawal forms to Dean's Office	10/23/2020 Friday All Campuses
<b>10/23/2020</b>	Friday	Final Exam Conflict Form Submission Deadline	10/23/2020 Friday All Campuses <b>(Guidelines)</b>
<b>10/23/2020</b>	Friday	Spring Term enrollment appointments begin (Veteran Students)	10/23/2020 Friday All Campuses
<b>10/26/2020</b>	Monday	Spring Term enrollment appointments begin (Non-Veteran Students)	10/26/2020 Monday All Campuses

## November 2020

<b>Begins</b>	<b>Date</b>	<b>Ends</b>	<b>Campus</b>
<b>11/6/2020</b>	Friday	Last day for Spring Term enrollment appointments	11/6/2020 Friday All Campuses
<b>11/7/2020</b>	Saturday	Spring Term open enrollment period begins	11/7/2020 Saturday All Campuses
<b>11/22/2020</b>	Sunday	Thanksgiving Recess for students (no classes), all schools	11/29/2020 Sunday All Campuses
<b>11/26/2020</b>	Thursday	Thanksgiving Recess for faculty and staff (University closed)	11/27/2020 Friday All Campuses
<b>11/30/2020</b>	Monday	Classes resume (all schools)	11/30/2020 Monday All Campuses

## December 2020

<b>Begins</b>	<b>Date</b>	<b>Ends</b>	<b>Campus</b>
<b>12/4/2020</b>	Friday	Spring Term deadline for continuing students to register	12/4/2020 Friday Pittsburgh Campus
<b>12/4/2020</b>	Friday	Fall Term: Last day for undergraduate day classes	12/4/2020 Friday All Campuses
<b>12/5/2020</b>	Saturday	CGS, Saturday Only, graduate, and evening classes meet during this period; final exams held during last scheduled class	12/12/2020 Saturday Pittsburgh Campus
<b>12/5/2020</b>	Saturday	Reading Day	12/5/2020 Saturday All Campuses
<b>12/7/2020</b>	Monday	Final examination period for undergraduate day classes	12/12/2020 Saturday Pittsburgh Calendar
<b>12/12/2020</b>	Saturday	Fall Term Ends: Official date for degrees awarded in Fall Term	12/12/2020 Saturday All Campuses
<b>12/13/2020</b>	Sunday	Residence halls close	12/13/2020 Sunday Pittsburgh Campus

<b>12/13/2020</b>	Sunday	Winter Recess for students (no classes), all schools	1/10/2021	Sunday	All Campuses
<b>12/15/2020</b>	Tuesday	Fall Term grades must be approved by instructors by 11:59 p.m.	12/15/2020	Tuesday	Pittsburgh Campus
<b>12/24/2020</b>	Thursday	Winter Recess for faculty, staff, & designated offices. Responsibility centers & research projects staffed as necessary*	1/3/2021	Sunday	All Campuses

## January 2021

<b>Begins</b>	<b>Date</b>	<b>Ends</b>	<b>Campus</b>
<b>12/13/2020</b>	Sunday	Winter Recess for students (no classes), all schools	1/10/2021 Sunday All Campuses
<b>12/24/2020</b>	Thursday	Winter Recess for faculty, staff, & designated offices. Responsibility centers & research projects staffed as necessary*	1/3/2021 Sunday All Campuses
<b>1/4/2021</b>	Monday	All University offices and buildings reopen	1/4/2021 Monday All Campuses
<b>1/9/2021</b>	Saturday	Residence halls open	1/9/2021 Saturday Pittsburgh Campus
<b>1/11/2021</b>	Monday	Spring Term classes begin	1/11/2021 Monday All Campuses

Events calendar powered by 25Live

Printed: Tuesday, April 23, 2019 at 2:15 PM EDT

Calendar events displayed in Eastern Daylight Time/Eastern Standard Time

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# Catalog Home

## Search Programs, Courses & Policies

Whether you are interested in attending the University of Pittsburgh, or are already enrolled, you can search the Catalog to obtain campus information, academic programs, policies, and courses. For any questions, Contact us!

### University of Pittsburgh Nondiscrimination Policy Statement

The University of Pittsburgh, as an educational institution and as an employer, values equality of opportunity, human dignity, and racial/ethnic and cultural diversity. Accordingly, as fully explained in Policy 07-01-03, the University prohibits and will not engage in discrimination or harassment on the basis of race, color, religion, national origin, ancestry, sex, age, marital status, familial status, sexual orientation, gender identity and expression, genetic information, disability, or status as a veteran. The University also prohibits and will not engage in retaliation against any person who makes a claim of discrimination or harassment or who provides information in such an investigation. Further, the University will continue to take affirmative steps to support and advance these values consistent with the University's mission. This policy applies to admissions, employment, access to and treatment in University programs and activities. This is a commitment made by the University and is in accordance with federal, state, and/or local laws and regulations.

For information on University equal opportunity and affirmative action programs, please contact: University of Pittsburgh, Office of Diversity and Inclusion, Cheryl Ruffin, Institutional Equity Manager, 4415 Fifth Avenue, 2nd Floor Webster Hall, Pittsburgh, PA 15260 (412) 648-7860.

For complete details on the University's Nondiscrimination Policy, please refer to Policy 07-01-03. For information on how to file a complaint under this policy, please refer to Procedure 07-01-03.

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### Catalog Help

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# About the University of Pittsburgh at Johnstown

## A Brief History

Pitt-Johnstown was founded in 1927 as a two-year college of the University of Pittsburgh. For almost 20 years it held classes in the Johnstown High School building in the Kernville section of downtown Johnstown. After World War II, the Johnstown College moved to the Moxham section of town where the number of courses and students increased. In the early 1960s, community leaders worked with the University of Pittsburgh to build a new campus in Richland Township, a Johnstown suburb. The new campus opened in 1967 with two classroom buildings, five dormitories, and a student union. Degree-granting status was awarded to Pitt-Johnstown by the University of Pittsburgh in 1970. The campus has grown significantly since that time, with five academic buildings, a library, an expanded student union, a sports and aquatic center, a wellness center, a conference center, a chapel, a performing arts center, and a large cluster of dormitories, lodges, townhouse apartments and other student resident housing. Pitt-Johnstown now offers more than 46 baccalaureate and associate degree programs.

## Academic Calendar Year

Pitt-Johnstown operates on a modified trimester calendar. The standard school year includes a 15-week fall term (September to mid-December) and a 15-week spring term (January to mid-April). Optional summer term offerings from 6-week to 12-week sessions allow students to accelerate their degrees.

## Accreditation

The University of Pittsburgh is accredited by the Middle States Commission on Higher Education, 3624 Market Street, Philadelphia, PA 19104, (267) 284 - 5000. In addition, programs may be accredited by discipline-specific accrediting bodies. The engineering technology programs at Johnstown are accredited by the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org>. Programs in education are reviewed and approved by the Pennsylvania Department of Education. The Respiratory Care program provides classroom and up-to-date clinical education as required by the Commission on Accreditation for Respiratory Care, 1248 Harwood Road, Bedford, TX 76021-4244, 817.283.2835, [www.coarc.com](http://www.coarc.com). The Surgical Technology program is accredited by the Commission on Accreditation of Allied Health Education Programs ([www.caahep.org](http://www.caahep.org)) upon the recommendation of Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC/STSA).

## Degrees Offered

Pitt-Johnstown offers Bachelor of Arts and Bachelor of Science degrees in more than 45 areas.

Additionally, Pitt-Johnstown offers several associate degrees in the allied health area.

## Description of the College

The Johnstown campus is one of the East's most attractive campus settings; the college occupies 655 acres in a suburban, wooded setting. This makes Pitt-Johnstown, physically, the third largest campus in Pennsylvania. It is



located eight miles outside Johnstown, Pennsylvania (metropolitan population of 110,000); 70 miles east of Pittsburgh; and 175 miles north of Washington, D.C.

The college offers more than 50 academic majors, with minors available in many of the major fields, as well as in other areas of arts and sciences. The average class size is 25, and the student to teacher ratio is 17:1. The college is strictly undergraduate, and all courses are taught by college faculty. The 145 full-time faculty members have outstanding credentials and remain active professionally. There are more than 22,000 Pitt-Johnstown alumni living around the globe.

The 38 campus buildings include resident housing, classroom buildings, a performing arts center, sports center, library, student union, wellness center, and outdoor recreation areas. Other features include a 40-acre nature preserve, more than 15 intramural activities, more than 80 student organizations, and NCAA Division II men's and women's sports.

## Facilities and Resources

The campus has seven academic/administrative buildings: Biddle Hall, Krebs Hall, John P. Murtha Engineering and Science Building, Blackington Hall, Nursing and Health Sciences Building, the John P. Murtha Center for Public Service and National Competitiveness and the Living/Learning Center. Each building contains classrooms, laboratories, faculty offices, and/or administrative offices. Additional facilities include a music room, computer labs, auditoriums, smart classrooms, and conference rooms.

The Owen Library holds more than 146,000 monograph volumes and more than 10,000 microforms. As part of the University Library System (ULS), the Owen Library supplies access to more than 5 million monograph volumes, 40,000 electronic full-text journals and over 500,000 electronic books. PITTCat+, the University of Pittsburgh's online library catalog, offers access to materials held in all University libraries, as well as to online journal, newspaper and magazine articles, e-books, digital images, and streaming video and audio files. Most material held within the ULS is available for loan within the Pitt system. The ULS provides access to more than 400 additional general and subject specific databases supporting the research needs of faculty, staff and students. Owen Library offers wireless laptops and iPads for short period multi-day loans. There are computer stations for research needs as well as a computer lab. Wireless Pittnet is available in the library building. There is seating for study at tables and individual units, as well as lighted study carrels.

Campus-wide computing labs for student use are available. Labs primarily contain Windows-based PCs, along with application servers, laser printers, scanners, and advanced graphics devices. The labs can be used to work with software, such as word processing and programming languages, or to access network services, such as online card catalogs, electronic mail, and the Internet. There are more than 200 computers available on campus for student use.

The Student Union, located in the middle of campus, houses the Student Life Office, Health and Wellness Services, Housing Office, Residence Life, RealWorld Career Services, International Services, and the campus store. Also included are a full-service mail room, a 400-person cafeteria, a food court including the Brioche Doree, and a dining/entertainment venue known as the Mountain Cat Club. The union also holds "The Zone," a hi-tech game room, and many organizational offices.

The Living/Learning Center, completed in 1994, is a 400-person residence unit, which includes a full-circuit weight training room, sauna, an aerobics room, and a smaller student cafeteria, The Varsity Cafe. The Living/Learning Center is not only used as a residence but also as a conference center throughout the year. With several meeting rooms, the facility can accommodate groups of 20-300 people.

In addition to the residence units in the Living/Learning Center, the campus offers the choice of single gender and coeducational housing. The campus has six residence halls, seven small-group lodges, 46 townhouse-style apartment units, and an apartment complex.

The Pasquerilla Performing Arts Center (PPAC) is a 42,000-square-foot multipurpose facility; it was completed in 1991. It contains a 1,000-seat concert hall, a 200-seat studio theater, and supporting operational spaces. Performances

include Pitt-Johnstown theater department productions, music department concerts, and national touring troupes. The PPAC is also home to the Johnstown Symphony Orchestra and the Southern Alleghenies Museum of Art at Johnstown. Additionally, the River City Brass Band of Pittsburgh performs a complete season of concerts at the Center each year. The art gallery displays at least eight exhibitions a year as well as work produced by Pitt-Johnstown students.

The J. Irving Whalley Memorial Chapel was constructed in 1991. It is nondenominational and seats 250 people. Weekly Catholic mass and Protestant services are held, as well as personal conferences.

University Square is an outdoor green space that features a gazebo and seating areas in a park-like atmosphere. The facility provides a central meeting place for students and other groups and takes advantage of Pitt-Johnstown's lush, pristine surroundings. In addition to hosting a number of student events, the area also hosts Homecoming activities and is the location for Pitt-Johnstown's annual Light Up Night.

The Sports Center and Zamias Aquatic Center provide recreational facilities for more than 15 intramural sports, as well as intercollegiate activities. The building houses the Athletics Hall of Fame, a 25-meter indoor swimming pool, a workout room with free weights, and locker rooms with showers. Adjacent to the Sports Center is the Pitt-Johnstown Wellness Center, a 40,000-square-foot facility containing cardiovascular and strength training areas, a three-lane, elevated running track, two multi-purpose courts for basketball and volleyball, a 30-ft. climbing wall, and a 1,000-square-foot professional-grade dance studio

## **Special Programs**

Special opportunities include internships, the President's Scholars program, independent and directed studies, a self-designed major, an ESL program, an International Studies Certificate, participation in the RealWorld Action Program, and the Academic Success Center.

## **Statement of Academic Purpose**

The University of Pittsburgh at Johnstown strives for academic integrity by employing skilled and professional faculty to ensure that a valuable and marketable education is adopted by all students.

## **The Pitt-Johnstown Mission**

To offer a high-quality educational experience in a supportive living-learning environment, that is grounded in the liberal arts and sciences, that is current, and that is responsive both to our students' personal and professional needs and to our communities' needs.

## **The Pitt-Johnstown Vision**

Pitt-Johnstown will be the regional leader educating for success in the real world.

## **Campus Life**

## **Academic Success Center**

The Academic Success Center (ASC) supports Pitt-Johnstown's mission to offer a high-quality educational experience by providing comprehensive services designed to strengthen learning, promote success, and enhance retention of students. ASC staff serve as academic advisors to Undeclared students as well as students with majors who wish to explore other options. Academic support is provided through the First-Year Success Program (FYSP) for provisionally admitted students and Great Outcomes in Academic Learning (GOAL) for first-year students on academic probation. Academic counselors are available to work with any student wishing to improve academic performance. Students may seek peer tutoring through the ASC, choosing among individual, small group, and drop-in formats as well as Supplemental Instruction sessions. Pitt-Johnstown students can gain valuable paraprofessional experience by serving as tutors, Mentors for Academic & Personal Success (MAPS), and/or as student workers. Learn more about the ASC by visiting G-16 Owen Library or contacting us at (814) 269-7998 or at <https://www.upj.pitt.edu/en/academics/academic-success-center/> or [upjasc@pitt.edu](mailto:upjasc@pitt.edu).

## **Athletics**

Pitt-Johnstown varsity teams compete in NCAA Division II athletics and are members of the Pennsylvania State Athletic Conference (PSAC). Pitt-Johnstown's student-athletes' performances have garnered individual and team honors at the conference, regional and national levels. The 15 varsity sports offer student-athletes an opportunity to compete and represent Pitt-Johnstown, while learning valuable lessons that can be applied off the court, field, mat or track. Men compete at the NCAA level in baseball, basketball, cross country, golf, indoor and outdoor track and field, and wrestling, while women compete in basketball, cross country, soccer, softball, indoor and outdoor track and field, and volleyball.

In addition, Pitt-Johnstown offers an excellent intramural program that includes basketball, flag football, volleyball, soccer, and many other activities for students throughout the academic year.

## **Bookstore**

The Pitt-Johnstown Book Center, located in the Student Union Building, is managed by eFollett.com. Its purpose is to provide students and the campus community with the largest possible selection of high quality goods and services at equitable prices with particular attention paid to academic requirements.

The Book Center sells required textbooks (new, used, rental, and pricematch with approved online competitors); reference materials and student aids; school supplies; technology products and engineering supplies. Other merchandise available includes University of Pittsburgh and Pitt-Johnstown clothing, spirit and gift items and glassware. Additional Book Center services include: on-line purchases, textbook reservation, book buy-back, special order for books and apparel, group orders, graduation regalia, and class rings.

The Book Center also stocks a wide selection of products including snack foods, beverages, and health and beauty aids.

## **Campus Ministry**

Campus ministry strives to meet the spiritual needs of students by providing an exciting and comfortable atmosphere in which to worship, serve, and share fellowship with other believers. Both Protestant and Catholic ministries desire to challenge and encourage students to realize their God-given potential in order to effectively and positively impact the world around them. Most services are held weekly in the Whalley Memorial Chapel, in addition to other venues on campus.

## **Campus Police**

The Campus Police Department provides on-campus protection and service to students, faculty, staff, and visitors of the University. Officers are on duty 24 hours a day, 365 days a year. Campus police officers are certified by the Pennsylvania State Police and receive annual training as mandated under the Municipal Police Officers' Education and Training Commission. The department also provides a variety of programs such as crime prevention awareness, alcohol and drug awareness training and programming, fire safety training, and operation ID (students inscribe identifying numbers on valuables such as televisions, stereos, computers, etc.). Campus police officers enforce the Pennsylvania Crimes Code and the Pennsylvania Motor Vehicle Codes as it relates to parking on campus, including campus vehicle registration. Additional miscellaneous services of the department include motorist assistance and police escort services. As required by federal law (Clery Act), the University of Pittsburgh at Johnstown publishes an annual safety brochure. This brochure provides information regarding safety and security policies, procedures, and programs, as well as campus crime statistics for the past three years. To view the most recent information on campus safety and crime reports, visit <http://www.upj.pitt.edu/globalassets/security-fire-safety-report.pdf>. To receive a copy by mail write to: Campus Police Department, University of Pittsburgh at Johnstown, 450 Schoolhouse Road, Johnstown, PA 15904.

## Career Services

The Pitt-Johnstown Office of Real World Career Services assists students in identifying career goals, formulating career plans, and implementing their plans upon graduation. Our services begin when students first arrive on campus for orientation and continue throughout their time on campus. This service is also available to our Pitt-Johnstown alumni as they continue pursuing their professional careers.

Our services include career counseling (including the Myers-Briggs Type Indicator Assessment & the Strong Interest Inventory), résumé development/review, personal branding, professional correspondence development/review (cover letters, thank you notes), mock interviewing, informational interviewing, job shadowing opportunities, networking opportunities, internship research, job search strategies, and social media etiquette.

PJ Links is an online job and internship database offered only to the Pitt-Johnstown student. Pitt-Johnstown students have access to Handshake, the online job and internship database maintained by Pitt-Oakland. Pitt-Johnstown students have access to all Pitt-Oakland Career Fairs and other regional fairs.

The Office of Real World Career Services partners with faculty and student organizations to target their particular needs. We also partner with the community and economic development organizations in the region for the benefit of our students.

## Information Technology Facilities

The Information Technology unit manages seven computer labs for student use. All labs are equipped with windows-based PCs or MAC's and provide full Internet and e-mail access; a comprehensive suite of software for course work, research, and project development; access to library resources; and printing capability. Additionally, several academic divisions maintain private labs for specialized departmental use.

The University-wide network also enables access to many computing resources including the University mainframe computers, and all Web-based campus resources.

A multimedia center, located in the Technology Support Center (228 Blackington Hall) provides access to scanning, digitizing, and high-quality color printing.

The university's wireless network is free to the campus community and is available in academic buildings, the Owen Library, and the Student Union. Wireless network is also available in all residence halls along with direct-connect high-speed Internet access for each student.

All classrooms are technology-enabled with PC, internet access, document camera and multimedia devices and projectors. Network access is available in every classroom. Laptop computers and video projectors are available for loan to both students and faculty for academic-related projects.

Information Technology provides local oversight to the university's program that provides free productivity software to students. The University also works with major hardware vendors to provide discounted computer prices for students. A variety of computer-related and software supplies are available in the campus Bookstore.

## **Computing Use Policy**

Every member of the University community has two basic rights regarding computing: privacy and a fair share of resources. It is unethical for another person to violate these rights. All users, in turn, are expected to exercise common sense and decency with regard to the campus computing resources. Students are subject to the rules and regulations as described in the University of Pittsburgh Student Code of Conduct. Students should realize that any misuse of computing resources may result in the suspension of their computing privileges.

## **Cultural Activities**

The Pasquerilla Performing Arts Center is a focal point of cultural and community activities. The area's most professional and diverse theatre, this state-of-the-art facility presents numerous live, professional, world-class artists and entertainment through a variety of performances that include Broadway, theatre, music, comedy, dance, family entertainment, and shows for children. The Arts Center hosts the Johnstown Symphony Orchestra, River City Brass Band, and Johnstown Concert Ballet. It also serves as an artistic, educational, social, and economic resource for the Greater Johnstown Region.

The Pitt-Johnstown Theatre department makes its home at the Pasquerilla Performing Arts Center, presenting two to three productions each year. Pitt-Johnstown's Dance Ensemble, the largest student organization on campus, also calls the Arts Center home. The Arts Center is also home to the Southern Alleghenies Museum of Art (SAMA). SAMA is nationally accredited and offers more than five exhibitions annually.

## **Drug-Free School and Workplace Policy**

The University of Pittsburgh prohibits the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance on University property or as part of any University activity. Faculty, staff, and students of the University must also comply with the laws of the Commonwealth of Pennsylvania on the possession and consumption of alcohol.

Violation of this policy will result in disciplinary action within 30 days, including, but not limited to, a warning, written reprimand, suspension, dismissal, expulsion, and/or mandatory participation and successful completion of a drug abuse assistance or rehabilitation program approved by an appropriate health or law-enforcement agency.

Any University employee paid from federally funded grants or contracts, or any students participating in any federally funded or guaranteed Student Loan Program, must notify the University of any criminal drug statute conviction for a violation occurring at the University or while engaged in University activities. For more information, see <https://www.cfo.pitt.edu/policies/procedure/06/06-02-01.html>.

## **Harassment Policy**



No University employee, student, or individual on University property may intentionally harass or abuse a person (physically or verbally) with the purpose or effect of unreasonably interfering with such person's work or academic performance, or of creating an intimidating, hostile, or offensive work or academic environment.

## **Office of Health and Counseling/Disability Services**

At Pitt-Johnstown we offer services for students with diagnosed disabilities. The purpose of these services is to enhance our students' educational experience and to assure that the University does not discriminate against any student with a disability. For more information on the services provided visit the Office of Health and Counseling /Disability Services in G-10 Student Union or call 814-269-7119.

## **Office of Health and Counseling/Health Services**

On campus, health care is available to all University of Pittsburgh Johnstown's enrolled, full-time students. A health fee is paid by full-time students each term. The health center staff provides treatment for minor ailments and general health problems.

The Office of Health and Counseling Services is not equipped to handle severe accidents or illnesses. Students who present with medical needs beyond the Center's scope of practice will be directed off campus for services. The University of Pittsburgh Johnstown is not accountable for student expenses incurred for off campus medical treatment, hospitalization, or prescription drugs.

All incoming freshmen must provide a completed health record and documentation of required immunizations, including the month, day, and year the immunizations were administered, to the University's Student Health Service.

Failure to Comply: Incoming full-time freshmen who, after receipt of notification by the University that their immunization records are incomplete, fail to provide proof of immunization or written request for exemption as described above will be prohibited from registering for any classes beyond the term following initial enrollment.

## **Office of Health and Counseling/Counseling Service**

Counseling services are provided to assist Pitt-Johnstown students with their emotional, mental health, and/or social concerns. The center can assist with many issues including homesickness, relationship problems, anxiety, stress, depression, sexual assault, grieving, low self-esteem, and eating disorders. The mission of the Counseling Center is to support students on their academic journey as a means to foster a positive collegiate experience. All services are free and confidential. Off-campus referrals for services are made as necessary. All student records and consultations are confidential and do not become part of the student's academic record.

Students may schedule an appointment by visiting the Office of Health and Counseling Services located in G-10 of the Student Union Building or by calling the office at 814-269-7119. Emergency services: are available during the hours of 8:30 am to 5:00 p.m. at 814-269-7119; after hours please contact Campus Police at 814-269-7222; or Cambria County Crisis Intervention, 1-877-268-9463. Crisis workers are available 24 hours each day to answer questions and provide crisis intervention services.

## **ID Cards**

A Pitt-Johnstown identification card (known as the Mountain Cat Card) is issued to all registered students, faculty and staff through the ID Center, located in room 152 of the Student Union Building. The Mountain Cat Card is used to access meal plan and "Mountain Cat Cash" accounts for making purchases in the cafeteria and other eating venues on

campus. The "Mountain Cat Cash" account can also be used for purchases at the Pitt-Johnstown Bookstore. Residence facilities and the Health and Wellness Center require use of the Mountain Cat Card to gain access. Students also use the card for student identification in the library, at sporting events, and to receive student discounts for campus events and from local retailers. Cardholders can furthermore use their Mountain Cat Card to release print jobs at several Mt. Cat Mobile Print stations on campus. Individuals requesting additional information regarding the Mountain Cat Card should call 814-269-2049.

## Immunization Policy

All new full-time students will receive an email notification from the Office of Health and Counseling with directions on how to complete the mandatory University health requirements. All new full-time students must complete an on-line Student Health Record and provide verification of having received:

Two Measles-Mumps-Rubella (MMR) vaccines

Two Varicella vaccines (Chicken Pox)

Documentation must include the month, day and year when each immunization was administered and the name of the administering physician/agency. It is also highly recommended, but not required, that students receive Meningococcal immunization. More immunization information is included in the on-line form. Students with medical conditions and/or religious/moral/ethical beliefs that preclude such vaccinations may be granted an exemption based on a written statement from a physician that the student never received immunizations.

If this information is not received, an immunization hold will be placed on the student's University account that will prevent them from registering for the following term's classes.

## Information Technology

Pitt-Johnstown Information Technology is responsible for the implementation and support of applied computer systems and technology services on campus and includes the following units:

- **Information Systems** supports the hardware, software and data components of campus administrative systems.
- **Mail Room** provides post office services for students, faculty, and staff.
- **Printing Services** produces a variety of printed material for campus (academic documents, mailing pieces, brochures, programs, etc.).
- **Technical Services** supports the campus wired and wireless networks, telecommunications, and campus computer hardware and electronics.
- **User Services** supports campus desktop devices, the computer labs, the residential network (ResNet), and the Pitt-Johnstown Support desk.

## "Mountain Cat Cash" Account

Students have the option of creating a personal "Mountain Cat Cash" account by depositing funds on their student ID card through the Pitt-Johnstown Business Office. Mountain Cat Cash is a convenient way to make purchases on campus without the need to carry cash, checks, or credit/debit cards. Funds are added to the student's ID card and can be used at the dining facilities on campus and the Pitt-Johnstown Bookstore. Please visit <http://upj.pitt.edu/mtncatcash> for more information.

# Sexual Harassment Policy

The University of Pittsburgh is committed to the maintenance of a community free from all forms of sexual harassment. Sexual harassment violates University policy as well as state, federal, and local laws. It is neither permitted nor condoned.

It is also a violation of the University of Pittsburgh's policy against sexual harassment for any employee or student at the University of Pittsburgh to attempt in any way to retaliate against a person who makes a claim of sexual harassment. Any individual who, after thorough investigation and an informal or formal hearing, is found to have violated the University's policy against sexual harassment will be subject to disciplinary action, including, but not limited to, reprimand, suspension, termination, or expulsion.

Any disciplinary action taken will depend upon the severity of the offense. For more information, see <http://www.cfo.pitt.edu/policies/documents/policy06-05-01web.pdf>.

# Smoking Policy

Smoking is prohibited in all University-owned and -leased facilities, including residence halls and offcampus housing facilities, and in all University vehicles, including motor pool vehicles, campus buses, and vans, with explicit limited exceptions described in University Policy 04-05-03. For complete policy text, see <http://www.cfo.pitt.edu/policies/policy/04/04-05-03.html>.

# Student Clubs and Organizations

There are more than 100 clubs and organizations at the University of Pittsburgh at Johnstown that students may participate in according to their interests and career objectives. Students are encouraged to explore their leadership potential by joining one of a range of groups including honor societies, religious organizations, fraternities, sororities, musical and theater opportunities, academic and professional clubs, publications and media outlets, governance and professional organizations, special interest groups, and recreational clubs. For more information about a particular club or organization, contact the Campus Activities & Engagement, G61 Student Union Building, Johnstown, PA 15904.

# Campus Involvement and Student Leadership

The Campus Activities and Engagement Office (Student Union G-61) strives to create an engaged student community by creating diverse co-curricular involvement opportunities on a seven day campus. Campus Activities and Engagement provides support to over 100 registered student organizations (RSOs) and is key in collaborating and coordinating traditional and major events such as Homecoming (student portion), Student Activities Fairs, Civic Engagement week, New Student Orientation and much more.

The department also prides itself as responsible for the coordination of the new student orientation program, assists with commuter student affairs, and works primarily with Athletics to deliver the school spirit initiative. Campus Activities and Engagement strives to create a vibrant seven-day campus with opportunities for educational and entertainment events throughout the week and over the weekend both on and off campus. Campus Activities and Engagement serves as the primary advisors to the Student Government, The Greek Council, Pitt-Johnstown @ Your Service, and the Pitt-Johnstown Program Board.

Housed in the Student Union, all related offices in Student Affairs and groups operate in this building, which also hosts *The Zone*, Pitt Johnstown's student staffed game room, meeting space, the Mountain Cat Club, the Commuter Lounge,

the Tuck, Brioche Café, the Cafeteria, the UPJ branch of Somerset Bank, and the Student Leadership Suite (Student Union G-61).

Student Government Association (SGA) serves as the governing body of the students, and is made up of the elected leadership and representatives from each class. The Student Government Association is the voice of the student body which addresses issues impacting the quality of the student experience directly with administration. Student organizations receive funding from the Student Government. Leadership opportunities as a class senator or as a non-senator on SGA committees are available to all traditional undergraduate students.

Pitt-Johnstown Program Board or "PB" provides a diverse palette of events for students. The events are coordinated by students for students and offer support to the academic experience as well as social, spiritual, recreational and collaborative events. UPJPB is a major player in the implementation of traditional campus events and offers a routine schedule of live comedians, music events, novelty items, arts & crafts, film, and activities in the area at a free or reduced rate.

Over 100 organizations comprise major categories of organizations: Academic /Honorary/ Professional, Cultural/Community/Faith Based, Media/ Entertainment/Performing Arts, Service/Advocacy, Special Interest, Student Government/ Sports & Recreation and Fraternity/Sorority Life. Campus Activities and Engagement works with students who may want to create new clubs and connects them to the Student Government Association for approval. Student organizations also work with their advisors and the Pitt-Johnstown@Your Service initiative to provide support and resources to the greater Johnstown area through community service.

For more information about leadership development, connecting with clubs and organizations, joining a fraternity or sorority, planning a campus wide event, or participating in community service, please contact the Campus Activities and Engagement Office at 814.269.7065.

## Campus Housing

### Types of Facilities

The University of Pittsburgh at Johnstown offers a variety of housing styles, including traditional residence halls, apartments, suites, and townhouses. All rooms and apartments are fully furnished. Additionally, all rooms and apartments are wired for Internet, telephone, and cable television services at no additional cost. Wireless internet is available in all residential facilities. The apartments and townhouses are equipped with kitchen appliances (except a microwave). All other rooms are equipped with a microwave and mini-fridge.

#### Residence Halls

- Hemlock Hall
- Hickory Hall
- Laurel Hall
- Maple Hall
- Oak Hall

The residence halls house first-year students in suites; two bedrooms share a bathroom. (There are no community bathrooms at Pitt-Johnstown.)

Each residence hall accommodates from 100-170 first-year students and features a distinctive lobby reminiscent of a ski lodge with a fireplace. A lounge, recreation room, study room, and laundry room is also available in each residence hall.

#### Willow Hall

Willow Hall is the newest residential facility and accommodates upper-division students. Willow Hall features apartment-style suites designed to accommodate 4-5 students in a mixture of single and double rooms. Each suite features a living room, kitchenette, and two bathrooms. Willow Hall is air conditioned. Two conference rooms are available for student meetings or for use as study areas. Due to the lack of a full kitchen setup in each suite, students are required to have a meal plan.

#### North and South Lodges

- Briar Lodge
- Buckhorn Lodge
- Foxfire Lodge
- Hawthorn Lodge
- Heather Lodge
- Larkspur Lodge
- Sunset Lodge

Each lodge is subdivided into discrete units, housing from as few as 8 to as many as 24 students. Each unit is a mini-community unto itself. Units feature suite-style living with at least one furnished common/lobby area for residents to share. Student Organizations have the option of living in a unit and using that as an "organization house." Individual students may also live in a lodge without a group affiliation.

#### Townhouse Apartments

- Cascade Manor
- Highland Manor
- Summit Manor
- Timberline Manor
- Wilderness Manor
- Woodland Manor

The townhouses are most appealing to upper-division students because of the degree of independence offered by this living option. The townhouses feature a living room, kitchen, and powder room downstairs and two bedrooms and a full bath upstairs. Because the townhouses are equipped with a full kitchen (excluding a microwave), students are not required to have a meal plan. Townhouses accommodate 4-5 students.

#### College Park Apartments

The garden-style apartments of College Park are typically sought by students looking for a unique environment close to, but not surrounded by, the campus. The College Park Apartments vary in size (studio, one bedroom, and two bedroom) and in the number of occupants they house (one, two, three, or four). Students housed in College Park Apartments are not required to have a meal plan.

#### The Living/Learning Center (LLC)

The Living/Learning Center is a state-of-the-art residence facility featuring a 400-bed residence facility and an adjoining classroom building. All rooms of this beautiful upper-division residence are air-conditioned and have private bathrooms. The facility houses 2 recreation rooms and an exercise room. The LLC also houses the Varsity Café-a full-service dining facility.

#### Office of Housing

The Office of Student Housing manages housing contracts and assignments. The office works with new incoming students to assign rooms based on the process described below, and runs spring recontracting for our returning students to select their own assignment for the following year. The office works closely with the Physical Plant staff to provide maintenance and repairs to the facilities as needed, and is the coordination point for building emergency services.



## Department of Residence Life

In addition, Residence Life supports all aspects of campus living—from programming to student conduct. The office employs professional, graduate, and student staff members. Student staff members are resident assistants and residence directors. These highly trained and carefully selected student staff members live and work within the residence facilities, as do our professional and graduate area coordinators.

### Roommate Selection

New students are asked to complete a brief survey as part of the housing application process that evaluates their study habits, interests, and personal living preferences. Using the information from this survey, students are then matched with peers who indicated similar lifestyles. Students may also mutually request to be assigned together in a room.

Upper-division residents may choose their own roommates and may request specific housing assignments provided they follow the housing recontracting procedures publicized each spring term. Upper-division students who do not select roommates will complete a roommate survey as part of the recontracting process. Using the information from this survey, students are then matched with peers who indicated similar lifestyles.

## Auxiliary Services for Students

### Food Service

#### Food Service

Pitt-Johnstown offers three traditional meal plans, all of which offer a combination of meals and dining dollars. Students who commute and those who reside in the campus townhouse or College Park Apartments may select from any of the traditional meal plans or the Declining Balance plan. Dining Dollars can be used as cash in any of the campus' six unique dining facilities: the Student Union Cafeteria, the Varsity Café (in the Living/Learning Center), the Tuck Shop (a small fast food outlet), the Daily Grind, and Brioche Dorée.

Pitt-Johnstown Food Services can accommodate most special dietary needs. Students are encouraged to participate in the Mindful dining program which encourages making healthy food choices. Nutritional information and menus are posted for each dining hall. To-go meals are available to all students and are particularly convenient for those students who will be off campus during regular meal times (e.g., student teachers, athletes, etc.).

### Laundry Service

Laundry Service at Pitt-Johnstown is operated by CSC ServiceWorks. CSC Service Works has installed laundry machines in the twelve separate laundry rooms throughout campus and is responsible for the maintenance and upkeep of this equipment. These machines can be utilized by resident students free of charge.

Students can download the CSC ServiceWorks app for reporting machine problems, and additional resources. Our residents also have access to LaundryView, an e-monitoring system for campus laundry facilities. The system allows you to see laundry rooms in real time to check the status of washers and dryers from a computer or smartphone. It also offers weekly usage reports to help residents avoid the busiest times in the laundry room.

### Mail Service

The full-service mailroom is next to the Bookstore in the Student Union. All students, including commuters and residents, are assigned a key-accessible mailbox next to the mailroom for their entire enrollment at Pitt-Johnstown.

## Area Map and Directions

Download a map of the University of Pittsburgh at Johnstown campus.

**From Eastern, Southern or Western Points:** Take Pennsylvania Turnpike (Rt. 76) to Somerset (Exit 10). From Somerset, take Route 219 North to the Elton Exit. Make a right at stop sign, then another right onto Theatre Drive. Continue straight and follow signs to campus.

**Alternate route from Eastern or Southern Points:** Take Pennsylvania Turnpike to Bedford (Exit 11). At the exit, turn left onto Business Route 220, then left again onto Route 220 North (towards Altoona). Exit onto Route 56 West. Follow Route 56 for approximately 30 miles until you reach a traffic light near the community of Windber. Continue on Route 56 for about 3 miles until you come to the second traffic light. Make a right onto Theatre Drive at light. Follow signs to campus.

**Directly From Northern Points:** Take Route 219 South to the "Elton" Exit. Note: DO NOT take the "Johnstown" Exit. At the traffic light at the bottom of the exit ramp, turn left onto Route 756. Make a right onto Theatre Drive at next light. Continue straight and follow signs to campus.

Pitt-Johnstown is located in the suburb of Richland Township, approximately 8 miles east of the city of Johnstown. As for travel, the Johnstown area can be directly reached by auto but is also served through the John P. Murtha Johnstown-Cambria County airport, Amtrak, and Greyhound Bus Lines.

Richland Township is a well-developed commercial and residential suburb. Richland has a wide range of shopping malls, restaurants, banks, hotels, and variety stores. In addition, medical clinics, doctors' and dentists' offices, and other health services are easily accessible from campus.

# **Administrative Officers, Schools, and Campuses**

## **Administrative Officers of the University of Pittsburgh at Johnstown**

Jem Spectar, *President*

Amy Buxbaum, *Vice President for Finance and Administration*

Janet L. Grady, *Vice President for Academic Affairs*

Therese Grimes, *Executive Director for Enrollment Services*

Christian Stumpf, *Vice President for Student Affairs*

Tammy Barbin, *Executive Director of Development and Community Relations*

### **Division Chairs**

Janet L. Grady, Chair, *Division of Nursing and Health Sciences*

Steven Stern, Chair, *Division of Natural Sciences*

Raymond B. Wrabley, Interim Chair, *Division of Business and Enterprise*

Jerry Samples, Director, *Division of Engineering and Computer Science*

Gerald Zahorchak, *Division of Education*

Raymond B. Wrabley, Chair, *Division of Social Sciences*

Michael Stoneham, Chair, *Division of Humanities*

### **Directors**

Dolores Berkey, *Executive Director, Budget and Purchasing Services*

Michael Bodolosky, *Executive Director, Pasquerilla Performing Arts Center*

Kathleen Clawson, *Director, Conference Center*

Bruce Colbert, *Director, Allied Health*

Frank Dupnock, *Manager, Mailroom*

Robert Eckenrod, *Director, User Services*

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Center for Research in Chronic Disorders  
*Also see Jointly-Administered Centers.*

## **Centers, Institutes, Laboratories, and Clinics: Other Academic Units and the Regional Campuses**

### **Office of the Provost**

Center for Instructional Development and Distance Education  
Center for Philosophy of Science

### **Student Affairs**

Student Health Service  
University Counseling Center

### **University Center for International Studies**

African Studies Program  
Asian Studies Center

Center for Latin American Studies  
Center for Performing Arts of India  
Center for Russian and East European Studies  
Center for West European Studies  
European Union Center of Excellence  
Pennsylvania Ethnic Heritage Studies Center

## **University Library System**

Center for American Music

## **Johnstown Campus**

John P. and Joyce Murtha Center for Continuing Education and Professional Development

## **Greensburg Campus**

The Smart Growth Partnership of Westmoreland County  
The Westmoreland Heritage

## **Titusville Campus**

George J. Barco Center for Continuing Education

## **Bradford Campus**

Allegheny Institute of Natural History  
Business Resource Center  
Center for Rural Health Practice

## **Centers, Institutes, Laboratories, and Clinics: Jointly-Administered Centers**

### **Graduate School of Public and International Affairs/Joseph M. Katz Graduate School of Business**

Center for Conflict Resolution and Negotiation

### **Graduate School of Public and International Affairs/University Center for International Studies**

Global Studies Program

Matthew B. Ridgway Center for International Security Studies, which includes the Ford Institute for Human Security

## **Health Sciences <sup>2</sup>**

Center for Clinical Pharmacology

Center for Continuing Education in the Health Sciences

Center for Environmental Oncology

Center for Injury Research and Control

Division of Laboratory Animal Resources

Facial Nerve Center

Genomics and Proteomics Core Laboratories

Head and Neck Cancer Specialized Program of Research Excellence

Institute for Clinical Research Education

Lung Cancer Specialized Program of Research Excellence

Musculoskeletal Institute

Oral Cancer Center

Pittsburgh AIDS Center for Treatment

Transgenic and Gene Targeting Facility

## **Health Sciences <sup>2</sup>/Bioengineering**

Human Movement and Balance Laboratories

Medical Virtual Reality Center

Musculoskeletal Research Center

Pittsburgh Claude D. Pepper Older Americans Independence Center

## **Health Science/Children's Hospital of Pittsburgh/Magee Womans Hospital and Research Institute**

Pittsburgh Cytogenetics Laboratory

Diabilities Resource Center

## **Health Sciences/UPMC Health System**

Center for Assistive Technology

Center for Biosecurity

Center for Environmental Oncology

Center for Sports Medicine

Center for Vaccine Research

Clinical and Translational Science Institute

Neuromuscular Research Laboratory

Peter M. Winter Institute of Simulation Education and Research (WISER)

Swallowing Disorders Center

## **Joseph M. Katz Graduate School of Business/University Center for International Studies**

International Business Center

## **Dietrich School of Arts and Sciences/Swanson School of Engineering**

Center for Molecular and Materials Simulations  
Institute of NanoScience and Engineering

## **School of Arts and Science/Health Sciences**

Drug Discovery Institute

## **Dietrich School of Arts and Sciences/Health Sciences <sup>2</sup>/School of Law**

Center for Bioethics and Health Law

## **Dietrich School of Arts and Sciences/ School of Medicine**

Center for Neuroanatomy with Neurotropic Viruses  
Center for Neuroscience  
Conte Center for the Neuroscience of Mental Disorders  
Pittsburgh Institute for Neurodegenerative Diseases  
University Community Leaders and Individuals with Disabilities Center

## **School of Health and Rehabilitation Sciences/Swanson School of Engineering/VA Pittsburgh Health Care System/UPMC Health System**

Human Engineering Research Laboratories  
University of Pittsburgh Model Center on Spinal Card Injury

## **School of Information Sciences/Graduate School of Public Health/School of Medicine**

Center for National Preparedness

## **School of Law/University Center for International Studies**

Center for International Legal Education

## **School of Medicine/Children's Hospital of Pittsburgh**

Benedum Pediatric Trauma Program  
Pediatric Center for Neuroscience  
Pediatric Neurotrauma Center

## **School of Medicine/Children's Hospital of Pittsburgh/Magee-Womens Hospital and Research Institute**

Fetal Diagnosis and Treatment Center  
Pittsburgh Diabetes Institute

## **School of Medicine/Magee-Womens Hospital and Research Institute**

Pregnancy and Diabetes Center  
Center for Family Planning Research  
Center for Fertility and Reproductive Endocrinology  
Center for Research in Continence and Pelvic Floor Disorders  
Ovarian Cancer Center of Excellence  
Pittsburgh Development Center

## **School of Medicine/UPMC Health System**

Affect Regulation and Adolescent Brain Center  
Audiology Center  
Benedum Geriatric Center  
Brachial Plexus and Peripheral Nerve Injury Center and Clinic  
Brain and Spine Injury Center  
Charles T. Campbell Ophthalmic Microbiology Laboratory  
Cardiovascular Institute  
Center for Clinical Neurophysiology  
Center for Diabetes and Endocrinology  
Center for Emergency Medicine of Western Pennsylvania  
Center for Balance Disorder  
Center for Hemochromatosis and Iron Overload Disorders  
Center for Image-Guided Neurosurgery  
Center for Integrative Medicine  
Center for Intestinal Health And Nutrition Support  
Center for Liver Diseases  
Center for Overcoming Problem Eating  
Center for Pathology Informatics  
Center for Women's Digestive Health  
Comprehensive Epilepsy Center  
Comprehensive Lung Center  
Comprehensive Pain Center  
Cosmetic Surgery and Skin Health Center  
Cutaneous Oncology Center

Digestive Disorders Clinic  
Emphysema Resource Center  
Eye Center  
Gastrointestinal Cancer Prevention and Treatment Center  
Hillman Cancer Center  
Inflammatory Bowel Disease Center  
Institute of Aging  
Institute for Doctor-Patient Communication  
Institute to Enhance Palliative Care  
Institute for Rehabilitation and Research  
Raymond E. Jordan Center for Balance Disorders  
LHAS Women's Heart Center  
Late-Life Depression Evaluation and Treatment Center  
Magnetic Resonance Research Center  
McGowan Institute for Regenerative Medicine  
Mental Health Intervention Research Center for Mood and Anxiety Disorders  
Neurogastroenterology and Motility Center  
Osteoporosis Prevention and Treatment Center  
Spasticity Evaluation and Treatment Center  
Pancreas and Biliary Center  
Minimally Invasive Endoneurosurgery Center  
Position Emissions Tomography Center  
Safar Center for Resuscitation Research  
Simmons Center for Interstitial Lung Diseases  
Center for Sleep Medicine  
Sinus and Allergy Center  
STAR Center (Services for Teens at Risk)  
Stroke Institute  
Thomas E. Starzl Transplantation Institute  
University of Pittsburgh Headache Center  
Voice Center  
Weight Management Center  
Paul Wellstone Muscular Dystrophy Cooperative Research Center  
Western Psychiatric Institute and Clinic  
Late-Life Mood Disorder Evaluation and Treatment Center

## **School of Medicine/VA Pittsburgh Health Care System**

Geriatric Research Education and Clinical Center  
Center for Health Equity and Research Promotion

## **University of Pittsburgh/Carnegie Mellon University**

Brain Imaging Research Center  
Center for the Neural Basis of Cognition  
Real-time Outbreak and Disease Surveillance Laboratory  
Pittsburgh Center for Social History  
Pittsburgh Mind/Body Center  
Pittsburgh NMR Center for Biomedical Research

## **University of Pittsburgh/Carnegie Mellon University/Duquesne University/UPMC Health System/Windber Research Institute**

Pittsburgh Tissue Engineering Initiative

## **University of Pittsburgh/Carnegie Mellon University/Sandia National Laboratories**

Pittsburgh Molecular Libraries Screening Center

## **University of Pittsburgh/Carnegie Mellon University/Westinghouse Electric Corporation**

Pittsburgh Supercomputing Center

## **University-wide**

Institute of Politics

<sup>1</sup> Centers and institutes in the category "University Centers and Institutes" are distinguished by organizational permanence, programmatic autonomy, and an annual operating budget fiscally independent of any other academic, research, and or service unit.

<sup>2</sup> Centers and institutes listed are jointly-administered by two or more schools of the Health Sciences, which includes: the Graduate School of Public Health, School of Dental Medicine, School of Health and Rehabilitation Sciences, School of Nursing, School of Pharmacy, and School of Medicine.

*Note: The centers, institutes, laboratories, and clinics listed are University of Pittsburgh or University affiliated organizations. They are either single or multidisciplinary in scope, and are generally involved in some combination of education, research or service activities. Each center, institute, laboratory, and clinic is listed under the name of the unit with which it is associated.*



# Admissions

Admission to the University of Pittsburgh at Johnstown is competitive. Pitt-Johnstown seeks applicants of good character who have demonstrated scholastic achievement and the capacity for further growth. The Pitt-Johnstown Admissions Committee carefully reviews each applicant's secondary school record, performance on college entrance examinations, personal qualifications, and other related factors.

In making admission decisions, the Admissions Committee recognizes that the college is best served by a diverse student body. The committee considers, in addition to statistical measures of academic accomplishment, evidence of leadership ability, motivation, extracurricular interests, and talents, as well as the overall potential for success at Pitt-Johnstown. Applications are reviewed on a personal basis in committee format, and all candidates for admission are notified as soon as action is taken on their applications.

## Admission Procedures

High school graduates and transfer students applying for admission to full-time or part-time study must file an application provided by the Office of Admissions. Official copies of all appropriate transcripts should be supplied. The application and credentials submitted in its support become the property of the college and are not returned to the student. All correspondence concerning full-time or part-time admission, including the application and supporting credentials, should be addressed to:

University of Pittsburgh at Johnstown  
Admissions Welcome Center  
157 Blackington Hall  
450 Schoolhouse Road  
Johnstown, PA 15904

Admitted students who wish to accept the offer of admission must submit a nonrefundable \$100 tuition deposit. This will be applied to the first-term tuition.

Once admitted, students are eligible to continue as long as they maintain satisfactory academic standing or until a degree has been earned. Admitted students may request that their admission be deferred until a later term, provided they do not attend another educational institution in the interim. Students may only defer admission up to one year. After that point, they must submit a new application.

## Admission Requirements

All applicants for full-time study at the University of Pittsburgh at Johnstown must have completed, or be in the process of completing, at least 15 units of work in an accredited or approved secondary school. Specific requirements as to how the 15 units must be distributed have been established in the following sections for applicants seeking admission to programs in arts and sciences, upper-division programs, nursing, and engineering. Admission to one program of study at Pitt-Johnstown does not guarantee admission to other programs. To be reconsidered for admission to another program, a student must submit a request in writing to the Admissions Welcome Center.

## Admission to Programs in Arts and Sciences

For admission to programs in Arts and Sciences, applicants must submit the following:

- Scores from either the American College Test (ACT) or the Scholastic Aptitude Test (SAT) of the College Entrance Examination Board
- An official academic record of all work completed at the secondary level

The student's secondary school record is an important criterion for admission into programs in arts and sciences.

Typically, applicants to arts and sciences are expected to have successfully completed, or show current enrollment in, a college preparatory curriculum that includes:

<b>Subject</b>	<b>Units</b>
English	4
Laboratory Science	1 (preferably 2)
Algebra	2

(additional course work in geometry is preferred)

Foreign Language	2 (same language)
Academic Electives	5
Social Sciences	1

Exceptions to these requirements may be determined on an individual basis by the Admissions Committee.

## **Admission to Programs in the Division of Engineering and Computer Science**

For admission to programs in the Division of Engineering and Computer Science, applicants must submit the following:

- scores from either the American College Test (ACT) or the Scholastic Aptitude Test (SAT) of the College Entrance Examination Board
- an official academic record of all work completed at the secondary level

The student's secondary school record is an important criterion for admission into programs in the Division of Engineering. Applicants to the Division of Engineering are expected to have successfully completed, or show current enrollment in, a college preparatory curriculum that includes:

<b>Subject</b>	<b>Units</b>
English	4
Chemistry	1
Algebra	2
Physics	1
Geometry	1

Trigonometry/Pre-Calculus/Calculus 1

History 4

Note: In addition to these academic requirements, along with a competitive QPA, admission into Engineering requires a minimum standardized test score of 1100 SAT (combined Reading & Math, at least a 550 score in Math) or ACT composite score of 22.

Exceptions to these requirements may be determined on an individual basis by the Admissions Committee.

## Admission to the Bachelor of Science in Nursing

For admission to the Bachelor of Science in Nursing Program, applicants must submit the following:

- scores from either the American College Test (ACT) or the Scholastic Aptitude Test (SAT) of the College Entrance Examination Board
- an official academic record of all work completed at the secondary level

The student's secondary school record is an important criterion for admission into the Bachelor of Science in Nursing program. Applicants are expected to have successfully completed, or show current enrollment in, a college preparatory curriculum that includes:

Subject	Units
English	4
Chemistry	1
Algebra	2
Academic Math	2
Laboratory Science	2
Foreign Language	2 (same language)
Social Studies	3 (preferably 4)

Note - In addition to these academic requirements, along with a competitive QPA, admission into Nursing requires a minimum standardized test score of: **SAT 1130 (combined Reading and Math sections) or ACT 23 Composite.**

## Admission to Upper-Division Programs

Students intending to pursue upper-division programs such as education, pharmacy, health and rehabilitation sciences, library and information science, and social work are admitted initially to arts and sciences and are expected to meet the same admission requirements as other arts and sciences students. The appropriate preparatory curricula will be selected with the assistance of academic advisors.

## Admission of Transfer Students

Students who have earned credits at another institution before applying to the University of Pittsburgh at Johnstown must apply to the Admissions Welcome Center for admission with advanced standing. An official transcript of all courses taken at other schools must be submitted at the time of application, whether or not the student wishes those courses to be counted toward a degree at Pitt-Johnstown. Transfer applicants must complete all other admission requirements as stated above. Students who previously attended Pitt-Johnstown and wish to re-enroll on a part-time or full-time basis should contact the Office of the Assistant Vice President for Academic Affairs.

## Advanced Placement

University of Pittsburgh at Johnstown accepts for consideration, exemption, or advanced placement the results of Advanced Placement Tests administered by the College Entrance Examination Board.

### BIOLOGY (BY)

Test Score# of CreditsCredits for

4	4	BIOL 0110, 0111
5	8	BIOL 0110, 0111, 0120, 0121

### CHEMISTRY (CH)

Test Score# of CreditsCredits for

3 or 4	4	CHEM 0111 & CHEM 0113
5	8	CHEM 0111, 0112, CHEM 0113 & CHEM 0114

### CLASSICS (see Foreign Language)

### COMPUTER SCIENCE (CSA or CSAB)

Test Score# of CreditsCredits for

4, or 5	3	CS 0015
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### ECONOMICS MICRO (EMI)

Test Score# of CreditsCredits for

4 or 5	3	ECON 0105
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### ECONOMICS MACRO (EMA)

Test Score# of CreditsCredits for

4 or 5	3	ECON 0115
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### ENVIRONMENTAL SCIENCE (ENVS)

Test Score# of CreditsCredits for

4 or 5	3	GEOL 0086
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### ENGLISH LANGUAGE & COMPOSITION (ENG C)

Test Score# of CreditsCredits for

4 or 5 6 ENGCOMP 0005, ENGLIT (NE)

**ENGLISH LITERATURE & COMPOSITION (ELC)**

Test Score# of CreditsCredits for

4 or 5 6 ENGCOMP 0005, ENGLIT (NE)

**ART (HISTORY) (ARH)**

Test Score# of CreditsCredits for

3, 4 or 5 3 FINE ARTS (NE)

**FOREIGN LANGUAGE**

Latin Prose (LTL)

Test Score # of CreditsCredits for

4 or 5 3 LATIN 0211

Vergil (LTV)

4 3 LATIN 0211

French (FRA)

4 3 FRENCH 0355

5 6 FRENCH 0355, 0356

French Literature (FLA)

4 3 FRENCH 0321

5 6 FRENCH 0321, FRENCH 0355

German (GM)

4 3 GER 1490

5 5 GER 1490

Spanish (SPL)

4	3	SPANISH 0325
5	6	SPAN 0325, 0351

### **GEOGRAPHY**

Test Score# of CreditsCredits for

Human

4 or 5	3	GEOL 0030
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### **GOVERNMENT & POLITICS**

Test Score# of CreditsCredits for

US Government & Politics (GPU)

4 or 5	3	PS 0206
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Comparative Government & Politics (GPC)

4 or 5	3	PS 0302
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### **HISTORY**

Test Score# of CreditsCredits for

American - United States (UH)

4 or 5	3	HISTORY 0610 or HISTORY 0620
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European (EH)

4 or 5	3	HISTORY 0120 or HISTORY 0130
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World (WH)

4 or 5	3	HISTORY (NE)
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### **MATHEMATICS (MAB)**

Test Score# of CreditsCredits for

Calculus (AB)

4 or 5	4	MATH 0221
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### **MATHEMATICS (MBC)**

Test Score# of CreditsCredits for

Calculus (BC)

4, or 5      8MATH 0221 & 0231

**MUSIC**

Test Score      # of Credits      Credits for

Listening & Literature (MSL)

3, 4, or 5      3      MUSIC 0212

Theory (MST)

3, 4 or 5      3      MUSIC 0100

**PHYSICS (PY1 & PY2)**

Test Score# of CreditsCredits for

Physics 1 and Physics 2 (MUST TAKE BOTH)

4 and 4      4PHYS 0140

4 and 54PHYS 0140

5 and 44PHYS 0140

5 and 58PHYS 0140 & phys 0142

**PHYSICS C - Mechanics (Part 1) (PHCM)**

Test Score# of CreditsCredits for

4 or 5      4      PHYS 0150

**PHYSICS C - Mechanics & ELECTRICITY - magt parts 1 & 2) (PHCE/PHCM)**

Test Score# of CreditsCredits for

4 or 5      8      PHYS 0150 & PHYS 0152

**PSYCHOLOGY (PY)**

Test Score# of CreditsCredits for

4 or 5      3      PSY 0200

**STATISTICS (STAT)**

Test Score# of CreditsCredits for

4 or 5      3      STAT 1020

*NE= No Equivalent*

# Campus Visit and Conference

Interviews are not required; however, applicants or prospective applicants are strongly encouraged to visit the campus. The purpose of the campus visit is to permit candidates to gain firsthand knowledge of the college's programs, facilities, and admission policies. A personal conference allows candidates, parents, and campus personnel the opportunity to exchange information in a more personal setting. In addition, tours are offered Monday through Friday with a student tour guide. Arrangements for an admissions counselor conference and tour may be made by calling 1-800-LIKE-UPJ or visiting our website at [upj.pitt.edu/admissions](http://upj.pitt.edu/admissions).

# Admissions Scholarship Programs

## Admissions Scholarship Programs

The Admissions Welcome Center offers several types of scholarships to outstanding incoming freshmen. Applications for admission are reviewed by the Scholarship Committee to identify possible scholarship candidates.

**President Scholars** are selected from incoming freshmen on the basis of exceptional test scores, outstanding high school academic performance, and extracurricular activities in high school. Each student chosen to be a president's scholar receives merit-based scholarship assistance for four years if a 3.0 grade point average is maintained.

Other aspects of the program, which continue throughout the scholar's enrollment at Pitt-Johnstown, include priority registration for classes; special academic advising targeting a career area, exploring personal interests and academic options such as studying abroad, and allowing for independent work and research; periodic social gatherings; and occasional special seminars.

# Accelerated High School Students

The University of Pittsburgh at Johnstown admits a limited number of outstanding high school students who have completed the junior year of the college preparatory curriculum of their high schools. This program permits talented students, with the agreement and support of secondary school officials, to accelerate their education by attending Pitt-Johnstown in lieu of their senior year or for a set number of classes. Individuals who wish to participate in either option of this program should contact the Admissions Welcome Center for further information.

The **Early Admission Program** is designed for students entering their senior year in high school who have fulfilled all of their high school requirements and wish to attend Pitt-Johnstown full time in lieu of their senior year. High school students interested in early admission must fill out an application and have an interview with the Admissions Welcome Center. The applicant's high school must provide written documentation that supports the application and the student's desire for early admission.

The **Mountain Cat Dual Enrollment Experience** is designed for students who are still attending high school, but wish to take courses at Pitt-Johnstown. The student must fill out a special application and obtain a letter of recommendation from secondary school officials.

# Admission to Adult Education

The University of Pittsburgh at Johnstown provides opportunities for continued learning, through part-time and full-time study, for qualified adults. Courses may be taken for credit toward fulfilling degree requirements or on a non-degree basis. Admission is open to high school graduates or those who hold equivalency certificates and are 25 years of age or older. Adult applicants with incomplete high school preparation may qualify for admissions by taking



examinations administered by the Pennsylvania Department of Education and earning a High School Equivalency Certificate.

Qualified adult students may gain admission to any of the degree programs offered by Pitt-Johnstown. For detailed descriptions of individual program requirements, adult students should refer to our website. In addition, adult students should review their academic goals and plans with the Director of Advanced and Continuing Education when they apply for admission.

## **College Level Examination Program (CLEP)**

The basic purpose of the College Level Examination Program (CLEP) is to provide those individuals who have acquired college-level knowledge through life and work experiences with a way to assess their achievements and then use these test results in planning and seeking college credit or advanced placement.

Advanced and Continuing Education, aware of the diverse background of its adult student population, uses the general examinations of CLEP as a means of evaluating adult candidates for advanced placement. There are general examinations in five areas: College Composition, College Mathematics, Humanities, Natural Sciences, and Social Sciences. A maximum of 6 credits can be earned in each area, and a maximum of 30 credits may be awarded through CLEP.

Persons who have earned more than 15 college credits are ineligible for CLEP at Pitt-Johnstown. Those who have earned one to 15 credits are eligible (as are those who are just beginning to seek college credits), and they should consult the Director of Advanced and Continuing Education regarding the areas in which CLEP scores would apply to their program. Certain deductions may be necessary in order to ensure that there is no duplication of credit. Credit granted through this program might not transfer to all schools within the University, but it will apply to the degrees earned in Arts and Sciences.

## **Pitt Online Self-Paced Courses**

Advanced and Continuing Education students at Pitt-Johnstown may receive credit for classes administered through the Pitt Online program. These are classes designed for self-motivated students who can work independently using specifically prepared study materials. Classes usually meet only three times (three Saturdays each term) in Pittsburgh. Pitt-Johnstown students interested in the Pitt Online courses should consult the Director of Advanced and Continuing Education for course descriptions and registration information.

## **Registration Status/Reinstatement**

Students who have not registered for at least one credit in a 12-month period must request reinstatement with the Assistant Vice President for Academic Affairs in order to register for classes again.

Students who do not attend for two or more consecutive terms, or who resign during any term, must be reinstated before resuming a program provided they did not attend another educational institution in the interim. To be reinstated a student must contact the Assistant Vice President for Academic Affairs.

## **Relocation (within the University)**

Pitt-Johnstown students who wish to attend another Pitt campus must complete the relocation request forms and submit the forms to the Registrar's Office. Forms are available online at UPJ-Registrar or in the Registrar's Office. Students must meet the requirements set by the campus they wish to attend.

Students who wish to relocate to Pitt-Johnstown from another campus of the University of Pittsburgh must request relocation from the academic dean of the Pitt campus they are currently attending.

Any questions regarding relocating to another Pitt campus should be directed to the Registrar's Office.

# Academic Procedures and Policies

## Absence

Normally, students are expected to attend classes as scheduled because frequent absences can result in poor academic performance. Although there is no University policy regarding attendance, individual faculty members may set rules for their own courses and may assign serious academic consequences for lack of attendance.

## Academic Advising

During a full-time student's first term, he/she is assigned to a faculty advisor. The advisor usually represents the student's field of interest. In cooperation with the advisor, the student defines a course of study consistent with his/her academic goals and career interests.

Information about the University's resources, recommendations concerning course selections, clarification of institutional policies, and general guidance are some of the important services offered by the advisor. **Ultimately, each student is responsible for his/her own academic progress.** Should a student's academic interests shift, he/she may request permission from the division chairperson to be assigned to a different advisor.

## Academic Awards

The following awards recognize scholarship and achievement at Pitt-Johnstown.

**1st Summit Bank Award.** This award is given to senior accounting students who reside in Cambria or contiguous counties. It is based on academic ability as demonstrated by GPA and citizenship as demonstrated by participation in student life.

**C. Bruce Baker Memorial Award.** This award is for outstanding students in mechanical engineering technology.

**Bloom, Dr. Meyer Award** - Awards are limited to undergraduate full-time students in the premedical program who are of junior or higher class standing. Also, limited to those students who have achieved superior academic records and show high promise of becoming successful physicians. Grants are limited to ambitious and deserving students who have demonstrated ability in pre-medical studies, but lack funds to pursue their objectives. In no case may an award or grant to any one student exceed one-third the cost of tuition for that school year.

**Brice, William R. Award for Excellence in Geology** - Geology faculty are to select a junior student who has a QPA of 3.25 or higher and exhibits the greatest promise for success in the field of Geology

**Department of Business Academic Achievement Award.** This award is presented to a student who excels in several disciplines within the business curriculum and exhibits outstanding leadership and communication skills necessary in professional career development.

**Campus Association of UPJ - Ruby Biddle Award** - Sophomore level student that has completed 24 credits at UPJ with a 3.25 QPA or above in spite of some significant personal obstacle. Chosen by Academic Affairs Office.

**Campus Association of UPJ - Rosella Blackington Award** - Presented to a graduating woman for outstanding academic performance and leadership contributions to the University during her first 90 credits at UPJ.

**Dr. Sheldon I. and Beth Rapoport Clare Award.** This award is granted to graduating seniors who are going to teach high school chemistry.

**Stanton Chapman Crawford Memorial Award.** This award is presented to students who have made significant contributions to the betterment of the college, representing it well in areas of student life, and, in doing so, have typified the kind of student the college aims to produce.

**CTC Award.** This award, in honor of Congressman John P. Murtha, is given to the graduating senior student in management who exhibits outstanding leadership qualities in civic responsibilities and great potential for professional success in the public or private sectors.

**Education (1), Upper Level Elementary Student of the Year Award** - For excellence in the elementary education curriculum and for high potential for success in the education profession by a student who has demonstrated leadership, been involved in extracurricular activities and served both the college and local communities.

**Education (2), Upper Level Secondary Student of the Year Award** - For excellence in the secondary education curriculum and for high potential for success in the education profession by a student who has demonstrated leadership, been involved in extracurricular activities and served both the college and local communities.

**G. Fesler Edwards Award.** This award is presented to outstanding students in the business program at the end of their junior year who have achieved excellent academic records, have exemplified good student citizenship, and have shown potential for further academic work and/or success in business.

**Emglo Products, LP Award.** This award is given to the top student in the accounting program.

**Faculty Senate Scholar-Athlete Award.** This award is presented to a student involved in intercollegiate athletics who demonstrates academic achievement.

**Harold Grant Fry Award** - Grants made to students majoring in geology at Pitt-Johnstown. Awards are based on academic merit and financial need.

**Garbarino Family Theatre Award.** This award supports students according to academic and theatrical ability.

**Claire Garber Memorial Creative Writing Award.** This award is for the best single piece of fiction or single poem by a junior or senior.

**Humanities Creative Prose Award** - This award is presented for excellence in the genres of short story, personal essay, or memoir for full-time students.

**Journalism Award** - This award is given to underclassmen who show promise in developing skills necessary for a successful practice in Journalism.

**Virginia Koumoungis Golubic Poetry Award.** This award shall benefit one (or more) Junior student(s) who have a QPA of 3.25 and have written the most worthy poems as determined by the Humanities Division faculty who teach poetry/creative writing.

**Carroll Grimes Award for Writing in the Humanities.** This award provides support to the undergraduate author of the best scholarly or critical essay written for a humanities class.

**Samuel S. Hicks Award.** This award is given to a student majoring in the Justice Administration and Criminology program and who is a Pennsylvania resident.

**Robert J. Hunter Award.** This award is presented to an outstanding senior who exhibits the innovative, enthusiastic, and inquiring spirit traditionally associated with scholarship in the social sciences; who demonstrates significant potential for graduate study; and who is pursuing a career in public service.

**Dr. and Mrs. Henry J. Idzkowsky Golden Candle Medal.** This medal is presented to the recipient of the Pitt-Johnstown Campus Association's Rosella Blackington Award.

**Walter W. Krebs Award.** This award is presented to a freshman, sophomore, or junior who has shown outstanding ability in composition and writing.

**Charles Kunkle Jr. Leadership Award.** Given to a deserving senior who best exemplifies leadership at Pitt-Johnstown.

**Hazel Lansberry French Language Award** - Presented to a junior or senior student who has maintained a 3.25 average in French and a 3.0 overall academic average.

**George E. Letcher Jr. Accounting Alumni Advisory Board Award** - Given annually to the top accounting student exhibiting academic merit as evidenced by a QPA of 3.25, service to the University of Pittsburgh at Johnstown community and leadership within the accounting community.

**Rose Ann Liska Award in Foreign Language.** Presented to an exceptional foreign language student.

**Robert E. McClure Award.** This award is presented to students who have demonstrated outstanding achievement and have shown a probability for success in the field of chemistry.

**John Fiske McHugh Memorial Award.** This award is presented for excellence in advanced reporting and making significant contributions to the *Advocate*.

**Louise Letizia Miele Award.** This award recognizes freshman women in the field of English who have demonstrated potential in creative writing and, through interest and ability, have shown a probability of success in the field of writing.

**The Morgan-Korch Scholar.** Presented to a student who shows the greatest promise in the field of biology.

**Dr. Christopher J. Morgan Mathematical Advancement Award** - Award given to an outstanding junior or senior who has a QPA of 3.25 or higher, is a Mathematics major or minor, or a Mathematics Education major and who is making a presentation at a mathematics conference. Preference will be given to students from Indiana, Armstrong, Jefferson, Clearfield, Cambria and Westmoreland counties.

**Nursing Alumni Student Award.** Applicants must have completed a minimum of 12 nursing credits and have earned a GPA of 3.3 in nursing courses. Along with application a typed essay describing current nursing practice and how the award would be used for education must be submitted. Winner will be selected by the UPJ Nursing Award Committee.

**George V. Peck Memorial Award.** Supports the winners of the freshman speech contest in engineering technology.

**Howard M. Picking Jr. Award.** This award is presented to the outstanding senior who demonstrates the most potential for making a significant contribution to the field of business.

**Pitt-Johnstown Alumni Association Achievement Award.** Presented to outstanding junior(s) who exemplify a QPA of 3.25 or higher, leadership skills, service to the UPJ community and participation in outreach activities.

**Movene L. Ponas Nursing Award.** This award is presented to students with a GPA of 3.25 or higher who are the top two students in the graduating class of the RN-BSN program.

**Joseph J. Rapoport Memorial Award.** This award is presented to a male student exhibiting leadership, good citizenship, and active service to the college and the community.

**Thomas H. Russell Memorial Award in Journalism** - This award is presented to a student who has displayed consistently the highest potential for a successful career in professional journalism.

**James V. and Concetta M. Saly Award.** This award is given to outstanding senior accounting students with selection based upon academic records, personal and citizenship qualifications, and potential for success in the accounting and business fields.

**Sally A. Sargent Award.** This award is given to a graduating senior in marketing/management who has a GPA of 3.25 or higher and exhibits the greatest promise for success in an entrepreneurial venture and/or professional business environment.

**Lowell D. Shaffer Student-Athlete Award.** This award is presented to a student involved in intercollegiate athletics who demonstrates academic achievement.

**Dr. Jem Spectar Award** - This Award will be given to a junior who has a QPA of 3.75 or higher and will be applied toward senior-year tuition.

**Louis M. Ulery Award.** This award is granted to students who have demonstrated outstanding ability in the fields of the mathematical and computing sciences.

**Albert P. Vannucci International Studies Award.** This award is presented for superior achievement in international studies.

**Wilson Construction Co. Award.** This award is presented to outstanding senior engineering technology students based on their academic records, personal and citizenship qualifications, and potential for success.

**John D. Wilson Mathematics Research Award.** This award recognizes the work of an outstanding upper-class student in the areas of mathematics or statistical research, either theoretical or applied, which is performed either as a course requirement or as an independent study project.

**WJAC Television Award (Electrical Engineering Technology)** - Presented for outstanding ability in subjects related to the television communication industry and indicating a desire to pursue a career in that field.

**WJAC Television Award (Communications or Journalism)** - Presented for outstanding ability in subjects related to the television communication industry and indicating a desire to pursue a career in that field.

## Academic Integrity

Students have the responsibility to be honest and to conduct themselves in an ethical manner while pursuing academic studies. Students have the right to be treated by faculty in a fair and conscientious manner in accordance with the ethical standards generally recognized within the academic community (as well as those recognized within the profession). Should a student be accused of a breach of academic integrity or have questions regarding faculty responsibilities, procedural safeguards including provisions of due process have been designed to protect student rights. These may be found at <http://upj.pitt.edu/en/academics/academic-affairs/academic-advising/academic-integrity/>

## Academic Standing and Probation

Students must maintain a cumulative GPA of at least 2.00 to be in good academic standing. At the end of each fall and spring term, the Assistant Vice President for Academic Affairs reviews all students' records and notifies those students whose cumulative GPAs are below 2.00 that they are on probation for the next full term. Probation means that a student may not relocate within the University, nor take more than 18 credits in a semester. Furthermore, students who fail to achieve or maintain a GPA of 2.00 in their major subject area will be placed on probation.

Students who fail to make progress toward good academic standing are subject to suspension. Suspension means that a student is barred from registering at the University of Pittsburgh at Johnstown for a specified period of time. The following guidelines will be used to determine when a student will normally be suspended:

Cumulative GPA between 0.00 and 2.00 after three consecutive semesters

Cumulative GPA between 0.00 and 1.49 after two consecutive semesters

Cumulative GPA between 0.00 and 0.99 after one semester

Courses that are taken outside the University of Pittsburgh during a period of suspension may not be transferred into the University. After the suspension period has expired, the suspended student must request reinstatement in writing or in person through the Office of Academic Affairs. This request must contain a clearly expressed strategy for achieving good academic standing. Reinstatement is not a right, and applications for reinstatement are dealt with on an individual basis.

More than one suspension will result in dismissal. Dismissal means that a student is no longer permitted to register at the University of Pittsburgh at Johnstown. A suspended or dismissed student may appeal his/her academic status to the Committee on Academic Standards. The procedure for the appeal is available from the Office of the Registrar.

## **Affirmative Action and University of Pittsburgh Nondiscrimination Policy Statement**

The University of Pittsburgh, as an educational institution and as an employer, values equality of opportunity, human dignity, and racial/ethnic and cultural diversity. Accordingly, as fully explained in Policy 07-01-03, the University prohibits and will not engage in discrimination or harassment on the basis of race, color, religion, national origin, ancestry, sex, age, marital status, familial status, sexual orientation, gender identity and expression, genetic information, disability, or status as a veteran. The University also prohibits and will not engage in retaliation against any person who makes a claim of discrimination or harassment or who provides information in such an investigation. Further, the University will continue to take affirmative steps to support and advance these values consistent with the University's mission. This policy applies to admissions, employment, access to and treatment in University programs and activities. This is a commitment made by the University and is in accordance with federal, state, and/or local laws and regulations.

For information on University equal opportunity and affirmative action programs, please contact: University of Pittsburgh, Office of Diversity and Inclusion, Cheryl Ruffin, Institutional Equity Manager, 4415 Fifth Avenue, 2nd Floor Webster Hall, Pittsburgh, PA 15260 (412) 648-7860.

For complete details on the University's Nondiscrimination Policy, please refer to Policy 07-01-03. For information on how to file a complaint under this Policy, please refer to Procedure 07-01-03.

## **Certification of Enrollment**

Certifications of enrollment to third parties are processed by the Office of the Registrar in 279 Blackington Hall.

## **Classification of Students**

Classification of students is based upon the number of credits earned. To be classified as a sophomore, a student must have earned at least 23.5 credits; as a junior, at least 53.5 credits; and as a senior, at least 83.5 credits.

## **College Honors**

At the close of each full term, students who earned a 3.25 average for the previous term are placed on the College Honors List. Each honoree must have earned at least 12 credits with no grade lower than C. Courses taken on the H/S/U option are included as part of the 12 credit minimum if there is no option to take the course for a letter grade. At

least 50% of credits must be taken for a letter grade. Part-time students will be eligible for inclusion on the College Honors List based upon their 12 most recent credits. A student who receives a U grade, or grades of G or I, will not be eligible for the College Honors List.

## Programs Completed in Pittsburgh

Certain programs of study can be initiated at Pitt-Johnstown and are related to those in the Dietrich School of Arts and Sciences and the Swanson School of Engineering at the University's Pittsburgh campus. Students who wish to pursue a degree in these programs must relocate to Pittsburgh to complete the degree requirements. The programs include classics, fine arts, music, philosophy, and studio arts in the Division of Humanities; physics in the Division of Natural Sciences; anthropology and religious studies in the Division of Social Sciences; and engineering in the Division of Engineering.

## Course Changes

After registration, course changes should be made only with the approval of the academic advisor. During the first 10 class days of a term (three class days for summer sessions), adding and/or dropping one or more courses is permitted. No additions may be made after the 10th class day. No record of a course dropped within this period is maintained.

- Courses may be dropped with a W grade on the transcript at any time from the 10th class day through the ninth week of the term. Students should discuss with their academic advisor any plans for dropping a course; then with the advisor's approval, students must submit the completed form to the Office of the Registrar. Note that refunds, if any, depend on the dates certain actions are carried out. There are no refunds for W grades.

After the ninth week (third week for summer sessions), withdrawal from a course is not possible unless extenuating circumstances can be shown. If the student believes that circumstances justify late withdrawal, he/she should:

- Meet with the Registrar to review the process of a late withdrawal.
- Follow the late withdrawal process and obtain appropriate signatures, submit completed late withdrawal paperwork to the Office of the Registrar.

## Course Repetitions

Required courses in a student's major must be repeated if the grade of F is received. If the grade of D is earned in a sequence course such as mathematics or language and the student intends to continue in that discipline, the course should be repeated. Other courses may be repeated at the discretion of the student. Course repetitions are subject to the following limitations:

1. No sequence course completed with a grade of C-/D/F may be repeated for credit after a higher-numbered course in that sequence has been passed with a C or higher grade.
2. Courses for which a C-/D/F has been earned cannot be repeated using the S/U grade option.
3. The grade earned by repeating a course replaces the grade originally earned. The originally earned grade will not be counted in the computation of the GPA; it does not increase the number of credits unless an F grade is replaced by a passing grade.
4. No course may be repeated at any institution other than the University of Pittsburgh or its regional campuses.
5. Except as noted in the course descriptions, a particular course may be taken for credit only once.
6. Courses passed with a grade of C or higher may be repeated only after consultation with a student's advisor.
7. A student may not take any course more than three times.



# Courses Taken Elsewhere

Students may attend a summer or special session of another accredited institution in order to supplement their programs if they are in good academic standing. In order to receive appropriate credit for courses taken at other institutions, students must submit a written request to the Office of the Registrar in advance, identifying the course title and description. The course must be as follows:

1. Offered by an accredited institution. Students who have earned 60 or more credits may not take courses in two-year schools except with prior authorization.
2. Substantially the same as courses regularly offered in arts and sciences.
3. Different from any course taken previously.

To obtain permission to attend another university, students must have begun their program in the University of Pittsburgh system or must have been enrolled as a transfer student with not more than 30 advanced-standing credits.

A maximum of two summer or special sessions may be taken at other institutions with a maximum of two courses a session. It is assumed that 30 credits in residence will be earned between the two sessions and, normally, another 30 credits in residence after returning from the last session.

Courses that are taken outside the University of Pittsburgh during a period of suspension may not be transferred into the University.

Credits attempted at an institution other than the University of Pittsburgh at Johnstown while a student is enrolled simultaneously at the University of Pittsburgh at Johnstown will not be transferable unless prior approval is obtained.

# Credit by Examination

Students may earn credits toward graduation not only by taking and successfully finishing courses, but also by taking special examinations. Each test for credit by examination must be arranged with the department teaching the course for which credit is desired. The department has the prerogative, for good reason, to offer or not to offer such an exam.

In some areas, students may obtain credit by examination if they have mastered material during their high school years that is traditionally covered in college courses but is not required to gain college admission. This is with the provision that the courses are those in which the department generally allows for credit by examination. Credit by examination cannot be obtained, however, for a college-level course for which credit has already been awarded, nor can it be used to alter a grade already received. Credit may not be earned by examination in lower-level sequence courses when the student has already obtained credit for a higher-level course in the sequence. Students are not permitted to audit courses without registering and then apply for credit by examination.

There is a fee for the examination, whether or not credits are earned.

# Double and Triple Majors

Students who meet the major requirements of two or more departments may declare, and have recorded on their transcripts, a double or triple major. If one of the majors leads to a BA degree and another to a BS degree, at graduation the student must decide which of the two degree options is to appear on the transcript and the diploma, as only one degree is granted.

Students must fulfill all general education and major field requirements for each major. A minimum of 120 credits and a GPA of 2.00 must be earned.

## Double Degree

Students may earn two degrees simultaneously, providing that one is a Bachelor of Arts and the other is a Bachelor of Science. Students may not earn two BA or two BS degrees simultaneously.

Students pursuing this option must complete major field requirements for each degree, a minimum of 30 credits beyond one degree, and general education requirements. A minimum of 150 credits and a GPA of 2.00 are required to earn a double degree.

Students will have both degrees printed on their transcript and will receive two separate diplomas.

## Equity in Athletics Disclosure Act Notice

Students and prospective students have the right to review the University's most recent report prepared pursuant to the Federal Equity in Athletics Disclosure Act, 20 USC 1092. The report is available from the University of Pittsburgh at Johnstown Office of Athletics.

## Faculty-Student Relationship Policy

The University's educational mission is promoted by professional relationships between faculty members and students. Relationships of an intimate nature (that is, sexual and/or romantic) compromise the integrity of a faculty-student relationship whenever the faculty member has a professional responsibility for the student. The University prohibits relationships between a faculty member and a student whose academic work, teaching, or research is being supervised or evaluated by the faculty member.

If an intimate relationship should exist or develop between a faculty member and a student, the University requires the faculty member to remove himself/herself from all supervisory, evaluative, and/or formal advisory roles with respect to the student.

*NOTE: In this policy, the definition of "faculty member" refers to anyone appointed by the University as a teacher, researcher, or academic administrator, including graduate and undergraduate students so appointed.*

For complete text, go to [www.cfo.pitt.edu/policies/policy/02/02-04-03.html](http://www.cfo.pitt.edu/policies/policy/02/02-04-03.html).

## Family Educational Rights and Privacy Act of 1974

In compliance with the Family Educational Rights and Privacy Act of 1974 (FERPA), as amended, the University guarantees that students have the right to inspect all personally identifiable records maintained by the institution and may challenge the content and accuracy of those records through appropriate institutional procedures. It is further guaranteed by the University that students' records containing personally identifiable information will not be released except as permitted by the Family Educational Rights and Privacy Act.

Additional information regarding either of the above may be obtained through the Office of the Registrar, 279 Blackington Hall.

A full explanation of students' rights provided by FERPA and the procedures available to exercise those rights is available to all University of Pittsburgh at Johnstown students in the Office of the Registrar.

# Full-time/Part-time Status and Credit Load

Full-time and part-time status is defined by the number of credits students carry during the fall or spring terms. Students who register for 12 or more credits per term are classified as full-time students. Those who register for fewer than 12 credits are classified as part-time students. A typical major program ranges from 14 to 17 credits per term. Any term in excess of 18 credits requires the approval Office of the Registrar. To be eligible for more than 18 credits, a student must be in good academic standing. Students who need to repeat a course as a result of poor scholarship in that course should attend an additional term rather than carry an excessive load in any term.

# Student Self-Service Enrollment

Student Self Service Enrollment allows students to enroll in classes and add/drop classes for a particular term and/or session. All undergraduate students are required to meet with an advisor prior to enrolling in classes. An Academic Advisement Required Hold has been placed on all undergraduate student records; and students must see an advisor in order for the hold to be removed.

Each term students will be assigned an enrollment appointment, which indicates the date and time that the student becomes eligible to enroll for classes. You can find your appointment information at the "Student Center" at my.pitt.edu. Students are assigned an enrollment appointment based on the total number of credits earned in their current career. A student's enrollment appointment will begin on the date and time specified. Students may enroll and change their schedule until the end of the published add/drop period for a given term and or session.

Veteran/Servicemember students will receive priority enrollment and will be assigned enrollment appointments prior to the general student population.

Students should be aware that dropping a course or courses may affect athletic and/or financial aid eligibility.

# Grade Option H/S/U

Honors, satisfactory, and unsatisfactory may be chosen as the form of evaluation for any course that is NOT required in the major, e.g., general education classes, general electives, etc. H is awarded for A work, S is awarded for B and C achievement, and U is awarded for C- and lower performance.

The H/S/U option is limited by regulations established by the various divisions of the University. The decision to select the H/S/U option must be made during the first three weeks of the term; it is irreversible. Grade Option request forms are available in the Office of the Registrar, 279 Blackington Hall.

Students are advised to be cautious in choosing the H/S/U option, particularly if they are planning post baccalaureate study. No more than 12 credits with S or H grades may be counted toward graduation.

# Grade Report

Shortly after the term ends, students can access their grades online via the University Portal at [www.my.pitt.edu](http://www.my.pitt.edu).

# Grade Point Average

The grade point average (GPA) is a numerical statement of the academic standing of an individual student. It is simply an arithmetical average of the grade points in every course taken for a letter grade. GPA is determined by dividing the total number of earned quality **points** by the total number of earned quality **point credits**. All courses taken for credit on the letter grade system, except repeated courses, are included in the computation of the official GPA, which is determined in the Office of Academic Affairs. In the event an H/S/U grade appears on a transcript, the credit should not be included in the credit total for calculation of the GPA. Inclusion on the College Honors List, honors at graduation, and academic probation depend directly on the official GPA.

## Grades and Grade Points

A+ 4.00

A 4.00

A- 3.75

B+ 3.25

B 3.00

B- 2.75

C+ 2.25

C 2.00

C- 1.75

D+ 1.25

D 1.00

D- 0.75

F 0.00

Unfinished Class Work (ongoing). Class work unfinished because of extenuating personal circumstances - work is considered in progress for up to one calendar year. If the class work is not completed within one calendar year, the G grade will be changed to NG. The NG grade will remain on the record and the student will be required to re-register for the course if it is needed to fulfill requirements for graduation. A grade of G carries neither credit nor quality points.

I Incomplete course work due to the nature of the course, clinical work, or incomplete research work in individual guidance courses or seminars. A grade of I carries neither credit nor quality points.

N Registered audit. Neither credit nor quality points accompany a grade of N.

Unfinished Class Work (expired) Class work unfinished because of extenuating personal circumstances - work is no longer considered to be in progress. The NG grade will remain on the record and the student will be required to re-register for the course if it is needed to fulfill requirements for graduation.

R Resignation (from all courses)

Approved withdrawal from a course. See regulations on [withdrawal from courses](#). Neither credit nor quality points W accompany a W grade. If a student should at a later time take a course for which he/she has received a W, a course repeat will not be recognized. The original W grade does not lower the student's grade point average (GPA).

H Honors (exceptional) completion of class requirements.

S Satisfactory completion of class requirements.

U Unsatisfactory completion of class requirements.

## Graduation Application/Degree Audit

When students have earned 75 credits, they must file an application for graduation with the Office of the Registrar. Students should review their online Progress Report in the student operating system with their academic advisor. This report will indicate all requirements for all the majors/minors indicated on the graduation application. It is the student's responsibility to ensure that any unsatisfied requirements disclosed by the report are promptly corrected either in conference with the academic advisor or a representative of the academic division office.

## Graduation Honors

Those students of a graduating class who have attained an outstanding scholastic record may be graduated with honors. To qualify for honors, a student must have taken at least 60 credits on the letter-grade system at the University of Pittsburgh at Johnstown and attained a cumulative GPA of 3.25 for cum laude, 3.50 for magna cum laude, and 3.75 for summa cum laude.

## Graduation Requirements

All students must meet the graduation requirements defined by the division they are majoring in and fulfill the arts and sciences general requirements. In no instance may a student graduate with a cumulative or major GPA of less than 2.00.

## Independent Study and Directed Undergraduate Research

The University of Pittsburgh at Johnstown provides unique opportunities for advanced undergraduate students to engage in individual independent research and study. Students can, under direct individualized faculty supervision, pursue more in-depth investigation of topics in their program of study. Those opportunities include directed readings, directed research, and independent study. Under certain circumstances, students in their junior or senior year may propose an independent research team under the supervision of a team of faculty. Finally, students in education are encouraged to participate in a program of directed tutoring prior to their senior year student teaching experience.

Students are encouraged to consider applying for faculty-supervised independent research in one of three types of courses found in the curriculum: directed readings, directed research, and independent study. In a directed readings course, the student usually completes a prescribed set of readings in a topical area not covered in the program's recurring curriculum offerings, meets frequently with the supervising faculty member in tutorial sessions, and often is asked to write abstracts of materials read and discussed. In a directed research course, the student usually undertakes an in-depth research investigation of a specific topic and/or the application of a particular analytical technique under the

supervision of a faculty member in the program, resulting in an extensive written term project, thesis, paper, or laboratory project report. Directed research projects are usually completed by students while on campus and involve frequent meetings with the faculty supervisor as the assigned project moves through the various stages of completion. In an independent study course, the student undertakes, under specific conditions set by the supervising faculty member, an independent on-campus or off-campus program of study, research, or creative activity, often resulting in an extensive written paper, thesis, project report, or dramatic or musical performance.

It is not unusual for the results of independent student research to be presented on campus at events, such as the annual Natural Science Undergraduate Research Symposium on campus, the undergraduate Brackenridge symposium co-hosted by Pitt-Johnstown and the University Honors College at the University of Pittsburgh, or at regional or national conferences or symposia of professional associates, such as those associated with the Council on Undergraduate Research (CUR). The results of these types of student work are routinely presented at professional undergraduate research conferences in the areas of biology, chemistry, English literature, geology, history, international relations, and psychology, and at professional auditions and competitions in music and theater.

## **Internships**

Students may select internship opportunities for 3-12 credits, provided the division chairperson gives permission in advance. This experience is designed to provide students with practical experience in their chosen major. Internships may be completed locally or outside the region.

## **Minors**

Minors must include at least 18 credits, at least 6 of which must be upper-level credits. Unless required by the major department, the availability of a minor area of study in any particular subject is not guaranteed. Students needing courses to complete major requirements will have preference over students needing courses to complete minor requirements. Minors do not have to be in the same division as the student's major. Students are not required to complete a minor for graduation (except where the major program requires a minor). Minors are available in the following programs: Biology, Business, Chemistry, Communications, Computer Science, Creative Writing, Economics, English Literature, Entrepreneurship, French, Geography, Geology, History, Information Systems, Mathematics, Music, Philosophy, Physics, Political Science, Psychology, Sociology and Spanish.

## **Non-Arts and Sciences Courses**

A student in the arts and sciences may take no more than 15 credits in other undergraduate programs (e.g., education, engineering technology) offered at Johnstown.

## **Patent Policy**

A University student, during his or her period of enrollment, may be responsible for new discoveries and inventions that could have commercial value and contribute to scientific, technological, social, and cultural progress. Those accomplishments should be patented in the best interest of the student, the University, the public, and the government. The University's policy on patent rights and technology transfer determines the rights and obligations of the student and the University in any technology the student may invent while enrolled in the University. Details of the University policy are available from the Office of Technology Transfer and Intellectual Property.

## **Permanent Academic Record**

A permanent academic record is maintained on behalf of all students who attend the University of Pittsburgh at Johnstown. This record is maintained in the Office of the Registrar.

Upon graduation, the permanent academic record is sealed and no changes may be made to it. Changes may be made only upon documented proof of inaccuracy in the original recording of information and only with the authorization of the Vice President for Academic Affairs. A student who re-enrolls after graduation may not repeat courses taken during the first enrollment period.

## **Physical Education**

A student may take no more than 2 credits of physical education per term, for a career total of 8 credits. Only the first 4 credits of physical education are considered as arts and sciences credits.

## **Placement Exams**

All full-time students entering the University of Pittsburgh at Johnstown for the first time with fewer than 24 transfer credits must take the Math Placement Test in order to determine their appropriate course placement. Any student who plans to take a course in chemistry or in any foreign language should take a placement test in that subject area to ensure appropriate placement.

## **Pre-Professional Degree Programs**

There are several preparatory tracks available at the University of Pittsburgh at Johnstown within the degree programs it offers. The tracks are designed with special academic advising to prepare the student for further education in a professional graduate study program. The following tracks are outlined and available at the University of Pittsburgh at Johnstown:

### **Pre-Medical Field**

Students wishing to further study dentistry, optometry, medicine, physical therapy, or veterinary medicine generally follow the program requirements outlined for a Bachelor of Science in biology or chemistry. The students are assigned an academic advisor who works with them in preparation for further graduate study.

### **Pre-Law**

Law schools do not require a particular field of study, and pre-law students may pursue any degree program. However, pre-law students will benefit from the services of a pre-law advisor while completing their curriculum. Advising is provided on specific topics related to course selection, applications, entrance exams, and other matters involved in law school admission. Pre-law advising is coordinated through the Division of Social Sciences.

### **Pre-Seminary**

The University of Pittsburgh at Johnstown offers appropriate academic programs in traditional and self-designed areas of study recommended for students planning to pursue theological study and/or a ministerial career. To enhance the program, it includes pre-seminary academic and career advising, internship opportunities, activities with on-campus

student groups, and an active campus ministry led by Protestant and Catholic campus pastors. Advising is coordinated through the Division of Social Sciences.

## Research Integrity

The University of Pittsburgh seeks excellence in the discovery and dissemination of knowledge. Excellence in scholarship requires all members of the University community to adhere strictly to the highest standards of integrity with regard to research, instruction, and evaluation. Research misconduct carries potential for serious harm to the University community, to the integrity of science, and to society as a whole. The University's Research Integrity Policy is available [online](#).

## Second Degree

Students who have earned a bachelor's degree at the University of Pittsburgh at Johnstown and wish to re-enroll for additional course work or for a second degree may do so as an adult education student.

If the student is pursuing a second degree, all appropriate course work from the first degree will apply to the second degree, up to a maximum of 90 credits. All major field requirements and general education requirements for the second degree must be fulfilled. A minimum of 30 new credits must be earned. Only 15 credits from the first degree can be applied toward the major field requirements of the second degree.

Course work for the second degree will continue on the original University of Pittsburgh undergraduate transcript.

The cumulative GPA and credit total will be based on all credits from the first degree and all new course work taken that applies to the second degree. A minimum of 60 credits must be earned in the second degree for the student to be eligible for honors at graduation.

If a student has earned a bachelor's degree from an institution other than the University of Pittsburgh at Johnstown he/she is treated as a transfer student. A new academic record will be created, and all of the above requirements are in effect.

If the student has earned a bachelor's degree from the Pittsburgh campus or another regional campus of the University of Pittsburgh, he/she is treated as a transfer student, but the second degree will continue on the original University of Pittsburgh undergraduate transcript.

## Self-Designed Major

The self-designed major provides an option for students who have definable areas of interest for which no established program exists. It provides the equivalent of a normal major and area of concentration containing at least 36 credits. It must include concentrated study in at least three disciplines or programs and must provide the breadth and depth consistent with an arts and sciences major. Students normally plan a self-designed major during their fourth or fifth term of full-time study, but, under exceptional circumstances, may do so later. A detailed proposal, a list of courses, and a letter of support from the supervising faculty committee of at least three persons representing component fields involved in the major should be sent to the Office for Academic Affairs for approval. Any students interested in a self-designed major should consult their academic advisor for detailed information.

## Statute of Limitations



All the credits required for a degree, whether earned in residence or transferred from another institution, must have been earned no more than 12 years prior to the date on which the degree is awarded. However, when given evidence that the previous courses still provide adequate preparation for courses yet to be taken and still represent a reasonable part of the total academic program, the Vice President for Academic Affairs may waive this limitation. In such cases, the waiver is for a specific period during which the program must be completed.

## Study Abroad

Students in all fields of study, and particularly those in international studies, are encouraged to broaden their academic experience and perspective by studying abroad for a summer, a semester, or an academic year during their undergraduate career. Such experiences open opportunities for gaining multicultural perspective firsthand and have proven invaluable for students entering the workforce, considering graduate study in many fields, or plan to work abroad after graduation. The University of Pittsburgh has well-established programs in the United Kingdom, France, China, Greece, Italy, India, Spain, Africa, and many more. A program specialist in the Office of International Services advises all students considering study abroad opportunities.

Students wishing to participate in study abroad are required to choose either a Panther study abroad program or one selected from an extensive list of vetted, Pitt-approved providers. These programs offer a variety of multi-disciplinary courses, international internships, field research placements, volunteer opportunities, and advanced language studies. Students wishing to receive credit for study abroad are required to obtain approval from their academic advisor of their study plans in advance of their planned departure date. *With special permission, students may complete part of their senior year abroad.*

## Termination of Registration/Resignation (Dropping all Classes)

Students may resign any time after the end of the add/drop period but no later than the close of business on the 60th calendar day of the term or the 30th calendar day of the session by notifying the Office of the Registrar of their intention to terminate their registration for all classes by mail, university email, phone, or in person. Registration and term tuition charges will be adjusted in accordance with the official University Title IV Refund Policy. Students must do this even if they are only registered for one course or credit. If they have housing and/or food service charges, they must notify the appropriate offices immediately.

After the 60th calendar day of the term or the 30th calendar day of the session, students can only terminate their registration by withdrawing through the Office of the Registrar.

Students who wish to drop all of their courses before the official end of add/drop period should do so by contacting the Office of the Registrar, 279 Blackington Hall. If students drop all of their courses, they will not be liable for their term tuition and fees, and their registration will become void.

If students resign after the last day of the add/drop period, they are liable for a percentage of their charges and will be issued R grades, denoting resignation on transcripts. R grades do not count toward a degree, grade point average, or academic progress for the purposes of financial aid eligibility.

Failing to attend the classes for which a student is registered or failing to notify the appropriate academic and administrative offices of nonattendance is not considered an official resignation. Students who fail to follow proper procedures for termination of their registration are responsible for all tuition and fees assessed for the term or session.

The effective date of resignation is determined by: (1) the date of in-person contact with the Office of the Registrar; (2) the date of the postmark on the letter of intent to resign (or the date of receipt if no postmark exists); (3) the date of notification by telephone; and (4) the date of last attendance.

R grades are assigned for all courses for which registration is terminated after the add/drop period but prior to the resignation deadline for the term or session.

W grades are assigned for all courses for which registration is terminated after the 60th calendar day of the term or the 30th calendar day of the summer session.

## Transfer Credits

An official transcript (sent from the school where credits were earned to the University of Pittsburgh at Johnstown) is required for evaluation and transfer of credits.

Advanced-standing and transfer credits are not used in the computation of the student's grade point average (GPA).

All credits eligible for advanced standing are subject to the following limitations if the student enters an arts and sciences program:

1. For acceptance, courses must be passed with a satisfactory grade (C or better) in an academic area offered by the University of Pittsburgh and must be earned at an accredited institution. The University will not refuse to consider a transfer credit based on the accreditation of the sending institution.
2. The number of credits granted for any given course may not exceed the number on the transcript from the school where they were earned, nor may it exceed the number earned in the corresponding course in arts and sciences at Pitt-Johnstown.
3. Students must complete all of their final 30 credits at the University of Pittsburgh at Johnstown.
4. All credits accepted for advanced standing must have been earned within 12 years of the date when the degree requirements will be completed.
5. All transfer credits are subject to reevaluation if the student transfers from one school to another school within the University.
6. In arts and sciences programs, a maximum of 15 non-arts and sciences credits may be counted in the minimum of 120 required for graduation.
7. Not more than 50 percent of the credits required in the major subject may be transferred from another school or from another campus of the University of Pittsburgh.
8. Not more than 90 credits may be transferred from four-year schools, and not more than 60 from two-year schools.
9. If a course for which advanced-standing credit has been granted is repeated, the advanced-standing credit is canceled.
10. Students who have attended the University of Pittsburgh previously and have attended another institution since their last term in residence at Pitt may apply for readmission with advanced standing.
11. An advanced-standing credit evaluation will be completed only after a student has applied for transfer admission.

## Transcripts

An academic transcript is a permanent record of a student's academic progress. The transcript is a cumulative record of the student's GPA, as well as a record of the department, title, and grade for each course in which the student has enrolled and summary of advanced standing information. Students may request an official transcript from the Office of the Registrar. Upon graduation, the transcript reflects a student's degree and date; major; and if applicable, honors, area of concentration, and minor. Information on requesting transcripts can be found on the Registrar's Office page on the Pitt-Johnstown website. Transcripts will not be issued if a student has any outstanding financial obligation to the University.

# Transfers to Professional Programs

Transfers to professional schools of the University are not automatic. Students must apply for admission to the professional schools, such as nursing, social work, pharmacy, and health and rehabilitation sciences on a competitive basis. They should consult the catalog of the appropriate school for specific requirements.

Students who have met all baccalaureate degree requirements, except for their major; who have accumulated a minimum of 90 credits (the last 30 credits at the University of Pittsburgh at Johnstown); and have been admitted to the University of Pittsburgh's School of Dental Medicine or School of Law may be awarded the baccalaureate degree on the basis of the first year's work in the professional school.

Similarly, the University of Pittsburgh at Johnstown has an affiliation agreement whereby students having completed three years of appropriate course work may gain admission to the Pennsylvania College of Optometry (PCO) and be awarded the baccalaureate degree after completing their first year at PCO. This possibility exists only for the Schools of Dental Medicine and Law at the University and for the PCO and is not applicable to any programs at other universities.

# Undeclared Students

Students have the opportunity to explore the range of major programs offered at the University of Pittsburgh at Johnstown before making a firm decision on the direction of their studies. One out of every five entering freshmen at the University of Pittsburgh at Johnstown is initially undeclared in a major. Students are normally encouraged to select a major before they reach junior status. Students should be aware that a change of major or an extended length of time as an undeclared major may affect their ability to complete degree requirements within 120 credits.

Students who identify themselves as undeclared are assigned to a designated academic advisor who will work directly with them to prepare class schedules. Class schedules are developed to cross many disciplines and still meet broad graduation requirements.

Students leaning toward a particular major but still undecided are encouraged to take one or two introductory courses in that area to explore whether a real interest in that discipline develops. If it does, the student then may decide to declare it as his/her official major.

Not only are academic advisors available for student assistance in choosing a major, there are several other resources. These include the University Scholarship class, The Academic Success Center, the *Source Book on Academic Information*, and the Career Services Office.

# University AIDS Policy

The University of Pittsburgh does not discriminate against individuals who are diagnosed as HIV positive or as having AIDS.

The University recognizes that the health condition of individuals is personal and confidential. Reasonable precautions will be taken to protect information regarding the health condition of all members of the University community.

Based on medical evidence that indicates that there is no risk of transmitting HIV through casual contact in the classroom or circumstances involving only casual contact with others, the University will impose no undue restrictions on faculty, staff, or students who are infected with HIV.

# Statement of Compliance Regarding VA Educational Beneficiaries - 38 US Code Section 3679(e)

As a matter of policy, the University of Pittsburgh allows students identified as *covered individuals*\* to attend and participate in all course(s) of education for any given term in which the student has been certified for VA educational benefits. This policy includes those circumstances in which VA payment(s) for student tuition and fees is late or delayed for up to 90 days after date of certification. The University retains the right to impose late fees upon those students who incur or retain an outstanding balance beyond the amount of expected VA tuition & fee payment for the term.

\* Note: VA defines a **Covered Individual** as any individual who is entitled to VA educational assistance under the VA's Vocational Rehabilitation and Employment program (38 U.S. Code Chapter 31) or the VA's Post-9/11 GI Bill® (38 U.S. Code Chapter 33).

("GI Bill®" is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government website at [www.benefits.va.gov/gibill](http://www.benefits.va.gov/gibill).)

# Financial Information

<ul style="list-style-type: none"><li>• Fees and Expenses</li><li>• Room and Board</li><li>• Fees for Auditing Courses</li><li>• Financial Obligations</li><li>• Eligibility for Reduced Tuition</li><li>• Financial Aid</li></ul>	<ul style="list-style-type: none"><li>• Eligibility for Financial Aid</li><li>• Satisfactory Academic Progress</li><li>• Scholarships Administered by Pitt-Johnstown</li><li>• Title IV Refund Policy</li><li>• Veterans' Benefits</li></ul>
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## Fees and Expenses

All fees and expenses are subject to change without notice. The tuition charge for those students who qualify under the University Eligibility for Reduced Tuition is listed below. The difference between full tuition and reduced tuition is provided through an appropriation from the Commonwealth of Pennsylvania (see additional information under Eligibility for Reduced Tuition). Any further questions related thereto should be directed to the University of Pittsburgh at Johnstown, Eligibility Officer, Office of the Registrar, 279 Blackington Hall.

**\*Tuition rates and fees are applicable to 2019-20 and are subject to change without notice.**

The University's tuition and mandatory fee rates are available on the Tuition and Mandatory Fees page.

## Determining How Full-Time vs Part-Time Students are Billed

### In the Fall and Spring Terms:

Undergraduate students registered for 12 to 18 credits in the Fall and Spring Terms are regarded as full-time students, and are assessed the current undergraduate "flat" tuition rate for their academic center.

Undergraduate students registered for fewer than 12 credits are considered part-time, and are billed on a per-credit basis.

Graduate students registered for 9 to 15 credits in the Fall and Spring Terms are regarded as full-time students, and are assessed the current graduate "flat" tuition rate for their academic center.

Graduate students registered for fewer than 9 credits are considered part-time, and billed on a per-credit basis.

Students will be charged per credit for each credit exceeding the maximum full-time credit limit.

### In the Summer Term:

All students receive notifications on a per-credit basis in the Summer Term with the exception of students in the School of Dental Medicine Dental Hygiene Certificate Program; the Swanson School of Engineering undergraduate program; the Katz Graduate School of Business Full-time MBA, MBA/MS and EMBA Programs; and the School of Nursing Accelerated Nursing Program.

## About Mandatory Fees

Mandatory Fee figures are applicable to students regardless of Pennsylvania or Out-of-State residency. Not listed under Mandatory Fees are:

1. **Course/major fees** that are based upon registration in specific courses (e.g., lab fees).
2. **Academic fees** (e.g., application fees, academic program fees for programs such as Cooperative Engineering Program and Study Abroad).
3. **Service fees** (e.g., late application for graduation and lost ID cards).
4. **Professional workshop and professional development fees**
5. **Specific-student fees** such as the Freshman Socialization Fee at the Greensburg Campus.

## Room and Board

### Room Rates (per term)

#### **Residence Halls and Lodges:**

- Double - \$2,820
- Single - \$3,430

#### **Living/Learning Center:**

- Double - \$2,955
- Single - \$3,610

#### **Townhouse Apartments:**

- Double \$3,085
- Single \$3,775

#### **Willow Hall:**

- Double \$3,085
- Single \$3,775

#### **College Park Apartments:**

- Four Person Apartment - \$3,085
- Two Person Apartment - \$3,430
- Single Room - \$3,775

## BOARD RATES (per term)

Ultimate Access Tier Plan offers 10 guest meals per term

Unlimited Student Union and Varsity Dining with 150 Dining Dollars \$2,255

Tier 1 Plan offers 6 guest meals per term

Plan 1B200 Dining Passes with 275 Dining Dollars \$2,010

Plan 1C165 Dining Passes with 450 Dining Dollars\$2,010

## Tier 2 Plan offers 4 guest meals per term

Plan 2B150 Dining Passes with 350 Dining Dollars\$1,855

Plan 2C125 Dining Passes with 475 Dining Dollars\$1,855

## Tier 3 Plan offers 4 guest meals per term

Plan 3B145 Dining Passes with 275 Dining Dollars\$1,745

Plan 3C120 Dining Passes with 400 Dining Dollars\$1,745

## Tier 4 Plan offers 4 guest meals per term

Plan 4B100 Dining Passes with 260 Dining Dollars\$1,595

Plan 4C75 Dining Passes with 425 Dining Dollars \$1,595

## Apartment/Townhouse and Commuter Plans

Plan B65 Dining Passes with 170 Dining Dollars\$885

Plan C55 Dining Passes with 220 Dining Dollars\$885

## NOTES:

1. Resident students living in the Residence Halls, Lodges, Living/Learning Center and Willow Hall must contract for either Ultimate Access Plan or Tier 1 through Tier 4.
2. First year freshmen living on campus must contract for only Ultimate Plans Tier 1 through Tier 3.
3. Commuters and resident students living in the Townhouses may contract for any meal plan.
4. Meal plan points can be added to any meal plan in increments of \$50.

## Other Student Fees

**Note: All fees are subject to change without notice**  
**All fees are per term unless otherwise noted**

<b>Fees</b>	<b>Full-Time</b>	<b>Part-Time</b>
Computing & Network Service	\$175	\$100
Student Activities	\$90	----
Student Activities (Summer)	\$10	\$5
Facilities	\$98	\$12
Student Health	\$40	----
Recreation	\$65	\$15
Physical Education (Per Class)	\$10	\$10
Parking Registration (Per Year)	\$95	\$47.50
Lab (Per Specified Lab)	\$50	\$50

## **Fees for Auditing Courses**

Students who audit classes must enroll and pay fees in the same manner and at the same tuition rate as students enrolling for credit.

## **PittPAY**

PittPAY is the University's online student financial portal where students and their Authorized Users can view summary and detailed student account information, including the balance due and due date. Please note, we can only provide account information to the student and those they authorize in PITTPAY. Students and their Authorized Users are notified by email periodically before the due date if there is a balance due. In PittPAY, you can also make online payments, enroll in eRefunds, enroll in the optional payment plans, and generate account details to print or save.

## **MAKING PAYMENTS**

Payments can be made online through PITTPAY by electronic check (echeck) or credit/debit card. There is no additional charge for an eCheck but there is a non-refundable 2.75% convenience fee for all card payments. International payments can also be made through PITTPAY using FLYWIRE. Cash and paper check payments are accepted at the Business Office, 125 Blackington Hall. If you would like to mail a check, please remit to University of Pittsburgh at Johnstown Business Office, 450 Schoolhouse Road, 125 Blackington Hall, Johnstown, PA 15904.



For those who wish to pay in installments instead of in full by the due date, we offer payment plans through PITTPAY. Our optional payment plans are designed to help families spread out the balance due over a series of regular installments. Depending on the date you enroll in a plan, you may be eligible for up to six installments for fall or spring terms, or up to three installments for summer terms. Payment plan installments will be automatically deducted on the 5th of each month from the bank account or credit card you specify when enrolling in the plan. There is a \$45 sign-up fee for each term-based plan. More information is available at <http://payments.pitt.edu/payment-plans/>.

## Financial Obligations

The University of Pittsburgh has the right to withhold services if a student defaults on any financial obligation until repayment arrangements have been made that are satisfactory to the University of Pittsburgh at Johnstown Business Office.

## PA Tuition Rate Eligibility

Eligibility for Pennsylvania Tuition rates is contingent upon whether or not the student is a permanent resident of the Commonwealth of Pennsylvania. A higher tuition rate is charged to non-residents.

Determination of Pennsylvania residency is based upon the following:

## Determination of Domicile

Domicile is the place where one intends to reside either permanently or indefinitely and does in fact so reside. The presumptions and forms of evidence set forth in this section shall be considered by the University in making the determination.

1. Continuous residence in this Commonwealth for a period of 12 months prior to registration as a student at an institution of higher education in this Commonwealth creates a presumption of domicile. A student is presumed not to be a domiciliary if the student has resided for a shorter period before attending an institution of higher education, but the student may rebut this presumption by clear and convincing evidence.
2. Students who are not United States citizens, and have nonimmigrant visas or lack visas, are presumed not to be domiciled in this Commonwealth. The only way to overcome this presumption is to demonstrate that you are not a nonimmigrant and are, in fact, an asylee, refugee, US Lawful Permanent Resident, or that you have an approved I-140 or I-130 AND have a Form I-797 Receipt Notice for the filing of the Form I-485 Application to Register Permanent Residence or Adjust Status, and are otherwise in fact a domiciliary of Pennsylvania as described herein.
3. A minor is presumed to have the domicile of his or her parents or legal guardian. The age of majority for establishing a domicile for tuition purposes is 22. A minor may prove financial emancipation and thereby prove Pennsylvania domicile through clear and convincing evidence.
4. A student receiving a scholarship, loan or grant, dependent upon maintaining domicile in a state other than Pennsylvania, is presumed to be domiciled in the state from which he or she is receiving financial aid.
5. The following factors may be considered as evidence of domiciliary intention but may be given weight that the finder of fact, given the circumstances of each case, may assign to them:
  1. Lease or purchase of a permanent, independent residence within this Commonwealth by the student.
  2. Payment of appropriate state and local taxes. Special attention should be given to payment of Pennsylvania taxes on income earned during periods of temporary absence from this Commonwealth.

3. Transfer of bank accounts, stocks, automobiles and other registered property to Pennsylvania from another state.
4. Procurement of a Pennsylvania driver's license.
5. Procurement of a Pennsylvania motor vehicle registration.
6. Agreement for permanent, full-time employment in this Commonwealth.
7. Membership in social, civic, political, athletic and religious organizations located in this Commonwealth.
8. Registration to vote in this Commonwealth.
9. A sworn statement by the student or his/her parents or legal guardian in the case of a minor declaring his/her intention to make this Commonwealth his/her residence either permanently or for an indefinite period of time.
10. A sworn statement from the parents or guardian of a minor setting forth facts to establish the minor's financial independence and separate residence.

Each case shall be decided on the basis of facts submitted, with qualitative rather than quantitative emphasis. No given number of factors is required for domicile, since the determination in each case is one of the subjective intentions and current objective ability of the student to reside permanently or indefinitely in this Commonwealth.

## Financial Aid

All students, both prospective and those currently attending the University, are encouraged to apply for financial aid. Students may apply for financial aid by completing the Free Application for Federal Student Aid (FAFSA) at [www.fafsa.gov](http://www.fafsa.gov). By completing the FAFSA, students are applying for several types of financial aid including aid from federal and state governments, as well as funding from the University. Individuals are encouraged to explore all potential sources of financial aid, including those from outside agencies and community sources.

## Types of Financial Aid

The University of Pittsburgh at Johnstown participates in several financial aid programs, including the following:

- Federal Pell Grant
- \*Federal Supplemental Educational Opportunity Grant (SEOG)
- \*Federal Perkins Loan
- \*Federal Work Study
- \*\*Federal Direct Student Loan
- \*\*Federal Direct PLUS Loan
- Pennsylvania Higher Education Assistance Agency (PHEAA) State Grant (administered by the state and only available to Pennsylvania residents)
- \*\*Alternative Loan (Loan applications may be requested from any lending institution).

*\*Campus-based funding*

*\*\*Programs that require students to complete a Master Promissory Note (MPN).*

Students at the University may apply for the above mentioned programs by completing the FAFSA prior to April 1. Detailed information about all financial aid programs can be obtained online at [www.upj.pitt.edu/financialaid](http://www.upj.pitt.edu/financialaid) or from the Office of Financial Aid located in 114 Blackington Hall.

## Eligibility for Financial Aid

The general requirements for financial aid eligibility include the following:

- Have a high school diploma or General Education Development (GED) certificate or by completing a high school education in a homeschool setting approved under state law.
- Be a US citizen, national or permanent resident, or other eligible noncitizen.
- Maintain satisfactory academic progress in your course of study.
- Be enrolled or accepted for enrollment as a regular student in an eligible degree or certificate program.
- Not be in default and must not have failed to make satisfactory arrangements to repay any Federal Student Loans.
- Not owe a repayment on a Federal Pell Grant or Federal Supplemental Educational Opportunity Grant.
- Be registered with the Selective Service, if you are a male between 18 and 25.
- Have a valid Social Security number.

Students must submit a Free Application for Federal Student Aid (FAFSA) by the April 1 preferred filing date to receive maximum consideration for need-based financial aid administered through the university. The Title IV school code for Pitt-Johnstown is 008815. To continue to receive financial aid, students must reapply each year. Additionally, they must meet the University's satisfactory academic progress standards listed below.

## Satisfactory Academic Progress

In accordance with federal regulations, the Financial Aid Office must monitor each student's progress toward the completion of a degree or certificate. Financial Aid staff members will review the following quantitative and qualitative measures **once annually, upon completion of each spring term**.

- Cumulative review of college credits completed
- Cumulative GPA
- Timeframe needed for program completion

Students who meet the guidelines established are considered to be in acceptable standing for financial aid and will be eligible to receive financial assistance for the upcoming academic year. All terms of enrollment, including those where a student did not receive financial aid, are included in this evaluation. Transfer credits that count toward degree requirements at Pitt-Johnstown are also included in this evaluation.

## Student Aid Programs Impacted

- Federal Pell Grant
- Federal Direct Student Loans
- Federal Perkins Loans
- Federal Supplemental Educational Opportunity Grant (FSEOG)
- Federal Work-Study
- Federal Direct PLUS Loans
- some alternative loans (check with your lender)
- most University aid

To maintain PHEAA State Grant eligibility, PHEAA has developed its own progress guidelines, which are different than those found within. Visit [www.pheaa.org](http://www.pheaa.org) or contact the Financial Aid Office for more information.

## Credit Requirement

Students must successfully complete 67% of the cumulative total number of credits attempted. For example, a student who has attempted 57 credits must have successfully completed at least 39 credits to be in acceptable academic standing. All credits for which a student is enrolled after the add/drop period are included in this calculation as attempted credits.

- **Successfully Completed Credits**-Credits in which a student earns a grade of A, B, C, D, H, S, or P or those that have transferred toward the student's degree.
- **Course Drop/Semester Withdrawal**- Courses dropped or semester withdrawals occurring during the add/drop period will not count as attempted credits. However, after the add/drop period has ended, courses dropped or semester withdrawals are counted as attempted credits. Students who have not earned the minimum number of required credits based upon enrollment as the result of the course drop or semester withdrawal will not be in acceptable academic progress.
- **Failing/Incomplete Grades**- Credits for a course in which students receive failing ("F") or incomplete ("G" or "I") grades are not considered successfully completed; therefore, students who have not earned the minimum number of required credits based upon enrollment as the result of failing or receiving an incomplete grade will not be in acceptable academic progress. Students who receive a letter grade for an incomplete grade must complete the Financial Aid Exception form to have their status re-evaluated.
- **Repeated Courses**- All completed and attempted credits will be counted toward the 67% completion rate. Please note, however, that federal regulations allow for financial aid to pay for only one retake of any previously passed course, so taking a course more than twice could affect your enrollment status for financial aid purposes.

## GPA Requirement

The minimum GPA requirements are determined by the total number credits attempted at any University of Pittsburgh campus, as well as any credits that have transferred into Pitt-Johnstown. Transfer credits are not included in the cumulative GPA calculation.

- Upon completion of the first academic year, students must achieve a minimum 1.50 cumulative GPA.
- Upon completion of the second academic year and thereafter, students must achieve a minimum 2.00 cumulative GPA.

## Timeframe for Program Completion

Students must complete their program of study within 150% rate of the published length of their program; therefore, to maintain financial aid eligibility, students may not exceed the following number of attempted credits based upon the program in which they are enrolled:

- Associate Degree-a maximum of 90 attempted credits
- Bachelor's Degree in Engineering-a maximum of 195 attempted credits
- Bachelor's Degree all other majors-a maximum of 180 attempted credits

**NOTE** - most Bachelor's Degree programs, with the exception of the engineering program, require 120 credits for completion. Some financial aid programs, such as the PHEAA State Grant program and some campus-based scholarships, impose a four year limit of receipt; therefore, students who enroll for less than an average of 15 credits per term may exhaust eligibility for certain financial aid programs before successfully completing their degrees.

## Re-establishing Eligibility

Students may re-establish financial aid eligibility by successfully completing 67% of their total attempted credits and meeting the cumulative GPA requirement. A reevaluation of eligibility will only occur during the academic year upon receipt of the Financial Aid Exception Form or when academic progress is checked again upon completion of the spring term.

## Written Appeal for Academic Progress

Students may appeal the loss of financial aid eligibility **only if an extreme circumstance due to events beyond the student's control contributed to not meeting the established requirements**. Appropriate documentation will support the reason given for the basis of the appeal. **Incomplete forms and requests without proper documentation will be automatically denied.**

The completed Appeal Form and the required documentation must be returned to the Financial Aid Office by the 60% point of the term in which reconsideration is being requested. The appeal form and the required documentation will then be forwarded to the Financial Aid Appeal Committee for review. The committee must determine if the student will be able to make satisfactory progress during the next term. The committee's decision is final and may not be appealed. Students will receive written notification of the committee's decision.

If an appeal is denied, the student may not receive financial aid from any of the programs impacted until eligibility is re-established.

## Scholarships Administered by Pitt-Johnstown

Most of the scholarships available through the University of Pittsburgh at Johnstown are administered directly to students without additional application requirements. All students are reviewed before their financial aid award is determined. Individuals are screened by evaluating their qualifications for financial aid, as well as criteria predetermined by the scholarship donors.

The following is a list of current scholarships awarded to Pitt-Johnstown students.

**American Association of University Women /Johnstown Branch, Endowed Scholarship.** Supports full-time upper-class female students who demonstrate financial need and academic merit. Students must reside in the Greater Johnstown Area, Pennsylvania.

**Adelman, Rachel and Simon Scholarship.** Financially needy, incoming freshmen with SAT scores of 1150 or higher who intend to major in Education

**Advantage Scholarship.** This scholarship aids underrepresented students.

**AmeriServ Scholarship.** Children or grandchildren of employees of AmeriServ Financial. Recipient(s) will be entering freshmen who are financially needy and have SAT scores of at least 1000.

**Frank H. and Violet R. Ashbridge Scholarship.** This scholarship is granted to full-time students who have financial need and that are graduates of Bedford, Blair, Cambria, Somerset, or Westmoreland counties. Preference is given to students enrolled in the business/economics program.

**Helen Zips Ayers Scholarship.** This scholarship supports two or more financially needy, fulltime junior or senior students who are majoring in education and have a QPA of 3.25 or higher.

**Ayres-Korns Scholarship.** This scholarship is given to deserving students who study medicine, law, or engineering.

**Mary F. Bartol Scholarship.** This scholarship funds female students from a single-parent household who are graduates of a Philadelphia area high school and pursue a degree in Engineering or technology. Recipients are also on the basis of financial need.

**Theodore W. Biddle Alumni Association Scholarship.** This fund provides students with financial assistance for college expenses. Assistance is limited to full-time incoming freshmen. High academic standing and excellent citizenship are qualifications.

**Leonard and Betty Black Scholarship.** This scholarship provides grants to students who participate in one or more of the women's intercollegiate athletic programs.

**Dr. Frank H. Blackington III Scholarship.** This fund was established in Dr. Blackington's honor upon his retirement as president of the University of Pittsburgh at Johnstown. This is given to full-time, deserving, and financially needy students.

**Dr. Meyer Bloom Scholarship.** This scholarship is for upper-class, full-time students of academic ability and financial need who want to be physicians.

**Sally S. Bloom Memorial Scholarship.** This scholarship is for the freshman year only and is given to students who are graduates of 22 selected high schools from Cambria and Somerset Counties. Applicants must have demonstrated financial need, academic ability, and citizenship.

**Blue & Gold Classic Athletic Scholarships.** Used to support Athletic Scholarships.

**Wilbert A. Boerstler - Ferndale Scholarship.** Awarded to a freshman student who is a graduate of Ferndale High school and has financial need.

**Edward Eugene Boyer Scholarship.** This scholarship supports a full-time student who has lived in the 15936 zip code for the four years prior to high school graduation, who is in the top 20 percent of his/her high school graduating class, and who has SAT scores of 1150 or better.

**Victor Bracken Engineering Technology Scholarship.** This scholarship supports students in the Division of Engineering.

**Glen Francis Brown Scholarship.** This fund provides scholarships to academically deserving students who show financial need. Preference is given to residents of Summerhill Township, Cambria County, PA.

**Irene B. Burkett Memorial Scholarship.** This fund supports full-time undergraduate students majoring in elementary education who are graduates of the Westmont Hilltop School District and who demonstrate financial need, academic ability, and good student citizenship.

**Bross Family Scholarship.** Students who major in business, having completed a minimum of 9 credits in economics, with a QPA of 3.0, a proficiency in reading, English, and speaking, and either having completed or will complete course work in human relations, values, and ethics related subjects.

**Cambria-Somerset-Indiana Mechanical Contractors Scholarship.** This fund provides scholarships for upper-class engineering students who demonstrate financial need. Preference is given to but not limited to mechanical engineers.

**Campus Association of UPJ Martha Anderson Memorial Scholarship.** This scholarship provides grants-in-aid to part-time students. Recipients must have completed a minimum of nine (9) credit hours at UPJ prior to the term for which a scholarship is awarded. Also, must have earned a minimum QPA of 3.3 in the process of earning their most recent nine (9) credits at UPJ.

**Bella G. and Samuel G. Coppersmith Scholarship.** This fund is given to students from Cambria County who show financial need and academic accomplishment.

**John N. Crichton Scholarship.** Students from computer science, engineering, and mathematics who demonstrate superior achievement receive this scholarship.

**Thomas N. Crowley Scholarship.** This scholarship is for deserving full-time students.

**Warren L. Custer Memorial Scholarship.** These grants are provided for engineering sophomores who displayed exceptional motivation, dedication, and desire to succeed during their freshman year.

**Russell P. and Grace C. Daniel Merit Scholarship.** The scholarship furthers the affirmative action goals at the University of Pittsburgh at Johnstown by providing merit grants to African American full-time freshman students from the Johnstown area. Applicants are evaluated in terms of academic accomplishments and financial need, and priority is given to students with interest in quantitatively-based fields.

**Daniel R. Devos Science and Technology Scholarship.** Awarded to a senior student who has financial need; is majoring in Engineering, Computer Science, Nursing or some other technology and/or scientific major; and who has a QPA of 3.25 or higher

**Clayton C. Dovey Jr. Allied Health/School of Nursing Scholarship.** Students must be juniors or seniors who are graduates of Conemaugh Health System's Allied Health or School of Nursing program and who are going to enter the allied health or nursing field. Recipients are selected based on financial need, academic ability, and citizenship.

**Michael L. Elswick Scholarship.** This scholarship supports juniors or seniors who are majoring in journalism, who are financially needy, and who have graduated from any of the high schools in the *Tribune-Democrat* circulation area.

**Emglo Accounting Scholarship.** Supports a financially needy full-time junior from Cambria or Somerset County who is majoring in accounting and has a QPA of 3.50 or better in the accounting major without regard to all other coursework.

**Albert L. Etheridge, Ph.D, Scholarship.** This scholarship supports the tuition and/or books of students that have completed a minimum of 60 credit hours and who have maintained a QPA of 3.25, and who must maintain a semester QPA of 3.0 while holding this scholarship

**Edith Davis Eve Foundation Scholarship.** This need-based scholarship is awarded to students who reside in Blair County, Pennsylvania. The scholarship is renewable as long as funds are received from the foundation.

**Myron F. and Inez Lou Fetterolf Education Scholarship.** Scholarships are preferentially granted to children of Fetterolf Group employees residing in Somerset or Snyder County.

**Colonel George W. and Louise M. Gage Scholarship.** This scholarship was established for full-time students in honor of the University of Pittsburgh at Johnstown Advisory Board member George W. Gage.

**Emory Fisher Post #30 GAR Scholarship.** The Emory Fisher Post 30 of the Grand Army of the Republic has provided scholarship funds for descendants of those who served in the Union Army in the Civil War. Applicants must be Pennsylvania residents (with a preference for those from the Johnstown area), must have completed their freshman year with above average scholastic records, and must have financial need.

**Rob and Jeanne Gleason Political Science Scholarship.** This award supports a junior or senior student who is a political science major from Cambria County and who has a QPA of 3.5

**David A. Glosser Foundation Scholarship.** This foundation provides one four-year scholarship yearly to an incoming freshman from Cambria or Somerset County.

**William F. Goenner IV Scholarship.** This scholarship is awarded to students enrolled in the Division of Education or Division of Natural Sciences who have demonstrated motivation, academic excellence, and promise for success. Additionally, applicants are evaluated based on financial need.

**Martin and Jane S. Goldhaber Scholarship.** This fund provides grants to deserving students who are children of Pepsi-Cola Bottling Co. of Johnstown employees.

**Dr. Robert W. Hartnett Scholarship.** Preference for recipients is given to students who are graduates of Greater Johnstown High School that actively participate in an intercollegiate athletic program and have an interest in pursuing a career in medicine.

**Blanche B. and Ruth Rebecca Heffley Scholarship.** These scholarships are awarded during the freshmen year to Cambria and Somerset County students who have graduated from an area high school.

**Annette L. Hinks Chemistry Scholarship.** This scholarship supports a financially needy student who is a chemistry major, has attained 60 credits, and maintains a QPA of 3.25.

**Robert L. Hite Memorial Scholarship.** Will provide financial assistance to students at the University of Pittsburgh at Johnstown enrolled in Business, Economics, Engineering, or related fields of study. Preference will be given for financial need, residents of Cambria County, Pennsylvania or contiguous counties.

**Jacob M. Hoffman Memorial Scholarship.** Recipients of this scholarship must be freshmen and graduates of Richland Township High School who have demonstrated financial need and have an above average scholastic record.

**Hoover, Ronald P. and Jean C. Hoover Scholarship.** Awarded to a student who is from Western Pennsylvania; has financial need; is majoring in Social Sciences with an emphasis in Economics or History; and who has a QPA of 3.00 or higher.

**Esther Goldhaber Jacovitz Scholarship.** This scholarship is for deserving full-time junior or senior students enrolled full-time in business, economics, or accounting. Recipients must have a 3.0 QPA for consideration and maintain a 3.0 QPA to have the scholarship renewed.

**Roy D. Johns Memorial Scholarship.** Recipients of this scholarship must demonstrate outstanding academic achievement and participate in one or more intercollegiate sports.

**Johnstown Educational Foundation Scholarship.** This scholarship supports deserving students from Cambria or Somerset County.

**Burrell K. Johnson Scholarship.** This scholarship is awarded to an outstanding minority student.

**Klatzkin Scholarship.** The recipient must be a U.S. citizen, demonstrate financial need, be scholastically able, and be a resident of Cambria, Somerset, Bedford, Blair, or Indiana County.

**John G. Klavuhn Scholarship.** Awarded to a freshman, sophomore, junior or senior student who is majoring in Mechanical Engineering, has a QPA of 3.25 or higher, and has financial need. Preference will be given to students who have permanent residence in Somerset and Cambria counties.

**G. William Klemstine Scholarship.** Students must reside in Cambria or Somerset Counties in PA. Must demonstrate financial need and not have other scholarships available to them.

**Mary E. Kocher and Stanley B. Education Scholarship.** This scholarship supports sophomore, junior, or senior-level students in the Division of Education who plan to be public elementary school teachers. Grants are limited to students from Cambria and contiguous counties who have financial need and academic ability as demonstrated by a QPA of 3.0.

**Joseph L. Krofina Scholarship Fund.** Awarded annually to a student with an interest in mathematics or science, who has also demonstrated financial need. Preference is given to graduates of Conemaugh Valley High School in Cambria County, with first preference given to students who live in Bon Air.

**Charles Kunkle Jr. Scholarship Fund.** Recipients shall be full-time undergraduate students enrolled at the University of Pittsburgh at Johnstown. Applicants will be evaluated by UPJ student aid officers with preference being given to those who demonstrate academic excellence.



**Anna Louise Leber Scholarship.** This scholarship supports talented and deserving female students.

**Cecil K. Leberknight Scholarship.** Recipients are juniors or seniors who are enrolled in political science and demonstrate academic merit, good citizenship, and exhibits potential for a career in government. Students must have the potential for completing at least 60 credits at Pitt-Johnstown with a current overall and major QPA exceeding 3.25.

**H.F. "Red" Lenz Scholarship.** These grants are provided for full-time engineering freshmen who display above average academic achievement as measured by rigorous secondary school curriculum, class rank, grade point average, and aptitude test scores.

**Irving L. London Scholarship.** This endowment provides grants to second-year students in premedical studies and engineering. Applicants are evaluated in terms of financial need, academic ability, and citizenship.

**Christine Marie (Stultz) Louder Memorial Scholarship.** Awarded to incoming freshman who has graduated with a B average as indicated by a 3.0 overall QPA and who is pre-education major.

**Anuj K. Malhotra Memorial Scholarship.** Scholarships are limited to qualified, financially needy sophomore students who are residents of Cambria County.

**Hubert H. and Ruby G. Mallinson Scholarship.** These grants are provided for juniors or seniors who are enrolled in financial services or education programs. Preference is given to those who reside in Cambria or contiguous counties. Applicants are considered in terms of financial need, academic ability (QPA of 3.0 or higher), and citizenship as demonstrated by participation in student life.

**Billy Miller Endowed Scholarship Fund.** Supports the educational expenses of students from Somerset or Bedford Counties, with preference given to students of the Meyersdale Area High School District. Recipients must be in good academic standing and demonstrate financial need.

**Matthew A. Oberst Scholarship.** For the benefit of full-time sophomore, junior, or senior students attending the University of Pittsburgh at Johnstown who are Engineering students. Awards from the Scholarship fund shall be given annually to a student that is a Bishop McCort High School Graduate that has (i) financial need, and (ii) has maintained a GPA of 3.0 or higher.

**Leonard J. Olbum Scholarship.** This fund provides financial assistance to deserving students, with preference given to business/economics students.

**Elvina J. Owen Journalism Scholarship.** This scholarship supports a deserving student who is majoring in journalism.

**Joanne Palumbo Perna Scholarship.** Support for a financially needy, full-time junior or senior student from Cambria, Bedford, Somerset, or Blair Counties who is majoring in Pre-Law or Special Education and has a QPA of 3.00 or better.

**Brenda J. Pardini, Ph.D., Scholarship.** This scholarship supports a student active in or employed by the Office of Student Life at Pitt-Johnstown.

**Pennsylvania Society of Professional Engineers Scholarship.** The society provides scholarships to full-time students majoring in engineering that have finished at least the first term of the engineering program. Students must be scholastically able and be Pennsylvania residents from Cambria, Somerset, Bedford, Fulton, or Indiana County for the previous five years.

**Phi Kappa Phi Award for Rising Seniors.** Student that has completed a minimum of 90 academic credits at the academic semester in which the award is received. This scholarship supports students who are members of the UPJ Chapter of Phi Kappa Phi, and consideration will be given only to members.

**Phi Kappa Phi Merit Scholarship.** Awarded to incoming freshmen as part of ongoing efforts to attract an academically strong cohort of student-scholars.

**Pitt-Johnstown Scholarship.** Many other individuals and organizations contribute yearly to the Pitt-Johnstown Scholarship Fund. Recipients of these funds are students with the potential for academic success who have demonstrated financial need.

**Pitt-Johnstown Alumni Association Legacy Scholarship.** Awarded to a son, daughter, grandson, granddaughter, or sibling of a Pitt-Johnstown alumnus who is a current member of the Pitt-Johnstown Alumni Association. Applicant must be an incoming freshman who is a first-time college student with a minimum cumulative high school GPA of 3.0 on a 4.0 scale.

**REB Commuter Scholarship.** This scholarship provides funds for needy, full-time, commuting students who are at least three-year residents of and high school graduates from the following Pennsylvania counties: Cambria, Somerset, Bedford, Indiana, or Westmoreland. Recipients must be in the top 10% of their high school graduating class, have a minimum 1200 SAT, and demonstrate financial need.

**Michael R. and M. Evelyn Risko Scholarship.** This scholarship is available to full-time sophomore, junior, or senior students who major in Education. Students must demonstrate financial need and have a 3.0 QPA or higher. Preference is given to residents of Cambria County, Pennsylvania.

**George C. Rutledge Scholarship.** This fund provides scholarships to students who are children of First National Bank employees. Students are evaluated in terms of financial need, academic ability, and citizenship as demonstrated by participation in student life.

**Paul H. Saylor Memorial Scholarship.** This scholarship provides funds to engineering students who have recently completed the first course in engineering mechanics, have a minimum QPA of 3.25, have demonstrated student citizenship, and a promise for success in the engineering field.

**Benn Shadden Memorial Scholarship.** This endowment provides assistance for the freshman year to graduates of Blacklick Valley, Westmont Hilltop, Bishop Carroll, Greater Johnstown, and Bishop McCort High Schools. Candidates are evaluated in terms of high school record, academic ability, citizenship, and financial need.

**Shaping a Future Scholarship.** This scholarship is given to deserving students.

**Harry Silverstone Family Memorial Scholarship.** This fund provides grants to freshman students who are graduates of selected Cambria and Somerset County high schools. Applicants are evaluated in terms of financial need, academic ability, and citizenship.

**Rhea Louise Smith Scholarship.** This fund provides scholarships to students from Greater Johnstown High School who have graduated in the upper third of their class.

**Robert M. and Eunice B. Smith Scholarship.** Graduates from Greater Johnstown, Somerset, and Westmont Hilltop High Schools who are selected to participate in the Robert M. Smith Academy during the senior year of high school are eligible for consideration of funds of this scholarship. Academic merit is used in the selection process. Recipients are chosen collaboratively by administrators from the respective high schools and Pitt-Johnstown.

**Robert M. and Eunice B. Smith Business School Scholarship.** This scholarship supports undergraduate business students at the University of Pittsburgh at Johnstown.

**Minnie Patton Stayman.** Students who are residents of the city of Altoona, PA who demonstrate financial need.

**Merle V. Stroz and Dorothy A. Partsch Scholarship.** For the benefit of full-time sophomore, junior or senior students attending the University of Pittsburgh at Johnstown. Awards shall be given annually to a student that has (i) financial need and (ii) has maintained a GPA of 3.3 or higher. Preference shall be given to qualified student applicants from the counties of Cambria, Somerset, Westmoreland, Allegheny, Centre, Blair or Bedford Pennsylvania.

**Susan McLuckie Spangler Memorial Scholarship.** This fund provides scholarships for deserving junior or senior full-time students enrolled in communication/theater who demonstrate financial need. Recipients must maintain a 3.0 cumulative QPA.

**Francis L. Sutton and Josephine B. Scholarship.** Awards from this scholarship fund shall be given annually to a full-time student that is a Bishop McCort High School graduate with financial need.

**Sara Jane Torquato Scholarship.** This scholarship is limited to incoming freshmen from Cambria County who are financially needy and rank in the top 10 percent of their graduating class. English majors can continue to receive the scholarship as long as they maintain a QPA average of 3.0 or higher.

**John W. Ungar Health Sciences Scholarship.** This scholarship supports students who are going to enter the allied health, respiratory care, or nursing professions. Applicants are evaluated for financial need and academic ability.

**Donald Anthony Vacco Scholarship.** This scholarship supports junior and senior students who maintain a QPA of 2.0 and have financial need. Preference is given to high school graduates from the Greater Johnstown Area of Pennsylvania.

**Sara A. and Salvator J. (Sam) Valenty Award.** Awarded annually to a student pursuing a degree from the College's business management program or other business-related programs. The student must demonstrate both academic achievement (minimum cumulative GPA of 3.0) and financial need.

**John J. Vanyo Jr. Memorial Scholarship.** This scholarship is for upper-class students who are residents of the areas served by the Westmont Hilltop, Somerset Area, and Berlin-Brothersvalley School Districts. Applicants must demonstrate financial need, average academic ability, and leadership qualities as demonstrated by participation in student life.

**Mark Vella Fund.** This fund assists students who are enrolled in health care related majors.

**Marcia Ponas Warrick Memorial Scholarship.** This scholarship provides grants to deserving undergraduate students. Applicants are evaluated in terms of financial need, academic ability, and citizenship.

**Reid A. Weimer Scholarship.** This scholarship is awarded to outstanding juniors in the Division of Education who have demonstrated financial need and are graduates of a Somerset County high school.

**Reid A. and Thelma Lint Weimer Memorial Scholarship.** Awarded annually to several financially needy, Education majors who are graduates of a Somerset county high schools. Recipients can either be freshmen who graduated in the top 10% of their class or upper class students who have a QPA of 3.25 or higher.

**John I. Whalley Jr. Education Scholarship.** This scholarship provides funds for a financially needy and motivated student enrolled in business.

**James E. and Margaret Wilkes Athletic Scholarship.** This scholarship supports the Mountain Cat men's basketball program.

**James E. Wilkes Windber Scholarship.** Awarded to students with financial need who are graduates of Windber Area High School in Somerset County Pennsylvania. Recipients must maintain a QPA of 2.5 and are expected to write a thank you letter.

**Margaret E. Wilkes Scholarship for Nurses.** Supports one student enrolled in the nursing program who has financial need and a QPA of 3.0 or better.

**James E. and Margaret Wilkes Scholarship.** This scholarship provides funds to junior and senior students from Somerset County with a QPA of at least 2.5.

**Demos Zamagias Memorial Scholarship.** This scholarship provides grants to students who participate in one or more intercollegiate athletic programs.

# Title IV Refund Policy

Adjustments to tuition charges resulting from official resignation are based on the effective date of resignation in accordance with the federally mandated calculation.

The calculation is based on the period of enrollment completed. That percentage is computed by dividing the total number of calendar days in the term into the number of calendar days completed, as of the date of student notification. The percentage of Title IV assistance to which the student is entitled (or "earned") is equal to this percentage of the term completed, up to 60 percent. If the resignation occurs after 60 percent of the term is completed, the percentage is equal to 100 percent.

The amount of the Title IV aid which must be returned is based on the percentage of "unearned" aid. That percentage is computed by subtracting earned aid from 100 percent. The University is required to return the lesser of: 1) the unearned aid percentage applied to institutional charges or 2) the unearned aid percentage applied to the total Title IV aid received.

The student is required to return the difference between the amount of unearned aid and the amount returned by the University. If the student (or parents, in the case of PLUS loans) is required to return a portion or all of his/her loan proceeds, the calculated amount is to be repaid according to the loan's terms. Students must return only half the amount of grant funds calculated. Funds are returned in the following order of priority:

- Unsubsidized Federal Direct Loans
- Subsidized Federal Direct Loans
- Federal Perkins Loans
- Federal Direct Plus Loans
- Federal Pell Grants
- Federal Supplemental Educational Opportunity Grant (SEOG)
- Other Title IV assistance for which a return of funds is required
- Other Federal, state, private, or institutional financial assistance
- Students

## Veterans' Benefits

The Office of the Registrar, 279 Blackington Hall, assists veterans, war orphans, and veterans' dependents in obtaining and using their VA educational benefits. Applications for benefits may be obtained from veterans' service organizations, the American Red Cross, the Office of the Registrar, Department of Veterans' Affairs regional offices, or at [www.gibill.va.gov](http://www.gibill.va.gov).

Veterans must apply on VA form 22-1990 Application for Education Benefits. This application must be accompanied by a certified copy of their DD-214 Report of Separation form. DD-214 forms must be certified by a county court house official or a Department of Veterans' Affairs regional office. Active duty service persons may also apply on VA form 22-1990. The form must be signed by the applicant, as well as his/her education officer and his/her commanding officer. Eligible members of the Selected Reserve must provide the Office of the Registrar with a copy of VA form 2384 Notice of Basic Eligibility.

Surviving spouses, sons, and daughters must apply on VA form 22-5490 Application for Survivors' and Dependents' Educational Assistance. Upon receipt at the Regional Processing Center, the applicant will be notified concerning his/her eligibility.

Further information on veterans' benefits can be obtained from the Office of the Registrar, or from a [Department of Veterans' Affairs](#) regional office.

## Tuition and Mandatory Fees

### Pennsylvania Resident Tuition Rates

School	Full-Time Per Academic Year	Full-Time Per Term	Part-Time Per Credit
Johnstown Campus (except for Engineering, Nursing, and Respiratory Care)	\$13,198	\$6,599	\$549
Engineering	\$15,300	\$7,650	\$637
Nursing	\$16,908	\$8,454	\$704
Respiratory Care	\$14,114	\$7,057	\$588

### Out-of-State Resident Tuition Rates

School	Full-Time Per Academic Year	Full-Time Per Term	Part-Time Per Credit
Johnstown Campus (except for Engineering, Nursing, and Respiratory Care)	\$24,666	\$12,333	\$1,027
Engineering	\$29,172	\$14,586	\$1,215
Nursing	\$31,454	\$15,727	\$1,310
Respiratory Care	\$26,362	\$13,181	\$1,098

## Mandatory Fees

### Undergraduate

Fee	Full-Time Per Academic Year	Full-Time Per Term	Part-Time Per Term

<b>Student Activity Fee</b>	\$180	\$90	----
<b>Wellness Fee</b>	\$80	\$40	----
<b>Student Facility Fee</b>	\$196	\$98	\$12
<b>Computing and Network Services Fee</b>	\$350	\$175	\$100
<b>Student Recreation Fee</b>	\$152	\$76	\$15
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<b>TOTAL</b>	\$958	\$479	\$127

# Business and Enterprise

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Chair: Raymond B. Wrabley, Ph.D. (Interim)

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## Division Policies and Requirements

Candidates for graduation in Business and Enterprise must have earned a minimum of 120 credits. Of the 120, a maximum of 15 credits may be earned in non-Arts and Science programs of the University (e.g., education) or in courses offered for the convenience of students with particular professional goals (e.g., chemistry for nursing).

The final 30 credits **MUST** be earned at Pitt-Johnstown.

Degree candidates must have a grade point average of 2.000 (C average) or higher in all work at the University of Pittsburgh at Johnstown or at the University's other campuses.

The courses required for a major must be completed with a minimum grade point average of 2.000.

All students must complete the general education requirements in addition to major requirements.

These include core competencies in English writing (demonstrated by the successful completion of ENGCOMP 0005 - COMPOSITION 1 and ENGCOMP 0006 - COMPOSITION 2); public speaking (demonstrated by successful completion of COMMRC 0052- Public Speaking); and quantitative reasoning (demonstrated by successful completion of one of the Quantitative Reasoning courses listed elsewhere in this catalog). In addition, students must pass ten other General Education courses from at least eight different disciplines, distributed over four Worlds of Knowledge (Aesthetic and Creative Expression, Society and Civics, Global History and Culture, and Science and Nature).

Students may earn no more than 2 credits in physical education per term, to a maximum of 8 during their entire academic career at Pitt-Johnstown. Only the first four physical education credits are counted as being in arts and sciences; any additional credits are considered as non-arts and sciences.

### Experiential Learning

All students graduating with a degree in Business must complete at least six credits of Experiential Learning. In addition to the senior capstone course, BUS 1700 - BUSINESS STRATEGY which counts for three credits, students can complete a 3-credit internship in their major or an additional course in their major that has been designated as an Experiential Learning class. This requirement is intended to provide students with skills and experience in real world settings, doing projects for real world clients, or completing simulations of real world business applications.

### Business Internships

Each of the Business majors offers students an opportunity to enroll in an internship that provides field experience in some aspect of the students' career interests. Students interested in serving an internship during their junior or senior year should discuss this with their academic advisor. Internships are graded S/U only.

## Academic Programs Offered

### Major

## Accounting, BS

Faculty: Cristina DeDiana, CPA; Greg Petyak, CPA; Deborah Smiach-Zakrzewski, CPA

## Core Courses

- ACCT 0115 - ACCOUNTING PRINCIPLES 1
- ACCT 0200 - ACCOUNTING PRINCIPLES 2
- BUS 0100 - INTRODUCTION TO BUSINESS
- BUS 0350 - MICROCOMPUTER APPLICATIONS FOR BUSINESS
- BUS 1540 - ETHICS AND LEADERSHIP
- FIN 0300 - PRINCIPLES OF FINANCE
- IS 0400 - INTRO TO INFORMATION SYSTEMS
- MGMT 0500 - PRINCIPLES OF MANAGEMENT
- MRKT 0600 - PRINCIPLES OF MARKETING

## Required Statistics

- STAT 1040 - STATISTICS FOR BUSINESS/ECONOMICS

## Required Economics Courses

- ECON 0105 - INTRO MICROECONOMIC THEORY
- ECON 0115 - INTRO TO MACROECONOMIC THEORY

## Required Math and Computer Science

- MATH 0121 - BUSINESS CALCULUS
- CS 0015 - INTRODUCTION TO COMPUTER PROGRAM
- CS 0016 - INTRODUCTION TO COMPUTER PROGRAMMING APPLICATIONS

## Required Writing

- ENGWR1 1192 - TECHNICAL WRITING

## Required Senior Capstone

- BUS 1700 - BUSINESS STRATEGY

## Financial Accounting Track Required Courses

- ACCT 1100 - MANAGERIAL ACCOUNTING
- ACCT 1120 - INTERMEDIATE ACCOUNTING 1
- ACCT 1130 - INTERMEDIATE ACCOUNTING 2
- ACCT 1140 - AUDITING
- ACCT 1160 - INDIVIDUAL TAX ACCOUNTING 1

## Financial Accounting Track Electives



Select three of the following courses:

- ACCT 0281 - MONEY AND BANKING
- ACCT 1110 - COST ACCOUNTING
- ACCT 1146 - FORENSIC ACCOUNTING
- ACCT 1151 - ADVANCED ACCOUNTING THEORY
- ACCT 1156 - GOVERNMENT AND NONPROFIT ACCOUNTING
- ACCT 1171 - BUSINESS TAX ACCOUNTING 2
- ACCT 1190 - ACCOUNTING INFORMATION SYSTEMS
- ACCT 1286 - ACCOUNTING INTERNSHIP 1
- ACCT 1315 - PERSONAL FINANCIAL PLANNING
- ACCT 1325 - FINANCIAL STATEMENT ANALYSIS
- ACCT 1570 - BUSINESS LAW 1

## 150 Hour Option (Not required for BS, Accounting)

Taken in Consultation with Advisor

- ACCT 1360 - ACCOUNTING CAPSTONE
- ACCT 1365 - CPA REVIEW 1
- ACCT 1366 - CPA REVIEW 2

## Managerial Accounting Track Required Courses

- ACCT 1100 - MANAGERIAL ACCOUNTING
- ACCT 1110 - COST ACCOUNTING
- ACCT 1120 - INTERMEDIATE ACCOUNTING 1
- ACCT 1130 - INTERMEDIATE ACCOUNTING 2
- ACCT 1325 - FINANCIAL STATEMENT ANALYSIS

## Managerial Accounting Track Electives

Select three courses from the following:

- ACCT 0281 - MONEY AND BANKING
- ACCT 1140 - AUDITING
- ACCT 1171 - BUSINESS TAX ACCOUNTING 2
- ACCT 1286 - ACCOUNTING INTERNSHIP 1
- ACCT 1300 - INVESTMENTS
- ACCT 1356 - INTERMEDIATE FINANCIAL MANAGEMENT

## Economics, BA

Faculty: Guo Kai

To graduate with a baccalaureate degree in economics, a student must complete both the introductory (ECON 0105 and ECON 0115) and intermediate (ECON 1101 and ECON 1111) sequences in micro-and macroeconomics, as well as six other major courses in economics. Completion of the 0105-0115 introduction sequence is a prerequisite to any major course. Business courses may be taken as electives outside the economics major, but do not fulfill major course requirements in economics.

Majors must also complete STAT 1040 - STATISTICS FOR BUSINESS/ECONOMICS and an acceptable calculus course (MATH 0121) or sequence (MATH 0221/MATH 0231). These should be completed by the end of the sophomore year. Majors who are interested in pursuing graduate study in economics or a related field are advised to complete a three-term sequence in calculus (MATH 0221/MATH 0231/MATH 0241).

## **Finance, BS**

Finance, BS (Tracks in Chartered Financial Analyst and General Finance)

Faculty: James Teague

### **Core Courses**

- ACCT 0115 - ACCOUNTING PRINCIPLES 1
- BUS 0100 - INTRODUCTION TO BUSINESS
- BUS 0350 - MICROCOMPUTER APPLICATIONS FOR BUSINESS
- FIN 0300 - PRINCIPLES OF FINANCE
- IS 0400 - INTRO TO INFORMATION SYSTEMS
- MGMT 0500 - PRINCIPLES OF MANAGEMENT
- BUS 1540 - ETHICS AND LEADERSHIP
- MRKT 0600 - PRINCIPLES OF MARKETING

### **Required Statistics**

- STAT 1040 - STATISTICS FOR BUSINESS/ECONOMICS

### **Required Economics Courses**

- ECON 0105 - INTRO MICROECONOMIC THEORY
- ECON 0115 - INTRO TO MACROECONOMIC THEORY

### **Required Math and Computer Science**

- MATH 0121 - BUSINESS CALCULUS
- CS 0015 - INTRODUCTION TO COMPUTER PROGRAM
- CS 0016 - INTRODUCTION TO COMPUTER PROGRAMMING APPLICATIONS

### **Required Writing**

- ENGWR1 1192 - TECHNICAL WRITING

## Required Senior Capstone

- BUS 1700 - BUSINESS STRATEGY

## Chartered Financial Analyst Track Required Courses

- FIN 1310 - INVESTMENTS
- FIN 1315 - PERSONAL FINANCIAL PLANNING
- FIN 1356 - INTERMEDIATE FINANCIAL MANAGEMENT
- FIN 1370 - PORTFOLIO THEORY
- FIN 1380 - DERIVATIVES AND ALTERNATIVE INVESTMENTS

## Chartered Financial Analyst Track Electives

- ECON 0281 - INTRODUCTION TO MONEY & BANKING
- ECON 0501 - INTRODUCTION TO INTERNATIONAL ECONOMICS
- ECON 1141 - ECONOMIC FORECASTING
- ECON 1151 - FINANCIAL ECONOMICS
- FIN 1365 - FINANCE SPECIAL TOPICS
- FIN 1390 - INTERNATIONAL FINANCE
- FIN 1483 - FINANCE INDEPENDENT STUDY
- FIN 1486 - FINANCE INTERNSHIP 1

## General Finance Track Required Courses

- FIN 1310 - INVESTMENTS
- FIN 1356 - INTERMEDIATE FINANCIAL MANAGEMENT
- FIN 1370 - PORTFOLIO THEORY

## General Finance Electives

- ECON 0281 - INTRODUCTION TO MONEY & BANKING
- ECON 0501 - INTRODUCTION TO INTERNATIONAL ECONOMICS
- ECON 1141 - ECONOMIC FORECASTING
- ECON 1151 - FINANCIAL ECONOMICS
- FIN 1315 - PERSONAL FINANCIAL PLANNING
- FIN 1365 - FINANCE SPECIAL TOPICS
- FIN 1380 - DERIVATIVES AND ALTERNATIVE INVESTMENTS
- FIN 1390 - INTERNATIONAL FINANCE
- FIN 1483 - FINANCE INDEPENDENT STUDY
- FIN 1486 - FINANCE INTERNSHIP 1

## Information Systems, BS

Information Systems, BS (Tracks in Business Information Systems and Healthcare Information Systems)

Faculty: Travis Stouffer

## Core Courses

- IS 0400 - INTRO TO INFORMATION SYSTEMS
- IS 1410 - DATABASE MANAGEMENT SYSTEMS
- IS 1420 - SYSTEMS ANALYSIS AND DESIGN
- IS 1435 - IS PROJECT MANAGEMENT
- CS 1736 - SOFTWARE ENGINEERING
- MGMT 0500 - PRINCIPLES OF MANAGEMENT
- BUS 1540 - ETHICS AND LEADERSHIP

## Required Economics Courses

- ECON 0105 - INTRO MICROECONOMIC THEORY
- ECON 0115 - INTRO TO MACROECONOMIC THEORY

## Required Math and Computer Science Courses

- MATH 0401 - DISCRETE MATHEMATICAL STRUCTURES
- MATH 0121 - BUSINESS CALCULUS
- CS 0015 - INTRODUCTION TO COMPUTER PROGRAM
- CS 0016 - INTRODUCTION TO COMPUTER PROGRAMMING APPLICATIONS

## Required Writing

- ENGWR 1192 - TECHNICAL WRITING

## Business Information Systems Track Required Courses

- BUS 0100 - INTRODUCTION TO BUSINESS
- ACCT 0115 - ACCOUNTING PRINCIPLES 1
- FIN 0300 - PRINCIPLES OF FINANCE
- BUS 0350 - MICROCOMPUTER APPLICATIONS FOR BUSINESS
- MRKT 0600 - PRINCIPLES OF MARKETING
- STAT 1040 - STATISTICS FOR BUSINESS/ECONOMICS
- BUS 1700 - BUSINESS STRATEGY

## Business Information Systems Track Electives

- CS 0417 - INTERMEDIATE PROGRAMMING USING JAVA
- IS 1412 - GRAPHIC DESIGN
- IS 1415 - WEB DEVELOPMENT
- IS 1425 - NETWORKING
- IS 1426 - HARDWARE AND OPERATING SYSTEMS

- IS 1428 - MOBILE APPS
- IS 1441 - BUSINESS INTELLIGENCE
- IS 1445 - IS SPECIAL TOPICS
- IS 1450 - ENTERPRISE APPLICATIONS
- IS 1488 - IS INTERNSHIP
- IS 1489 - IS INDEPENDENT STUDY

## Healthcare Information Systems Track Required Courses

- HLTHCR 1054 - HEALTH CARE MANAGEMENT
- HLTHCR 1119 - LEGAL ASPECTS OF HEALTH CARE
- HLTHCR 1120 - LANGUAGE OF MEDICINE
- IS 1460 - HEALTH INFORMATION MANAGEMENT APPLICATIONS 1
- IS 1461 - HEALTH INFORMATION MANAGEMENT APPLICATIONS 2

## Healthcare Information Systems Track Elective Courses

- CS 0417 - INTERMEDIATE PROGRAMMING USING JAVA
- IS 1412 - GRAPHIC DESIGN
- IS 1415 - WEB DEVELOPMENT
- IS 1425 - NETWORKING
- IS 1426 - HARDWARE AND OPERATING SYSTEMS
- IS 1428 - MOBILE APPS
- IS 1441 - BUSINESS INTELLIGENCE
- IS 1445 - IS SPECIAL TOPICS
- IS 1450 - ENTERPRISE APPLICATIONS
- IS 1488 - IS INTERNSHIP
- IS 1489 - IS INDEPENDENT STUDY

## Management, BS

Management, BS (Tracks in General Management, Healthcare Management, and Human Resources Management)

Faculty: John Byrne

## Management Core Courses

### Core Courses

- ACCT 0115 - ACCOUNTING PRINCIPLES 1
- ACCT 0200 - ACCOUNTING PRINCIPLES 2
- ACCT 1100 - MANAGERIAL ACCOUNTING
- BUS 0100 - INTRODUCTION TO BUSINESS
- BUS 0350 - MICROCOMPUTER APPLICATIONS FOR BUSINESS
- BUS 1540 - ETHICS AND LEADERSHIP

- FIN 0300 - PRINCIPLES OF FINANCE
- IS 0400 - INTRO TO INFORMATION SYSTEMS
- MGMT 0500 - PRINCIPLES OF MANAGEMENT
- MRKT 0600 - PRINCIPLES OF MARKETING

### Required Statistics

- STAT 1040 - STATISTICS FOR BUSINESS/ECONOMICS

### Required Economics Courses

- ECON 0105 - INTRO MICROECONOMIC THEORY
- ECON 0115 - INTRO TO MACROECONOMIC THEORY

### Required Math and Computer Science

- CS 0015 - INTRODUCTION TO COMPUTER PROGRAM
- CS 0016 - INTRODUCTION TO COMPUTER PROGRAMMING APPLICATIONS
- MATH 0121 - BUSINESS CALCULUS

### Required Writing

- ENGWR1 1192 - TECHNICAL WRITING

### Required Senior Capstone

- BUS 1700 - BUSINESS STRATEGY

### General Management Track Required Courses

- MGMT 1000 - MANAGEMENT POLICY
- MGMT 1510 - HUMAN RESOURCES MANAGEMENT
- MGMT 1520 - ORGANIZATIONAL BEHAVIOR
- MGMT 1530 - OPERATIONS AND SUPPLY CHAIN MANAGEMENT

### General Management Track Electives

- MGMT 1435 - MANAGERIAL PROJECT MANAGEMENT
- MGMT 1535 - ORGANIZATIONAL CHANGE MANAGEMENT
- MGMT 1550 - GLOBAL ISSUES IN BUSINESS MANAGEMENT
- MGMT 1610 - QUALITY MANAGEMENT
- MGMT 1683 - MANAGEMENT INDEPENDENT STUDY
- MGMT 1686 - MANAGEMENT INTERNSHIP 1
- PSY 1636 - ORGANIZATIONAL PSYCHOLOGY

## Healthcare Management Track Required Courses

- HLTHCR 1054 - HEALTH CARE MANAGEMENT
- HLTHCR 1119 - LEGAL ASPECTS OF HEALTH CARE
- HLTHCR 1120 - LANGUAGE OF MEDICINE
- MGMT 1686 - MANAGEMENT INTERNSHIP 1

## Healthcare Management Electives

- MGMT 1435 - MANAGERIAL PROJECT MANAGEMENT
- MGMT 1535 - ORGANIZATIONAL CHANGE MANAGEMENT
- MGMT 1550 - GLOBAL ISSUES IN BUSINESS MANAGEMENT
- MGMT 1610 - QUALITY MANAGEMENT
- MGMT 1683 - MANAGEMENT INDEPENDENT STUDY
- MGMT 1686 - MANAGEMENT INTERNSHIP 1
- PSY 1636 - ORGANIZATIONAL PSYCHOLOGY

## Human Resources Management Track Required

- MGMT 1515 - RECRUITMENT, SELECTION, RETENTION, AND SEPARATION
- MGMT 1520 - ORGANIZATIONAL BEHAVIOR
- MGMT 1525 - EMPLOYMENT LAW AND NEGOTIATION
- MGMT 1545 - COMPENSATION, BENEFITS AND PERFORMANCE MANAGEMENT

## Human Resources Management Track Electives

- MGMT 1435 - MANAGERIAL PROJECT MANAGEMENT
- MGMT 1535 - ORGANIZATIONAL CHANGE MANAGEMENT
- MGMT 1550 - GLOBAL ISSUES IN BUSINESS MANAGEMENT
- MGMT 1610 - QUALITY MANAGEMENT
- MGMT 1683 - MANAGEMENT INDEPENDENT STUDY
- MGMT 1686 - MANAGEMENT INTERNSHIP 1
- PSY 1636 - ORGANIZATIONAL PSYCHOLOGY

## Marketing, BS

Marketing, BS

Faculty: Skip Glenn; John McGrath

### Core Courses

- ACCT 0115 - ACCOUNTING PRINCIPLES 1
- BUS 0100 - INTRODUCTION TO BUSINESS
- BUS 0350 - MICROCOMPUTER APPLICATIONS FOR BUSINESS

- BUS 1540 - ETHICS AND LEADERSHIP
- FIN 0300 - PRINCIPLES OF FINANCE
- IS 0400 - INTRO TO INFORMATION SYSTEMS
- MGMT 0500 - PRINCIPLES OF MANAGEMENT
- MRKT 0600 - PRINCIPLES OF MARKETING

## Required Economics Courses

- ECON 0105 - INTRO MICROECONOMIC THEORY
- ECON 0115 - INTRO TO MACROECONOMIC THEORY

## Required Math

- MATH 0121 - BUSINESS CALCULUS

## Required Writing

- ENGWR1 1192 - TECHNICAL WRITING

## Required Senior Capstone

- BUS 1700 - BUSINESS STRATEGY

## Marketing Required Courses

- MRKT 1600 - CONSUMER BEHAVIOR
- MRKT 1610 - MARKETING RESEARCH
- MRKT 1620 - MARKETING TOOLS AND ANALYTICS
- MRKT 1690 - MARKETING MANAGEMENT

## Marketing Electives

- COMMRC 1133 - INTEGRATED MARKETING COMMUNICATION
- COMMRC 1144 - VISUAL COMMUNICATION
- IS 1410 - DATABASE MANAGEMENT SYSTEMS
- IS 1412 - GRAPHIC DESIGN
- IS 1415 - WEB DEVELOPMENT
- JOURNL 1144 - PUBLIC RELATIONS I
- MRKT 1630 - INTEGRATED DIGITAL MARKETING
- MRKT 1635 - SOCIAL MEDIA WAR ROOM
- MRKT 1640 - INTERNATIONAL MARKETING
- MRKT 1645 - SALES MANAGEMENT
- MRKT 1650 - PRODUCT MANAGEMENT
- MRKT 1655 - PROMOTION MANAGEMENT
- MRKT 1660 - PRICING MANAGEMENT



- MRKT 1665 - DISTRIBUTION MANAGEMENT
- MRKT 1670 - MARKETING SPECIAL TOPICS
- MRKT 1671 - MARKETING INTERNSHIP 1
- MRKT 1680 - ENTREPRENEURS IDEA LAB

## **Minor**

In addition to an academic major, a student may elect to pursue a minor in another academic discipline. The specific requirements for each minor are established by the individual academic disciplines. However, all minors require the completion of a minimum of 18 credits of course work.

## **Business Minor**

### **Business and Enterprise Minors**

In addition to an academic major, a student may elect to pursue a minor in another academic discipline. The specific requirements for each minor are established by the individual academic disciplines. However, all minors require the completion of a minimum of 18 credits of course work. There are minors in business, economics, entrepreneurship and information systems.

## **Economics Minor**

### **Economics Minor**

In addition to an academic major, a student may elect to pursue a minor in another academic discipline. The specific requirements for each minor are established by the individual academic disciplines. However, all minors require the completion of a minimum of 18 credits of course work. There are minors in business, economics, entrepreneurship and information systems.

## **Entrepreneurship Minor**

### **Business and Enterprise Minors**

In addition to an academic major, a student may elect to pursue a minor in another academic discipline. The specific requirements for each minor are established by the individual academic disciplines. However, all minors require the completion of a minimum of 18 credits of course work. There are minors in business, economics, entrepreneurship and information systems.

## **Information Systems Minor**

### **Business and Enterprise Minors**

In addition to an academic major, a student may elect to pursue a minor in another academic discipline. The specific requirements for each minor are established by the individual academic disciplines. However, all minors require the completion of a minimum of 18 credits of course work. There are minors in business, economics, entrepreneurship and information systems.

## **Marketing Minor**

In addition to an academic major, a student may elect to pursue a minor in Marketing. The specific requirements for the minor are noted below.

## Required Into Marketing Course

- MRKT 0600 - PRINCIPLES OF MARKETING

## Required Upper Level Marketing Course

Complete 2 of the courses below:

- MRKT 1600 - CONSUMER BEHAVIOR
- MRKT 1610 - MARKETING RESEARCH
- MRKT 1620 - MARKETING TOOLS AND ANALYTICS
- MRKT 1690 - MARKETING MANAGEMENT

## Business Elective

Complete 1 of the Business courses below:

- ACCT 0115 - ACCOUNTING PRINCIPLES 1
- IS 0400 - INTRO TO INFORMATION SYSTEMS
- MGMT 0500 - PRINCIPLES OF MANAGEMENT

## Elective Upper Level Marketing Courses

Complete 2 of the courses below:

- COMMRC 1144 - VISUAL COMMUNICATION
- COMMRC 1133 - INTEGRATED MARKETING COMMUNICATION
- JOURNL 1144 - PUBLIC RELATIONS 1
- MRKT 1630 - INTEGRATED DIGITAL MARKETING
- MRKT 1635 - SOCIAL MEDIA WAR ROOM
- MRKT 1640 - INTERNATIONAL MARKETING
- MRKT 1645 - SALES MANAGEMENT
- MRKT 1650 - PRODUCT MANAGEMENT
- MRKT 1655 - PROMOTION MANAGEMENT
- MRKT 1660 - PRICING MANAGEMENT
- MRKT 1665 - DISTRIBUTION MANAGEMENT
- MRKT 1670 - MARKETING SPECIAL TOPICS
- MRKT 1680 - ENTREPRENEURS IDEA LAB

## Certificate

### Business Certificate

The Business Certificate program is designed primarily for part-time adult students admitted through adult education. It provides a 30-credit, career-oriented course of study for students who may eventually pursue a Bachelor's degree in a business field.

The Business certificate program has two components:

1. Distribution Component (15 credits):

- CS 0081 - COMPUTER LITERACY
- COMMRC 0052 - PUBLIC SPEAKING
- ENGCOMP 0005 - COMPOSITION 1
- MATH 0001 - ALGEBRA 1
- PSY 0200 - INTRODUCTION TO PSYCHOLOGY

2. Business Core Courses (15 credits):

- ACCT 0115 - ACCOUNTING PRINCIPLES 1
- MGMT 0500 - PRINCIPLES OF MANAGEMENT
- MRKT 0600 - PRINCIPLES OF MARKETING
- MGMT 1520 - ORGANIZATIONAL BEHAVIOR
- Business Elective

Note:

- While many of these courses are frequently offered in the evening, students in the Business Certificate program may have to complete several of their course requirements in daytime class sessions.
- Students may transfer as many as 15 approved equivalency credits from other institutions, provided that at least 15 required course credits (including at least three of the Business core courses) are completed at Pitt-Johnstown and at least a 2.000 overall GPA is maintained.

**ACCT 0115 - ACCOUNTING PRINCIPLES 1**

**ACCT 0200 - ACCOUNTING PRINCIPLES 2**

**ACCT 0281 - MONEY AND BANKING**

**ACCT 1100 - MANAGERIAL ACCOUNTING**

**ACCT 1110 - COST ACCOUNTING**

**ACCT 1120 - INTERMEDIATE ACCOUNTING 1**

**ACCT 1130 - INTERMEDIATE ACCOUNTING 2**

**ACCT 1140 - AUDITING**

**ACCT 1146 - FORENSIC ACCOUNTING**

**ACCT 1151 - ADVANCED ACCOUNTING THEORY**

**ACCT 1156 - GOVERNMENT AND NONPROFIT ACCOUNTING**

**ACCT 1160 - INDIVIDUAL TAX ACCOUNTING 1**

**ACCT 1171 - BUSINESS TAX ACCOUNTING 2**

**ACCT 1190 - ACCOUNTING INFORMATION SYSTEMS**

**ACCT 1270 - FINANCIAL REPORTING**

**ACCT 1280 - ACCOUNTING AND DIRECTED READING**

**ACCT 1283 - ACCOUNTING INDEPENDENT STUDY**

**ACCT 1286 - ACCOUNTING INTERNSHIP 1**

**ACCT 1300 - INVESTMENTS**

**ACCT 1315 - PERSONAL FINANCIAL PLANNING**

**ACCT 1325 - FINANCIAL STATEMENT ANALYSIS**

**ACCT 1356 - INTERMEDIATE FINANCIAL MANAGEMENT**

**ACCT 1360 - ACCOUNTING CAPSTONE**

**ACCT 1365 - CPA REVIEW 1**

**ACCT 1366 - CPA REVIEW 2**

**ACCT 1570 - BUSINESS LAW 1**

**BUS 0100 - INTRODUCTION TO BUSINESS**

**BUS 0350 - MICROCOMPUTER APPLICATIONS FOR BUSINESS**

**BUS 1110 - COST ACCOUNTING CONCEPTS**

**BUS 1115 - MANAGERIAL COST ACCOUNTING APPLICATIONS**

**BUS 1540 - ETHICS AND LEADERSHIP**

**BUS 1700 - BUSINESS STRATEGY**

**ECON 0105 - INTRO MICROECONOMIC THEORY**

**ECON 0115 - INTRO TO MACROECONOMIC THEORY**

**ECON 0281 - INTRODUCTION TO MONEY & BANKING**

**ECON 0401 - LABOR AND THE ECONOMY**

**ECON 0501 - INTRODUCTION TO INTERNATIONAL ECONOMICS**

**ECON 1011 - AMERICAN ECONOMIC HISTORY**

**ECON 1101 - INTERMEDIATE MICROECONOMICS**

**ECON 1111 - INTERMEDIATE MACROECONOMICS**

**ECON 1141 - ECONOMIC FORECASTING**

**ECON 1151 - FINANCIAL ECONOMICS**

**ECON 1370 - ECONOMICS AND THE ENVIRONMENT**

**ECON 1471 - LAW AND ECONOMICS**

**ECON 1810 - SPECIAL TOPICS**

**ECON 1830 - INDEPENDENT STUDY**

**ENTR 1680 - ENTREPRENEURS IDEA LAB**

**ENTR 1685 - ENTREPRENEURS TOOLKIT**

**ENTR 1686 - ENTREPRENEURS FIELD CAMP**

**FIN 0300 - PRINCIPLES OF FINANCE**

**FIN 1310 - INVESTMENTS**

**FIN 1315 - PERSONAL FINANCIAL PLANNING**

**FIN 1356 - INTERMEDIATE FINANCIAL MANAGEMENT**

**FIN 1365 - FINANCE SPECIAL TOPICS**

**FIN 1370 - PORTFOLIO THEORY**

**FIN 1380 - DERIVATIVES AND ALTERNATIVE INVESTMENTS**

**FIN 1390 - INTERNATIONAL FINANCE**

**FIN 1483 - FINANCE INDEPENDENT STUDY**

**FIN 1486 - FINANCE INTERNSHIP 1**

**FIN 1487 - FINANCE INTERNSHIP 2**

**IS 0400 - INTRO TO INFORMATION SYSTEMS**

**IS 1410 - DATABASE MANAGEMENT SYSTEMS**

**IS 1412 - GRAPHIC DESIGN**

**IS 1415 - WEB DEVELOPMENT**

**IS 1420 - SYSTEMS ANALYSIS AND DESIGN**

**IS 1425 - NETWORKING**

**IS 1426 - HARDWARE AND OPERATING SYSTEMS**

**IS 1428 - MOBILE APPS**

**IS 1435 - IS PROJECT MANAGEMENT**

**IS 1440 - QUALITY ASSURANCE**

**IS 1441 - BUSINESS INTELLIGENCE**

**IS 1445 - IS SPECIAL TOPICS**

**IS 1450 - ENTERPRISE APPLICATIONS**

**IS 1460 - HEALTH INFORMATION MANAGEMENT APPLICATIONS 1**

**IS 1461 - HEALTH INFORMATION MANAGEMENT APPLICATIONS 2**

**IS 1488 - IS INTERNSHIP**

**IS 1489 - IS INDEPENDENT STUDY**

**MGMT 0500 - PRINCIPLES OF MANAGEMENT**

**MGMT 1000 - MANAGEMENT POLICY**

**MGMT 1435 - MANAGERIAL PROJECT MANAGEMENT**

**MGMT 1510 - HUMAN RESOURCES MANAGEMENT**

**MGMT 1515 - RECRUITMENT, SELECTION, RETENTION, AND SEPARATION**

**MGMT 1520 - ORGANIZATIONAL BEHAVIOR**

**MGMT 1525 - EMPLOYMENT LAW AND NEGOTIATION**

**MGMT 1530 - OPERATIONS AND SUPPLY CHAIN MANAGEMENT**

**MGMT 1535 - ORGANIZATIONAL CHANGE MANAGEMENT**

**MGMT 1545 - COMPENSATION, BENEFITS AND PERFORMANCE MANAGEMENT**

**MGMT 1550 - GLOBAL ISSUES IN BUSINESS MANAGEMENT**

**MGMT 1610 - QUALITY MANAGEMENT**

**MGMT 1683 - MANAGEMENT INDEPENDENT STUDY**

**MGMT 1686 - MANAGEMENT INTERNSHIP 1**

**MRKT 0600 - PRINCIPLES OF MARKETING**

**MRKT 1600 - CONSUMER BEHAVIOR**

**MRKT 1610 - MARKETING RESEARCH**

**MRKT 1620 - MARKETING TOOLS AND ANALYTICS**

**MRKT 1630 - INTEGRATED DIGITAL MARKETING**

**MRKT 1635 - SOCIAL MEDIA WAR ROOM**

**MRKT 1640 - INTERNATIONAL MARKETING**

**MRKT 1645 - SALES MANAGEMENT**

**MRKT 1650 - PRODUCT MANAGEMENT**

**MRKT 1655 - PROMOTION MANAGEMENT**

**MRKT 1660 - PRICING MANAGEMENT**

**MRKT 1665 - DISTRIBUTION MANAGEMENT**

**MRKT 1670 - MARKETING SPECIAL TOPICS**

**MRKT 1671 - MARKETING INTERNSHIP 1**

**MRKT 1672 - MARKETING MADE IN ECUADOR TO THE WORLD**

**MRKT 1673 - SOCIAL MEDIA FOR SUSTAINABLE AMAZON**

**MRKT 1675 - CONSUMER BEHAVIOR**

**MRKT 1680 - ENTREPRENEURS IDEA LAB**

**MRKT 1690 - MARKETING MANAGEMENT**



# Education

• <a href="#">Division Policies and Requirements</a>	• <a href="#">Academic Programs Offered</a>
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Chair: Gerald Zahorchak, DED

Faculty: Natalie Conrad Barnyak, Melissa Casses, Sarah Chesney, Nina Girard, Donna Kowalczyk, Mark Previte, Bethany McConnell, Elaine Wilson

Adjunct Faculty: Francine Endler, Douglas Ledney, Keli Williams and Donald Yokitis.

## Division Policies and Requirements

The Division of Education provides complete information on all programs and related policies in its Program Handbook, which may be obtained in 153 Biddle Hall or viewed in an abridged version on the Pitt-Johnstown Web site, [www.upj.pitt.edu/education](http://www.upj.pitt.edu/education). Prospective students interested in majoring in education should read the Program Handbook prior to enrolling at Pitt-Johnstown. The Program Handbook is updated every year and is therefore more current and explanatory than this bulletin. In all cases, policies described in the Program Handbook take precedence over policies described in the bulletin.

Freshmen who plan to major in early childhood, middle level or secondary education as undergraduate students first enroll at Pitt-Johnstown as pre-education majors. To be eligible to declare pre-education as a major, incoming freshmen must have been granted admission status by the Pitt-Johnstown Office of Admissions.

Students who plan to relocate from another University of Pittsburgh campus to major in education at Pitt-Johnstown must meet minimum GPA requirements in order to declare pre-education as a major. While a 2.50 GPA is a minimum standard for students who have earned 12 or fewer credits, a higher GPA is required for students who have earned more than 12 credits.

Students who plan to transfer from another college or university to major in education at Pitt-Johnstown must meet minimum GPA requirements in order to declare pre-education as a major. This minimum GPA is based on all courses taken at another college, whether or not the credits are accepted by Pitt-Johnstown. (While a 2.50 GPA is a minimum standard for students who have earned 12 or fewer credits, a higher GPA is required for students who have earned more than 12 credits.) Students interested in transferring should request a transcript review from the Division of Education prior to applying for admission at Pitt-Johnstown. This transcript review will inform potential students of remaining course work needed to complete an education program at Pitt-Johnstown. Interested students should send a copy of all college transcripts, along with a cover letter stating the intended program and the potential term for enrollment in a program at Pitt-Johnstown, to Division Chair at the University of Pittsburgh at Johnstown, 153 Biddle Hall, Johnstown, PA 15904.

Post-baccalaureate students who plan to seek Commonwealth of Pennsylvania certification in either elementary or secondary education at Pitt-Johnstown must also meet minimum GPA requirements in order to declare pre-education as a major. This minimum GPA is based on all courses taken at any college within the past five years and any course taken longer than five years ago that would be applied to the program. (While a 2.50 GPA is a minimum standard for students, a higher GPA is required for students for whom 12 or fewer credits will apply to their intended program.) Eligible post-baccalaureate students may choose one of two options: certification while earning a second bachelor's degree or certification without earning a second bachelor's degree. Students interested in seeking post-baccalaureate certification should request a transcript review from the Division of Education prior to applying for admission at Pitt-Johnstown. This transcript review will inform potential students of remaining course work needed to complete an education program at Pitt-Johnstown. Interested students should send a copy of all college transcripts, along with a cover letter stating the intended program and the potential term for enrollment in a program at Pitt-Johnstown, to Division Chair at the University of Pittsburgh at Johnstown, 153 Biddle Hall, Johnstown, PA 15904.

Students already enrolled in another major at Pitt-Johnstown must gain the approval of the Chairperson of the Division of Education in order to change their major to pre-education. The student's current academic grade point average is the basis upon which approval will or will not be granted. (While a 2.50 GPA is a minimum standard for students who have earned 12 or fewer credits, a higher GPA is required for students who have earned more than 12 credits.) Once enrolled in pre-education, students must meet specific requirements to gain admission to the upper-level early childhood, middle level or secondary education programs. Criteria for admission include 48 earned credits, a minimum cumulative GPA of 3.00, satisfactory letters of recommendation, minimum C grades in several designated courses, one English composition and one English literature course, two math courses, successful passing of all Basic Skills requirements (reading, writing, and mathematics) either by way of PAPA or CORE exam or qualifying ACT or SAT scores. Post-baccalaureate and transfer students also must have earned a minimum combined GPA of 3.00 (combination of all courses taken in the past five years at any institution, courses taken more than five years from the date of admission that are applied to the program, and credits taken-minimum of 15-as a pre-education student). Policies related to admission to the upper-level program are described fully in the Program Handbook.

The upper-level program is structured as a sequence of experiences. Upper-level early childhood students complete a set of courses during a four-term period, with student teaching comprising the major part of the fourth-term component. The middle level and secondary education program is structured somewhat more flexibly, but interested students should gain an understanding of the sequential nature of the upper-level curriculum prior to declaring pre-education as a major. Upper-level students must meet specific requirements to be admitted to student teaching, and all students who complete student teaching also must pass all required Praxis and/or PECT certification tests to be eligible for Pennsylvania certification.

In addition, all pre-education majors must submit copies of a criminal background clearance, a child abuse history clearance, and fingerprinting at an approved state site prior to enrolling in the pre-education course History and Philosophy of Education, which must be taken at Pitt-Johnstown. NOTE: Prospective students who have failed any Basic Skills requirements are not eligible to declare pre-education as a major at Pitt-Johnstown until they have passed the failed test. NOTE: Most pre-education courses are open only to those students who are enrolled in pre-education. All upper-level education courses are open only to students admitted to the upper-level program, and all upper-level courses must be taken at Pitt-Johnstown.

## **Academic Programs Offered**

### **Major**

### **Early Childhood Education, BS**

#### **Early Childhood Education Major (120 credits)**

Students who complete all program requirements, meet graduation requirements, and pass all required certification tests will be certified in Pennsylvania to teach grades pre-school through 4th. Certification requirements vary in other states, but Pennsylvania certification typically is accepted by most states for initial employment. Prospective undergraduate students and post-baccalaureate students seeking certification only may find the most current information on program course requirements in the Division's Program Handbook. The following is a summarized description of program requirements.

#### **Pre-Education Curriculum Consists of General Education and Educational Studies:**

Pre-Education students take a 1 credit Introduction to Education course and must fulfill the university's WOK (Worlds of Knowledge) requirement as indicated by the program.

## Upper-Level Early Childhood Education Curriculum:

All courses in the upper-level early childhood education curriculum must be taken at Pitt-Johnstown. The first three terms involve methods courses and field placements. The final term is reserved for student teaching and the student teaching seminar.

## Middle-Level Education - Mathematics Concentration, BS

### Middle Level Education Major

The Division of Education offers middle level education degrees and certification in the following areas of concentration English, science, social studies, and mathematics. In addition, students who are completing certification requirements Early Childhood may add on Middle Level English (certification only) via a pathway agreement. Students who complete all of their specific program's requirements, meet graduation requirements, and pass all required certification tests will be certified in Pennsylvania to teach their program content in grades 4-8. Certification requirements vary in other states, but Pennsylvania certification typically is accepted by most states for initial employment. Prospective undergraduate students and post baccalaureate students seeking certification only may find the most current information on each program's course requirements in the Division's Program Handbook.

### Middle Level Education Major with an Area of Concentration in Mathematics (127-131 credits)

### Pre-Education Curriculum Consists of General Education and Educational Studies:

Pre-Education students take a 1 credit Introduction to Education course and must fulfill the university's WOK (Worlds of Knowledge) requirement as indicated by the program.

Middle Level Education Mathematics majors also complete curriculum in the content area:

- Mathematics (13 credits)
- Related Courses (6-7 credits)
- Math or CS Elective (3-4 credits)

### Upper-Level Middle Level Education Mathematics Curriculum:

All courses in the upper-level education curriculum must be taken at Pitt-Johnstown. The first three terms involve methods courses and field placements. The final term is reserved for student teaching and the student teaching seminar.

## Middle-Level Education - Science Concentration, BS

### Middle Level Education Major

The Division of Education offers middle level education degrees and certification in the following areas of concentration English, science, social studies, and mathematics. In addition, students who are completing certification requirements Early Childhood may add on Middle Level English (certification only) via a pathway agreement. Students who complete all of their specific program's requirements, meet graduation requirements, and pass all required certification tests will be certified in Pennsylvania to teach their program content in grades 4-8. Certification requirements vary in other states, but Pennsylvania certification typically is accepted by most states for initial employment. Prospective undergraduate students and post baccalaureate students seeking certification only may find the most current information on each program's course requirements in the Division's Program Handbook.

## **Middle Level Education Major with an Area of Concentration in Science (134 credits)**

### **Pre-Education Curriculum Consists of General Education and Educational Studies:**

Pre-Education students take a 1 credit Introduction to Education course and must fulfill the university's WOK (Worlds of Knowledge) requirement as indicated by the program.

Middle Level Education Science majors also complete curriculum in the content area:

- Science (32 credits)

### **Upper-Level Middle Level Education Science Curriculum:**

All courses in the upper-level education curriculum must be taken at Pitt-Johnstown. The first three terms involve methods courses and field placements. The final term is reserved for student teaching and the student teaching seminar.

## **Middle-Level Education - Social Studies Concentration, BS**

### **Middle Level Education Major**

The Division of Education offers middle level education degrees and certification in the following areas of concentration English, science, social studies, and mathematics. In addition, students who are completing certification requirements Early Childhood may add on Middle Level English (certification only) via a pathway agreement. Students who complete all of their specific program's requirements, meet graduation requirements, and pass all required certification tests will be certified in Pennsylvania to teach their program content in grades 4-8. Certification requirements vary in other states, but Pennsylvania certification typically is accepted by most states for initial employment. Prospective undergraduate students and post baccalaureate students seeking certification only may find the most current information on each program's course requirements in the Division's Program Handbook.

## **Middle Level Education Major with an Area of Concentration in Social Studies (125 credits)**

### **Pre-Education Curriculum Consists of General Education and Educational Studies:**

Pre-Education students take a 1 credit Introduction to Education course and must fulfill the university's WOK (Worlds of Knowledge) requirement as indicated by the program.

Middle Level Education Social Studies majors also complete curriculum in the content area:

- Social Sciences (30 credits)

### Upper-Level Middle Level Education Social Studies Curriculum:

All courses in the upper-level education curriculum must be taken at Pitt-Johnstown. The first three terms involve methods courses and field placements. The final term is reserved for student teaching and the student teaching seminar.

## Pre-K - 12 Education

Pitt-Johnstown Special Education

Students will enter area school classrooms in their first year to gain real world experience in the field.

The program offers:

- A year long student teaching internship working in both general and special education classrooms.
- Courses in autism, applied behavior analysis, and instructional technology to name a few.

## Secondary Education Biology, BS

### Secondary Education Major

The Division of Education offers secondary education degrees and certification in the following areas of concentration: biology, chemistry, earth and space science, social studies, English, and mathematics. In addition, students who are completing certification requirements in one of the science programs may choose to add certification requirements in general science without any additional coursework. Students who complete all of their specific program's requirements, meet graduation requirements, and pass all required certification tests will be certified in Pennsylvania to teach their program content in grades 7-12. Certification requirements vary in other states, but Pennsylvania certification typically is accepted by most states for initial employment. Prospective undergraduate students and post baccalaureate students seeking certification only may find the most current information on each program's course requirements in the Division's Program Handbook.

The following is a summarized description of each secondary education program's requirements.

### Concentration in Biology (126-135 credits)

Pre-Education Curriculum Consists of General Education and Educational Studies:

Pre-Education students take a 1 credit Introduction to Education course and must fulfill the university's WOK (Worlds of Knowledge) requirement as indicated by the program.

Secondary Education Biology majors also complete curriculum in the content area:

- Required Biology (24 credits)
- Required molecular Biology Elective (3-4 credits)
- Required Sciences (18 credits)

Upper-Level Secondary Education Curriculum:

All courses in the upper-level secondary education curriculum must be taken at Pitt-Johnstown. The final term generally is reserved for student teaching and the student teaching seminar.

## **Secondary Education Chemistry, BS**

### **Secondary Education Major**

The Division of Education offers secondary education degrees and certification in the following areas of concentration: biology, chemistry, earth and space science, social studies, English, and mathematics. In addition, students who are completing certification requirements in one of the science programs may choose to add certification requirements in general science without any additional coursework. Students who complete all of their specific program's requirements, meet graduation requirements, and pass all required certification tests will be certified in Pennsylvania to teach their program content in grades 7-12. Certification requirements vary in other states, but Pennsylvania certification typically is accepted by most states for initial employment. Prospective undergraduate students and post baccalaureate students seeking certification only may find the most current information on each program's course requirements in the Division's Program Handbook.

The following is a summarized description of each secondary education program's requirements.

### **Concentration in Chemistry (124 credits)**

Pre-Education Curriculum Consists of General Education and Educational Studies:

Pre-Education students take a 1 credit Introduction to Education course and must fulfill the university's WOK (Worlds of Knowledge) requirement as indicated by the program.

Secondary Education Chemistry majors also complete curriculum in the content area:

- Required Chemistry (32 credits)
- Required Sciences (18 credits)

## Upper-Level Secondary Education Curriculum:

All courses in the upper-level secondary education curriculum must be taken at Pitt-Johnstown. The final term generally is reserved for student teaching and the student teaching seminar.

## Secondary Education Earth and Space Sciences, BS

### Secondary Education Major

The Division of Education offers secondary education degrees and certification in the following areas of concentration: biology, chemistry, earth and space science, social studies, English, and mathematics. In addition, students who are completing certification requirements in one of the science programs may choose to add certification requirements in general science without any additional coursework. Students who complete all of their specific program's requirements, meet graduation requirements, and pass all required certification tests will be certified in Pennsylvania to teach their program content in grades 7-12. Certification requirements vary in other states, but Pennsylvania certification typically is accepted by most states for initial employment. Prospective undergraduate students and post baccalaureate students seeking certification only may find the most current information on each program's course requirements in the Division's Program Handbook.

The following is a summarized description of each secondary education program's requirements.

### Concentration in Earth and Space Science (125-137 credits)

### Pre-Education Curriculum Consists of General Education and Educational Studies:

Pre-Education students take a 1 credit Introduction to Education course and must fulfill the university's WOK (Worlds of Knowledge) requirement as indicated by the program.

Secondary Education Earth and Space majors also complete curriculum in the content area:

- Required Geography and Planetary Science (22 credits)
- Geology Electives (9-12 credits)
- Required Sciences (14 credits)

## Upper-Level Secondary Education Curriculum:

All courses in the upper-level secondary education curriculum must be taken at Pitt-Johnstown. The final term generally is reserved for student teaching and the student teaching seminar.

## Secondary Education Mathematics, BS

### Secondary Education Major

The Division of Education offers secondary education degrees and certification in the following areas of concentration: biology, chemistry, earth and space science, social studies, English, and mathematics. In addition, students who are completing certification requirements in one of the science programs may choose to add certification requirements in general science without any additional coursework. Students who complete all of their specific program's requirements, meet graduation requirements, and pass all required certification tests will be certified in Pennsylvania to teach their program content in grades 7-12. Certification requirements vary in other states, but Pennsylvania certification typically is accepted by most states for initial employment. Prospective undergraduate students and post baccalaureate students seeking certification only may find the most current information on each program's course requirements in the Division's Program Handbook.

The following is a summarized description of each secondary education program's requirements.

## **Concentration in Mathematics (133-138credits)**

### **Pre-Education Curriculum Consists of General Education and Educational Studies:**

Pre-Education students take a 1 credit Introduction to Education course and must fulfill the university's WOK (Worlds of Knowledge) requirements as indicated by the program.

**Secondary Education Mathematics majors also complete curriculum in the content area:**

- Content area courses (46-47 credits)

### **Upper-Level Secondary Education Curriculum:**

All courses in the upper-level secondary education curriculum must be taken at Pitt-Johnstown. The final term generally is reserved for student teaching and the student teaching seminar.

## **Secondary Education Social Studies, BA**

### **Secondary Education Major**

The Division of Education offers secondary education degrees and certification in the following areas of concentration: biology, chemistry, earth and space science, social studies, English, and mathematics. In addition, students who are completing certification requirements in one of the science programs may choose to add certification requirements in general science without any additional coursework. Students who complete all of their specific program's requirements, meet graduation requirements, and pass all required certification tests will be certified in Pennsylvania to teach their program content in grades 7-12. Certification requirements vary in other states, but Pennsylvania certification typically is accepted by most states for initial employment. Prospective undergraduate students and post baccalaureate students seeking certification only may find the most current information on each program's course requirements in the Division's Program Handbook.

The following is a summarized description of each secondary education program's requirements.

## **Concentration in Social Studies (128-138 credits)**



Completion of this program certifies graduates to teach anthropology, history, geography, political science, sociology, psychology, and economics to grades 7-12. (Students choose one of three strands: geography, history, or political science.)

## Pre-Education Curriculum Consists of General Education and Educational Studies:

Pre-Education students take a 1 credit Introduction to Education course and must fulfill the university's WOK (Worlds of Knowledge) requirements as indicated by the program.

Secondary Education Social Studies majors also complete curriculum in the content area:

- Content area courses (30 credits)

## Upper-Level Secondary Education Curriculum:

All courses in the upper-level secondary education curriculum must be taken at Pitt-Johnstown. The final term generally is reserved for student teaching and the student teaching seminar.

**ECED 0010 - DIRECTED TUTORING**

**ECED 0012 - DIRECTED STUDY IN EARLY CHILDHOOD EDUCATION**

**ECED 1101 - FOUNDATIONS OF EARLY CHILDHOOD EDUCATION**

**ECED 1111 - EARLY CHILDHOOD EDUCATION FIELD PRACTICUM 1**

**ECED 1112 - EARLY CHILDHOOD EDUCATION FIELD PRACTICUM 2**

**ECED 1113 - EARLY CHILDHOOD EDUCATION FIELD PRACTICUM 3**

**ECED 1123 - WRITING DEVELOPMENT**

**ECED 1151 - EARLY LANGUAGE AND LITERATURE**

**ECED 1153 - LITERACY IN THE PRIMARY GRADES**

**ECED 1154 - DIFFERENTIATED LITERACY INSTRUCTION ACROSS THE CONTENT AREAS**

**ECED 1162 - INTEGRATING THE CREATIVE ARTS**

**ECED 1164 - EARLY CHILDHOOD STUDENT TEACHING**

**ECED 1171 - SCIENCE TECHNOLOGY AND HEALTH**

**ECED 1172 - MATHEMATICS FOUNDATIONS**

**ECED 1173 - SOCIAL STUDIES IN EARLY CHILDHOOD EDUCATION**

**ECED 1174 - PRE-PRIMARY STUDENT TEACHING**

**ECED 1183 - ENGAGING YOUNG CHILDREN IN LEARNING (C&I)**

**ECED 1184 - PRIMARY STUDENT TEACHING**

**ECED 1190 - FAMILY AND SCHOOL COLLABORATION**

**ECED 1194 - ECED STUDENT TEACHING SEMINAR**

**ECED 1196 - EARLY CHILDHOOD STUDENT TEACHING SEMINAR - US**

**ECED 1197 - EARLY CHILDHOOD STUDENT TEACHING SEMINAR ABROAD**

**EDPSY 0006 - INTRO TO EDUCATIONAL PSYCHOLOGY**

**EDPSY 0011 - DIRECTED PRACTICUM IN EDPSY**

**EDPSY 0013 - DIRECTED STUDY IN PSYCHOLOGY**

**EDPSY 1021 - STUDENTS WITH SPECIAL NEEDS**

**EDPSY 1025 - INCLUSION STRATEGIES**

**EDPSY 1026 - ENGLISH LANGUAGE LEARNERS**

**EDPSY 1036 - FOUNDATIONS OF ESL INSTRUCTION**

**EDPSY 1046 - CONTEXTS FOR TEACHING AND LEARNING ENGLISH**

**EDPSY 1056 - LANGUAGE ACQUISITION & DEVELOPMENT OF ENGLISH  
LANGUAGE LEARNERS**

**EDPSY 1066 - CURRICULUM AND ASSESSMENT FOR ESL PROGRAM  
SPECIALISTS**

**EDPSY 1121 - EDUCATIONAL ASSESSMENT FOR INCLUSION CLASSROOM**

**FDSED 0001 - HIST/PHIL OF ED: AMER EMPHSS**

**FDSED 0002 - INTRODUCTION TO EDUCATION**

**FDSED 1020 - SPANISH FOR EDUCATORS**

**FDSED 1026 - ENGLISH LANGUAGE LEARNERS**

**FDSED 1030 - CULTURAL DIVERSITY AMONG NATIVE AND HERITAGE SPANISH SPEAKERS**

**FDSED 1036 - FOUNDATIONS OF ESL INSTRUCTION**

**FDSED 1046 - CONTEXTS FOR TEACHING AND LEARNING ENGLISH**

**FDSED 1056 - LANGUAGE ACQUISITION & DEVELOPMENT OF ENGLISH LANGUAGE LEARNERS**

**FDSED 1066 - CURRICULUM AND ASSESSMENT FOR ESL PROGRAM SPECIALISTS**

**FDSED 1171 - EDUCATIONAL LAW, POLICY, AND ETHICAL LEADERSHIP**

**FDSED 1188 - STUDENT TEACHING IN NEW ZEALAND**

**FDSED 1197 - STUDENT TEACHING SEMINAR ABROAD**

**FDSED 1240 - SPANISH METHODS I (PRE K -5)**

**FDSED 1250 - SPANISH METHODS II (G 6-12)**

**IL 1900 - INDEPENDENT STUDY**

**IT 1101 - INSTRUCTIONAL TECHNOLOGY FOR 21ST CENTURY LEARNING ENVIRONMENTS**

**IT 1145 - INSTRNL TECHN LGY SCED-ENGLISH**

**IT 1161 - INSTRNL TECHN SEC ED-SOC STDS**

**IT 1165 - INSTRC TECHN LGY SCED-SCIENCE**

**IT 1171 - INSTRNL TECHN SEC ED-MATH**

**IT 1172 - CALCULATORS IN MATH INSTRUCTN**

**MLED 0012 - DIRECTED STUDY IN MIDDLE LEVEL EDUCATION**

**MLED 1101 - READING AND LANGUAGE ARTS**

**MLED 1111 - FIELD PRACTICUM 1**

**MLED 1112 - FIELD PRACTICUM 2**

**MLED 1113 - FIELD PRACTICUM 3**

**MLED 1121 - MATHEMATICS METHODS FOR THE MIDDLE-LEVEL GRADES**

**MLED 1131 - SOCIAL STUDIES METHODS FOR THE MIDDLE-LEVEL GRADES**

**MLED 1141 - SCIENCE METHODS FOR THE MIDDLE-LEVEL GRADES**

**MLED 1144 - ENGLISH METHODS FOR THE MIDDLE LEVEL GRADES**

**MLED 1151 - GENERAL METHODS FOR MIDDLE LEVEL GRADES**

**MLED 1170 - LITERACY IN THE CONTENT AREAS**

**MLED 1191 - MIDDLE LEVEL STUDENT TEACHING**

**MLED 1195 - MIDDLE LEVEL EDUCATION STUDENT TEACHING SEMINAR**

**MLED 1196 - MIDDLE LEVEL STUDENT TEACHING SEMINAR (US)**

**PEDC 0001 - BEGINNING SWIMMING**

**PEDC 0002 - INTERMEDIATE SWIMMING**

**PEDC 0018 - DIRECTED STUDY**

**PEDC 0026 - AQUATIC CONDITIONING**

**PEDC 0029 - WEIGHT TRAINING - MEN**

**PEDC 0030 - WEIGHT TRAINING - WOMEN**

**PEDC 0032 - MODERN DANCE 2**

**PEDC 0034 - BALLET 2**

**PEDC 0041 - JAZZ 1**

**PEDC 0042 - JAZZ 2**

**PEDC 0063 - BASKETBALL 2 - CO-EDUCATIONAL**

**PEDC 0087 - PERSONAL DEFENSE**

**PEDC 0100 - LIFE GUARDING**

**PEDC 0103 - AEROBIC EXERCISE 1**

**PEDC 0123 - FIRST AID AND CPR**

**PEDC 0184 - SCUBA 1**

**PEDC 0199 - LIFEGUARD INSTRUCTOR**

**PEDC 0200 - WATER SAFETY INSTRUCTOR**

**PEDC 0231 - SOCCER 1**

**SCED 0010 - DIRECTED TUTORING IN SCED**

**SCED 0011 - DIRECTED FIELD PRACTICUM IN SECONDARY EDUCATION**

**SCED 0012 - DIRECTED STUDY IN SCED**

**SCED 0013 - DIRECTED STUDY IN SCED**

**SCED 1120 - SECONDARY MATHEMATICS METHODS 1**

**SCED 1121 - SECONDARY MATHEMATICS METHODS 2**

**SCED 1122 - PRE-STUDENT TEACHING FIELD PRACTICUM: MATHEMATICS**

**SCED 1144 - SECONDARY ENGLISH/LANGUAGE ARTS METHODS 1**

**SCED 1145 - SECONDARY ENGLISH/LANGUAGE ARTS METHODS 2**

**SCED 1146 - PRE-STUDENT TEACHING FIELD PRACTICUM: ENGLISH**

**SCED 1160 - SECONDARY SOCIAL STUDIES METHODS 1**

**SCED 1161 - SECONDARY SOCIAL STUDIES METHODS 2**

**SCED 1162 - PRE-STUDENT TEACHING FIELD PRACTICUM: SOCIAL STUDIES**

**SCED 1164 - SECONDARY SCIENCE METHODS 1**

**SCED 1165 - SECONDARY SCIENCE METHODS 2**

**SCED 1166 - PRE-STUDENT TEACHING FIELD PRACTICUM: SCIENCE**

**SCED 1170 - LITERACY IN THE CONTENT AREAS**

**SCED 1191 - STDNT TEACHING IN THE SEC SCHL**

**SCED 1192 - SECONDARY STUDENT TEACHING - US**

**SCED 1195 - SECNDRY EDUC STUDNT TCHNG SEMINR**

**SCED 1196 - SECONDARY EDUCATION STUDENT TEACHING SEMINAR - US**

**SCED 1197 - SECONDARY EDUCATION STUDENT TEACHING SEMINAR ABROAD**

**SPLED 1030 - METHODS AND MANAGEMENT IN SPECIAL EDUCATION**

**SPLED 1031 - ASSESSMENT AND INSTRUCTION**

**SPLED 1032 - APPLIED BEHAVIORAL ANALYSIS**

**SPLED 1033 - CURRICULUM AND PROGRAM DEVELOPMENT**

**SPLED 1040 - AUTISM SPECTRUM**

**SPLED 1041 - INSTRUCTIONAL METHODS**

**SPLED 1042 - EDUCATION OF STUDENTS WITH EMOTIONAL AND SOCIAL DISORDERS**

**SPLED 1043 - TECHNOLOGY FOR THE INCLUSIVE CLASSROOM**

**SPLED 1174 - SPECIAL EDUCATION STUDENT TEACHING EARLY CHILDHOOD**

**SPLED 1191 - SPECIAL EDUCATION STUDENT TEACHING MIDDLE**

**SPLED 1230 - METHODS FOR TEACHERS IN SPECIAL EDUCATION**

**SPLED 1231 - TEACHERS ASSESSMENT AND INSTRUCTION**

**SPLED 1232 - TEACHERS APPLIED BEHAVIORAL ANALYSIS**

**SPLED 1233 - TEACHERS DEVELOPMENT CURRICULUM AND PROGRAM**

**SPLED 1240 - TEACHING STUDENTS WITH AUTISM**

**SPLED 1241 - INTERVENTION METHODS FOR TEACHERS**

**SPLED 1242 - TEACHER EDUCATION STUDENTS WITH SOCIAL AND  
EMOTIONAL DISORDERS**

**SPLED 1243 - TEACHING TECHNOLOGY FOR THE INCLUSIVE CLASSROOM**

**SPLED 1244 - DIRECTED STUDY IN SPECIAL EDUCATION**

# Engineering and Computer Science

- |   |  |
|---|--|
| • <a href="#"><u>Division Policies and Requirements</u></a> | • <a href="#"><u>Academic Programs Offered</u></a> |
|---|--|

Director: Jerry Samples

The Bachelor of Science in engineering programs are now offered at Pitt-Johnstown. The Engineering programs will undergo the ABET accreditation process after the graduation of the first class sometime after the spring of 2019. Students admitted to the University of Pittsburgh at Johnstown as freshmen spend all four years at Pitt-Johnstown if they major in engineering programs taught at Pitt-Johnstown, or they relocate to the campus in Pittsburgh after one or two years if they choose engineering programs not taught at Pitt-Johnstown. Students may transfer to Pitt-Johnstown for engineering after one or two years of study at the Pittsburgh, Bradford, Greensburg, or Titusville campuses. Students from accredited associate degree programs in engineering are also encouraged to matriculate to Pitt-Johnstown. Credits from institutions not accredited by ABET will not be directly accepted; however, credit by examination is an option.

Engineers make significant contributions to the constant quest for better material products, more effective methods of solving society's technological problems, and better ways of using engineering to promote understanding among people. Pitt-Johnstown's programs in engineering prepare men and women to improve the quality of life by organizing individuals, materials, and equipment to manufacture products, erect buildings, construct and operate transportation systems, generate and distribute power, and solve other difficult engineering problems. Engineers are also responsible for existing technologies-nuclear, automotive, aircraft, chemical production, environmental, electronic, power generation, and others. Our application-oriented engineering graduates bring important practice, management and theoretical knowledge to the task of operating industries and businesses related to engineering. With this knowledge, they design and develop new products and process to better the world for clients and mankind in general.

## Division Policies and Requirements

To be recommended for graduation, a candidate must

- complete all required courses with passing grades;
- earn the total number of credits required by his or her major area;
- attain a minimum cumulative quality point average of 2.00 in:
  - all courses on his or her University of Pittsburgh record and
  - his or her major area (CHE, CE, COE, EE, ME, CS);
- complete the senior year (at least 30 credits) while registered in the Division of Engineering and Computer Science. (Exceptions to this requirement may be granted for a limited number of credits by a student's department head.)

Note: Advanced standing credits count toward graduation requirements but are not included in QPA computation.

## Mathematics Grade Requirements:

A grade of C- or better is required in MATH 0221 and MATH 0231 before taking the next course in the sequence. A grade of D or less requires that these courses be repeated.

## Academic Discipline:

The academic record of each student enrolled in the Division of Engineering and Computer Science is reviewed at the conclusion of the fall and spring terms of the academic year. In order to be classified in satisfactory academic standing, engineering students with full-time status must:



- earn a minimum of 24 credits per academic year (12 credits for the year of admission for students admitted in the Spring Term)
- have a minimum cumulative QPA of 2.00 overall and in their major area (CHE, CE, COE, EE, ME or CS). Division of Engineering and Computer Science students who fail to achieve the criteria for satisfactory academic standing will be placed on academic probation and are subject to dismissal from the division.

A student's cumulative QPA is determined by dividing the total number of quality points by the total number of credits that were assigned quality grades. Only credits and quality points for courses taken at the University of Pittsburgh are used in calculation of the QPA. All courses (with the exception of ENGR, CEE, ECE, COE, and MEMS (some of the course codes reflect those in Pittsburgh) seminars) must be taken for quality grades; H, S, or U grades will not be approved for any courses (other than the exceptions noted earlier) that are intended to satisfy graduation requirements of the Division of Engineering and Computer Science.

#### Changes in Concentration:

Division of Engineering and Computer Science students whose academic record satisfies the minimum requirements for continued registration may transfer from one engineering program (CHE, CE, COE, EE, or ME) to another, or to and from Computer Science, or change their registration status from full time to part time or from part time to full time. A form, Change Request for Program, Plan or Advisor, available in the Division of Engineering and Computer Science office, should be completed to initiate a change of program, advisor or change of registration status.

#### Statute of Limitations:

All required academic work for the Bachelor of Science in Engineering or Computer Science degree, including courses for which advanced-standing credit has been granted, must be completed within 12 consecutive calendar years. Under unusual circumstances, a student may, with the approval of his/her program chair, request a waiver of this policy by writing to the director of engineering and computer science. In effect, this policy means that part-time students must progress toward the degree at a minimum rate of 12 credits per calendar year.

#### Academic Programs Offered

NOTE - The Bachelor of Science programs in Civil Engineering Technology, Computer Engineering Technology, Electrical Engineering Technology and Mechanical Engineering Technology stopped accepting new students as of the Fall 2016 semester. These programs continue to be offered for students who began prior to that semester. These programs will remain active until all current students have completed the program.

## Major

## Chemical Engineering, BS

Faculty: Jerry Samples, PE; Shivkumar Bale; Hui Liu; Ramesh Singh

#### PROGRAM EDUCATIONAL OBJECTIVES

Graduates will gain employment in professional careers (often in positions of technical expertise in chemical engineering, but also including professions such as medicine, law, business, finance, non-profit organizations, government, education, etc.) and/or enroll in graduate studies.

Graduates will be committed to lifelong learning throughout their careers.

Graduates will work on teams and assume positions of leadership as their careers develop.

Graduates will recognize the importance of utilizing their knowledge, skills, and initiative for the benefit of society and demonstrate that understanding through their interactions within their community, in government, or in society as a whole.

## STUDENT OUTCOMES

The following are the Chemical Engineering program's student outcomes:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. an ability to communicate effectively with a range of audiences.
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

## ENROLLED STUDENTS/GRADUATES

Academic Year	Enrolled Students	Graduates
2018-2019	77	4
2017-2018	61	0
2016-2017	35	0
2015-2016	7	0

## Program Requirements

### Freshman Year - Fall Term

- MATH 0221 - ANALYTIC GEOMETRY AND CALCULUS 1
- CHEM 0150 - GENERAL CHEMISTRY 1 ENGINEERS
- PHYS 0150 - PHYSICS 1
- ENGR 0017 - INTRODUCTION TO ENGINEERING ANALYSIS
- ENGR 0081 - FRESHMAN ENGINEERING SEMINAR 1
- ENGCOMP 0005 - COMPOSITION 1

### Freshman Year - Spring Term

- MATH 0231 - ANALYTIC GEOMETRY AND CALCULUS 2
- CHEM 0151 - GENERAL CHEMISTRY 2 FOR ENGINEERS
- PHYS 0152 - PHYSICS 2
- ENGR 0018 - INTRODUCTION TO ENGINEERING COMPUTING
- ENGR 0082 - FRESHMAN ENGINEERING SEMINAR 2
- WOK (A&CE, GH&C, OR S&C)

### Sophomore Year - Fall Term

- CHE 0103 - CHEMICAL ENGINEERING FOUNDATIONS 1
- CHE 0104 - CHEMICAL ENGINEERING FOUNDATIONS LAB
- CHE 0220 - CHEMICAL ENGINEERING THERMODYNAMICS 1
- CHE 1085 - DEPARTMENTAL SEMINAR
- CHEM 0236 - ORGANIC CHEMISTRY I ENGINEERS
- MATH 0241 - ANALYTIC GEOMETRY AND CALCULUS 3

### Sophomore Year - Spring Term

- CHE 0105 - CHEMICAL ENGINEERING FOUNDATIONS 2
- CHE 0214 - INTRODUCTION TO CHEMICAL PRODUCT DESIGN
- CHE 0221 - CHEMICAL ENGINEERING THERMODYNAMICS 2
- CHE 0222 - CHEMICAL ENGINEERING THERMODYNAMICS LABORATORY
- CHE 1085 - DEPARTMENTAL SEMINAR
- CHEM 0237 - ORGANIC CHEMISTRY 2 ENGINEERS
- CHEM 0238 - ORGANIC CHEM LAB ENGINEERS
- MATH 1271 - ORDINARY DIFFERENTIAL EQUATIONS

### Junior Year - Fall Term

- ENGR 0020 - PROBABILITY AND STATISTICS FOR ENGINEERS 1
- CHE 0302 - TRANSPORT PHENOMENA 1
- CHE 0304 - TRANSPORT PHENOMENA LABORATORY
- CHE 0315 - PRODUCT DESIGN 2
- CHE 0402 - REACTIVE PROCESSES 1
- CHE 1085 - DEPARTMENTAL SEMINAR
- CHEM 1341 - PHYSICAL CHEMISTRY 1

### Junior Year - Spring Term

- CHE 0303 - TRANSPORT PHENOMENA 2
- CHE 0404 - REACTIVE PROCESSES LABORATORY
- CHE 0405 - REACTIVE PROCESSES II
- CHE 1085 - DEPARTMENTAL SEMINAR
- COMMRC 0052 - PUBLIC SPEAKING
- WOK (A&CE, GH&C, OR S&C)
- WOK (A&CE, GH&C, OR S&C)

- ENGR ELECTIVE

### Senior Year - Fall Term

- CHE 0503 - SYSTEM DYNAMICS AND MODELING
- CHE 0504 - SYSTEM DYNAMICS AND MODELING LAB
- CHE 1085 - DEPARTMENTAL SEMINAR
- CHEM 1321 - BIOCHEMISTRY 1
- ADVANCED SCIENCE
- ADVANCED SCIENCE LAB
- WOK (A&CE, GH&C, OR S&C)

### Senior Year - Spring Term

- CHE 0603 - CHEMICAL ENGINEERING SAFETY AND ETHICS
- CHE 0615 - SYSTEM PROCESS DESIGN
- CHE 1085 - DEPARTMENTAL SEMINAR
- CHE PETE ELECTIVE
- PROFESSIONAL ELECTIVE
- WOK (A&CE, GH&C, OR S&C)

### Technical Electives

#### Advance Physics Course w/lab

Course	Pre/Co Req	Typical Term
<b>PHYS 0450 + PHYS 1400</b> Electromagnetism+ Adv Lab	PHYS 0150 and PHYS 0152	Fall
<b>PHYS 1300 + PHYS 1400</b> Quantum mechanics + Adv Lab	PHYS 0150 and PHYS 0152	Fall

#### Professional Electives

- An additional Engineering Elective
- An additional advanced science
- MATH 1181 Linear Algebra
- ENGWRIT 1192 Tech Writing
- ENGWRIT 0053 Intro to Pro Writing
- COMMRC 0083 Intercultural Comm
- Other Courses with Permission
- 3 Semester of Co-op along with a paper and presentation

**Notes:**

- 1) *Students have a minimum of 131 credits to graduate.*
- 2) *Students who do not need to take ENGCOMP 0005 (SAT-V greater than 650) will need to take another 3 credits to meet this requirement.*
- 3) *3 credits of special projects will fulfil engineering elective requirement.*
- 4) *Students need to take 5 WOK courses with MAX 2 from each world of knowledge. **The chemical engineering students are not allowed to take WOK courses from world of science and nature.***

- CE 1105 - MATERIALS OF CONSTRUCTION
- CE 1503 - INTRO TO ENVIRONMENTAL ENGRNG
- CE 1610 - ENGINEERING & SUSTAINABLE DEVELOPMENT
- EE 0031 - LINEAR CIRCUITS AND SYSTEMS 1
- EE 0445 - PROGRAMMING AND INTRODUCTION TO DATA STRUCTURES
- ENGR 0022 - MATERIALS STRUCTURE AND PROPERTIES
- ENGR 0132 - STATICS
- ENGR 1103 - ENGINEERING ECONOMICS
- ENGR 1115 - ENGINEERING LEADERSHIP
- CHE 0510 - INTRODUCTION TO COMPUTATIONAL FLUID DYNAMICS
- CHE 0515 - CATALYSIS
- CHE 1096 - SPECIAL PROJECTS
- ME 0024 - INTRODUCTION TO MECHANICAL ENGINEERING DESIGN

## ENGINEERING ELECTIVES

- CHE 1096 - SPECIAL PROJECTS
- CE 1105 - MATERIALS OF CONSTRUCTION
- CE 1503 - INTRO TO ENVIRONMENTAL ENGRNG
- CE 1610 - ENGINEERING & SUSTAINABLE DEVELOPMENT
- EE 0031 - LINEAR CIRCUITS AND SYSTEMS 1
- EE 0445 - PROGRAMMING AND INTRODUCTION TO DATA STRUCTURES
- ENGR 0022 - MATERIALS STRUCTURE AND PROPERTIES
- ENGR 0132 - STATICS
- ENGR 1103 - ENGINEERING ECONOMICS
- ENGR 1115 - ENGINEERING LEADERSHIP
- ME 0024 - INTRODUCTION TO MECHANICAL ENGINEERING DESIGN

## ADVANCED CHEMICAL/PETROLEUM ELECTIVES

- CHE 0510 - INTRODUCTION TO COMPUTATIONAL FLUID DYNAMICS
- CHE 0515 - CATALYSIS

## ADVANCED SCIENCE ELECTIVES

- CHEM 0325 - ANALYTICAL CHEMISTRY
- CHEM 1131 - INORGANIC CHEMISTRY
- CHEM 1133 - SYNTHESIS & CHARACTERIZATION LAB
- CHEM 1327 - INSTRUMENTAL ANALYSIS

## ADVANCE PHYSICS COURSE W/LAB

- PHYS 0450 - ELECTROMAGNETISM
- PHYS 1300 - QUANTUM PHYSICS
- PHYS 1400 - ADVANCED LAB

## Civil Engineering, BS

**Faculty:** Brian L. Houston, PE; Jason Mashi; Maher M. Murad, PE; Shannon Lynn Isovitsch Parks, PE; Andrew T. Rose, PE

### PROGRAM EDUCATIONAL OBJECTIVES

Graduates will demonstrate an ability to apply mathematics, natural sciences, and contemporary technology to civil engineering practice.

Graduates will demonstrate a breadth of knowledge in the core areas of civil engineering.

Graduates will demonstrate an ability to function within a team environment including the ability to communicate effectively and to implement principles of leadership and management.

Graduates will demonstrate professional responsibility and an appreciation of societal, ethical, environmental, economic, regulatory, and global issues relative to civil engineering projects.

Graduates will acknowledge the need for personal and professional adaptability and will be prepared to pursue professional licensure, graduate study and professional growth during their careers.

### STUDENT OUTCOMES

The following are the Civil Engineering program's student outcomes:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. an ability to communicate effectively with a range of audiences.

4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

#### ENROLLED STUDENTS/GRADUATES

Academic Year	Enrolled Students	Graduates
2018-2019	182	20
2017-2018	126	0
2016-2017	82	0
2015-2016	47	0

## Program Requirements

### Freshman Year-Fall Term

- MATH 0221 - ANALYTIC GEOMETRY AND CALCULUS 1
- CHEM 0150 - GENERAL CHEMISTRY 1 ENGINEERS
- PHYS 0150 - PHYSICS 1
- ENGR 0017 - INTRODUCTION TO ENGINEERING ANALYSIS
- ENGR 0081 - FRESHMAN ENGINEERING SEMINAR 1
- ENGCOMP 0005 - COMPOSITION 1

### Freshman Year-Spring Term

- MATH 0231 - ANALYTIC GEOMETRY AND CALCULUS 2
- CHEM 0151 - GENERAL CHEMISTRY 2 FOR ENGINEERS
- PHYS 0152 - PHYSICS 2
- ENGR 0018 - INTRODUCTION TO ENGINEERING COMPUTING
- ENGR 0082 - FRESHMAN ENGINEERING SEMINAR 2
- WOK (A&CE, GH&C, OR S&C)

### Sophomore Year-Fall Term

- MATH 0241 - ANALYTIC GEOMETRY AND CALCULUS 3

- ENGR 0020 - PROBABILITY AND STATISTICS FOR ENGINEERS 1
- ENGR 0132 - STATICS
- CE 1503 - INTRO TO ENVIRONMENTAL ENGRNG
- CEE 1085 - DEPARTMENTAL SEMINAR
- Science Elective

## Sophomore Year-Spring Term

- MATH 1271 - ORDINARY DIFFERENTIAL EQUATIONS
- ENGR 0142 - MECHANICS OF MATERIALS
- ENGR 0152 - DYNAMICS
- ENGR 1103 - ENGINEERING ECONOMICS
- CE 0110 - COMPUTER METHODS IN CIVIL ENGINEERING
- CE 1105 - MATERIALS OF CONSTRUCTION
- CEE 1085 - DEPARTMENTAL SEMINAR

## Junior Year-Fall Term

- CEE 1085 - DEPARTMENTAL SEMINAR
- CE 1220 - SURVEYING & LAND DEVELOPMENT
- CE 1330 - INTRODUCTION TO STRUCTURAL ANALYSIS
- CE 1402 - FLUID MECHANICS
- CE 1703 - TRANSPORTATION ENGINEERING
- CE 1811 - PRINCIPLES OF SOIL MECHANICS

## Junior Year-Spring Term

- CEE 1085 - DEPARTMENTAL SEMINAR
- CE 1412 - HYDROLOGY AND WATER RESOURCES
- CE 1610 - ENGINEERING & SUSTAINABLE DEVELOPMENT
- ECON 0105 - INTRO MICROECONOMIC THEORY
- CE DESIGN ELECTIVE
- CE DESIGN ELECTIVE

## Senior Year-Fall Term

- CEE 1085 - DEPARTMENTAL SEMINAR
- CE 1195 - CIVIL ENGINEERING PROFESSIONAL PRACTICE
- CE 1200 - CONSTRUCTION MANAGEMENT
- CE DESIGN ELECTIVE
- CE DESIGN ELECTIVE
- COMMRC 0052 - PUBLIC SPEAKING

## Senior Year-Spring Term



- WOK (A&CE, GH&C or S&C)
- CE 1199 SENIOR DESIGN PROJECT
- CE ELECTIVE
- ENGINEERING ELECTIVE
- WOK (A&CE, GH&C, S&C)
- CEE 1085 - DEPARTMENTAL SEMINAR

### Technical Electives:

- CE 1340 - CONCRETE STRUCTURES
- CE 1341 - STEEL STRUCTURES
- CE 1510 - WATER SUPPLY & WASTEWATER
- CE 1714 - PAVEMENT DESIGN AND MANAGEMENT
- CE 1730 - HIGHWAY SURVEYING AND DESIGN
- CE 1814 - SLOPES, SEEPAGE & EARTH STRUCTURES
- CE 1821 - FOUNDATION ENGINEERING

## Computer Engineering, BS

**Faculty:** Maddumage Karunaratne; Chandana Jayasooriya; Kassiani Kotsidou; Laura Wieserman (Computer Science)  
Faculty: James Bilitski; Stephen Sarma-Weierman)

### Program Requirements

#### Freshman Year-Fall Term

- MATH 0221 - ANALYTIC GEOMETRY AND CALCULUS 1
- CHEM 0150 - GENERAL CHEMISTRY 1 ENGINEERS
- PHYS 0150 - PHYSICS 1
- ENGR 0017 - INTRODUCTION TO ENGINEERING ANALYSIS
- ENGR 0081 - FRESHMAN ENGINEERING SEMINAR 1
- ENGCOMP 0005 - COMPOSITION 1

#### Freshman Year-Spring Term

- MATH 0231 - ANALYTIC GEOMETRY AND CALCULUS 2
- CHEM 0151 - GENERAL CHEMISTRY 2 FOR ENGINEERS
- PHYS 0152 - PHYSICS 2
- ENGR 0018 - INTRODUCTION TO ENGINEERING COMPUTING
- ENGR 0082 - FRESHMAN ENGINEERING SEMINAR 2
- WOK (A&CE, GH&C, or S&C)

#### Sophomore Year-Fall Term

- EE 0031 - LINEAR CIRCUITS AND SYSTEMS 1

- EE 0132 - DIGITAL LOGIC
- EE 0445 - PROGRAMMING AND INTRODUCTION TO DATA STRUCTURES
- EE 0500 - DIGITAL AND CIRCUITS LAB
- COE 1885 - DEPARTMENTAL SEMINAR
- COMMRC 0052 - PUBLIC SPEAKING
- MATH 1271 - ORDINARY DIFFERENTIAL EQUATIONS

## Sophomore Year-Spring Term

- CS 0417 - INTERMEDIATE PROGRAMMING USING JAVA
- WOK (A&CE, GH&C, OR S&C)
- COE 1885 - DEPARTMENTAL SEMINAR
- EE 0142 - COMPUTER ORGANIZATION
- EE 0257 - ANALYSIS AND DESIGN OF ELECTRONIC CIRCUITS
- EE 0501 - DIGITAL & ELECTRONICS LABORATORY
- ENGR 0020 - PROBABILITY AND STATISTICS FOR ENGINEERS 1

## Junior Year-Fall Term

- COE 1885 - DEPARTMENTAL SEMINAR
- COE TECH ELECTIVE
- CS 0045 - ALGORITHMS AND INFORMATION STRUCTURES APPLICATIONS
- CS 0455 - ALGORITHMS AND INFORMATION STRUCTURES
- EE 1552 - SIGNALS AND SYSTEMS
- MATH 1181 - LINEAR ALGEBRA
- WOK (A&CE, GH&C, OR S&C)

## Junior Year-Spring Term

- COE 1885 - DEPARTMENTAL SEMINAR
- CS 0047 - ADVANCED PROGRAMMING CONCEPTS APPLICATIONS
- CS 0458 - DATA STRUCTURES AND FILES
- CS 0457 - ADVANCED PROGRAMMING CONCEPTS
- EE 1541 - COMPUTER ARCHITECTURE
- EE 1563 - SIGNAL PROCESSING THEORY AND PRACTICE

## Senior Year-Fall Term

- COE 1151 - COMPUTER NETWORKS
- COE 1195 - ENGINEERING PRACTICE AND PROFESSIONAL DEVELOPMENT
- COE 1750 - INTRODUCTION TO SYSTEMS SOFTWARE
- COE 1885 - DEPARTMENTAL SEMINAR
- COE ADVANCED ELECTIVE
- WOK (A&CE, GH&C, OR S&C)

## Senior Year-Spring Term

- COE 1151 - COMPUTER NETWORKS
- COE 1199 - SENIOR DESIGN ELECTIVE
- COE 1885 - DEPARTMENTAL SEMINAR
- CS 1736 - SOFTWARE ENGINEERING
- WOK (A&CE, GH&C, OR S&C)

## Technical Electives:

- EE 1201 - ELECTRONIC MEASUREMENTS AND CIRCUITS LABORATORY
- EE 1247 - SEMICONDUCTOR DEVICES: THEORY AND APPLICATIONS
- EE 1771 - ELECTRIC MACHINES
- CS 1783 - ARTIFICIAL INTELLIGENCE PROGRAMMING
- CS 1792 - COMPUTER OPERATING SYSTEMS

## Advanced Electives

- EE 1259 - ELECTROMAGNETICS
- EE 1673 - CONTROL SYSTEMS
- EE 1769 - POWER SYSTEM 1

Notes:

Students need a minimum of 128 credits to graduate

Students who have to take ENGCOMP 0005 needs 131 credits to graduate

## Computer Science, BS

Faculty: James Bilitski Jr.; Prasanna Joeg; Sandro Marchegiani; Stephen Sarma-Weierman

The Computer Science Department in the Division of Engineering and Computer Science at the University of Pittsburgh at Johnstown offers a four-year program leading to the degree of Bachelor of Science in Computer Science. The Computer Science Department currently offers two tracks in the Computer Science major. The Technical track highlights applications programming, systems-level programming, evolving technologies and applications, and mathematics. The Applied track provides an alternate degree option for those students whose career plans require an expanded advanced course selection in highly computer-dependent application areas.

## Standard Computer Science Track

### I. Freshman-level Core Courses

- CS 0100 - PERSPECTIVES IN COMPUTER SCIENCE
- CS 0406 - DISCRETE MATH 2 & STATS FOR CS
- CS 0410 - INTRO TO COMPTR SCI PRGM APPLC
- CS 0411 - INTRO COMPUTER SCI PROGRAMMING
- MATH 0221 - ANALYTIC GEOMETRY AND CALCULUS 1
- MATH 0231 - ANALYTIC GEOMETRY AND CALCULUS 2

- MATH 0401 - DISCRETE MATHEMATICAL STRUCTURES

## II. Sophomore-level Core Courses

- CS 0045 - ALGORITHMS AND INFORMATION STRUCTURES APPLICATIONS
- CS 0046 - COMPUTER SYSTEMS ARCHITECTURE APPLICATIONS
- CS 0047 - ADVANCED PROGRAMMING CONCEPTS APPLICATIONS
- CS 0048 - DATA STRUCTS & FILES APPLICATNS
- CS 0455 - ALGORITHMS AND INFORMATION STRUCTURES
- CS 0456 - COMPUTER SYSTEMS ARCHITECTURE
- CS 0457 - ADVANCED PROGRAMMING CONCEPTS
- CS 0458 - DATA STRUCTURES AND FILES
- MATH 0241 - ANALYTIC GEOMETRY AND CALCULUS 3
- MATH 1181 - LINEAR ALGEBRA

## III. Junior- and Senior-level Core Courses

Any five of the following Computer Science electives (listed in categories)

### Foundations

- CS 1713 - ALGORITHM DESIGN AND ANALYSIS

### Systems

- CS 1792 - COMPUTER OPERATING SYSTEMS

### Languages

- CS 1720 - PROGRAMMING LANGUAGES
- CS 1760 - ADVANCED OBJECT-ORIENTED PROGRAMMING AND DESIGN

### Applications

- CS 1132 - CLASSICAL NUMERICAL ANALYSIS
- CS 1163 - ADVANCED TOPICS IN CS
- CS 1164 - ADVANCED CS TOPICS & APPLICATNS
- CS 1735 - SOFTWARE DESIGN METHODOLOGY
- CS 1736 - SOFTWARE ENGINEERING
- CS 1762 - WEB PROGRAMMING
- CS 1765 - DATA BASE MANAGEMENT SYSTEMS
- CS 1766 - INTRODUCTION COMPUTER GRAPHICS
- CS 1783 - ARTIFICIAL INTELLGNC PROGRAMMING

## IV. Other Electives for Majors

- CS 1165 - DIRECTED PROJECT
- CS 1171 - COMPUTER SCIENCE ASSISTANTSHIP
- CS 1903 - INTERNSHIP
- CS 1904 - DIRECTED STUDY

## V. Non-Major Courses

- CS 0015 - INTRODUCTION TO COMPUTER PROGRAM
- CS 0016 - INTRODUCTION TO COMPUTER PROGRAMMING APPLICATIONS
- CS 0081 - COMPUTER LITERACY
- CS 0082 - CS ASSISTANTSHIP NONMAJORS
- CS 0417 - INTERMEDIATE PROGRAMMING USING JAVA

## Applied Computer Science Track

### I. Freshman-level Core courses

- CS 0100 - PERSPECTIVES IN COMPUTER SCIENCE
- CS 0406 - DISCRETE MATH 2 & STATS FOR CS
- CS 0410 - INTRO TO COMPTR SCI PRGM APPLC
- CS 0411 - INTRO COMPUTER SCI PROGRAMMING
- MATH 0221 - ANALYTIC GEOMETRY AND CALCULUS 1
- MATH 0401 - DISCRETE MATHEMATICAL STRUCTURES

### II. Sophomore-level Core Courses

- CS 0045 - ALGORITHMS AND INFORMATION STRUCTURES APPLICATIONS
- CS 0046 - COMPUTER SYSTEMS ARCHITECTURE APPLICATIONS
- CS 0047 - ADVANCED PROGRAMMING CONCEPTS APPLICATIONS
- CS 0048 - DATA STRUCTS & FILES APPLICATIONS
- CS 0455 - ALGORITHMS AND INFORMATION STRUCTURES
- CS 0456 - COMPUTER SYSTEMS ARCHITECTURE
- CS 0457 - ADVANCED PROGRAMMING CONCEPTS
- CS 0458 - DATA STRUCTURES AND FILES

### III. Junior and Senior- level Core Courses

#### Required Computer Science

- CS 1165 - DIRECTED PROJECT
- CS 1735 - SOFTWARE DESIGN METHODOLOGY
- CS 1736 - SOFTWARE ENGINEERING
- CS 1760 - ADVANCED OBJECT-ORIENTED PROGRAMMING AND DESIGN
- CS 1765 - DATA BASE MANAGEMENT SYSTEMS

Any five of the following Computer Science electives (listed in categories)

## Foundations

- CS 1713 - ALGORITHM DESIGN AND ANALYSIS

## Systems

- CS 1792 - COMPUTER OPERATING SYSTEMS

## Languages

- CS 1720 - PROGRAMMING LANGUAGES

## Applications

- CS 1163 - ADVANCED TOPICS IN CS
- CS 1164 - ADVANCED CS TOPICS & APPLICATIONS
- CS 1762 - WEB PROGRAMMING
- CS 1766 - INTRODUCTION COMPUTER GRAPHICS
- CS 1783 - ARTIFICIAL INTELLIGENCE PROGRAMMING

## IV. Non-Major courses

- CS 0015 - INTRODUCTION TO COMPUTER PROGRAM
- CS 0016 - INTRODUCTION TO COMPUTER PROGRAMMING APPLICATIONS
- CS 0081 - COMPUTER LITERACY
- CS 0082 - CS ASSISTANTSHIP NONMAJORS
- CS 0417 - INTERMEDIATE PROGRAMMING USING JAVA

# Electrical Engineering, BS

**Faculty:** Christopher Gabany, PE; Maddumage Karunaratne; Chandana Jayasooriya; Kassiani Kotsidou; Laura Wieserman

## PROGRAM EDUCATIONAL OBJECTIVES

Graduates will have a firm grasp of the fundamentals.

Graduates will adapt to technological change.

Graduates will communicate clearly

Graduates will work collaboratively.

Graduates will practice responsibly in a global environment.

## STUDENT OUTCOMES

The following are the Electrical Engineering program's student outcomes:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. an ability to communicate effectively with a range of audiences.
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

#### ENROLLED STUDENTS/GRADUATES

Academic Year	Enrolled Students	Graduates
2018-2019	43	3
2017-2018	22	0
2016-2017	21	0
2015-2016	10	0

## Program Requirements

### Freshman Year-Fall Term

- MATH 0221 - ANALYTIC GEOMETRY AND CALCULUS 1
- PHYS 0150 - PHYSICS 1
- ENGR 0017 - INTRODUCTION TO ENGINEERING ANALYSIS
- ENGR 0081 - FRESHMAN ENGINEERING SEMINAR 1
- CHEM 0150 - GENERAL CHEMISTRY 1 ENGINEERS
- ENGCM 0005 - COMPOSITION 1

### Freshman Year-Spring Term

- MATH 0231 - ANALYTIC GEOMETRY AND CALCULUS 2
- CHEM 0151 - GENERAL CHEMISTRY 2 FOR ENGINEERS
- PHYS 0152 - PHYSICS 2
- ENGR 0018 - INTRODUCTION TO ENGINEERING COMPUTING
- ENGR 0082 - FRESHMAN ENGINEERING SEMINAR 2
- WOK (A&CE, GH&C, OR S&C)

## Sophomore Year-Fall Term

- MATH 1271 - ORDINARY DIFFERENTIAL EQUATIONS
- EE 0031 - LINEAR CIRCUITS AND SYSTEMS 1
- EE 0132 - DIGITAL LOGIC
- EE 0445 - PROGRAMMING AND INTRODUCTION TO DATA STRUCTURES
- EE 0500 - DIGITAL AND CIRCUITS LAB
- ECE 1885 - DEPARTMENTAL SEMINAR
- COMMRC 0052 - PUBLIC SPEAKING
- WOK (A&CE, GH&C, OR S&C)

## Sophomore Year-Spring Term

- MATH 0241 - ANALYTIC GEOMETRY AND CALCULUS 3
- EE 0142 - COMPUTER ORGANIZATION
- EE 0257 - ANALYSIS AND DESIGN OF ELECTRONIC CIRCUITS
- EE 0501 - DIGITAL & ELECTRONICS LABORATORY
- EE 1071 - ELECTRICAL MACHINES LABORATORY
- EE 1771 - ELECTRIC MACHINES
- ECE 1885 - DEPARTMENTAL SEMINAR

## Junior Year-Fall Term

- ECE 1885 - DEPARTMENTAL SEMINAR
- EE 1201 - ELECTRONIC MEASUREMENTS AND CIRCUITS LABORATORY
- EE 1247 - SEMICONDUCTOR DEVICES: THEORY AND APPLICATIONS
- EE 1552 - SIGNALS AND SYSTEMS
- EE 1259 - ELECTROMAGNETICS
- EE 1059 - ELECTROMAGNETICS LABORATORY
- ENGR 0020 - PROBABILITY AND STATISTICS FOR ENGINEERS 1

## Junior Year-Spring Term

- MATH 1181 - LINEAR ALGEBRA
- EE 1212 - ELECTRONIC CIRCUIT DESIGN LAB
- EE 1541 - COMPUTER ARCHITECTURE
- EE 1563 - SIGNAL PROCESSING THEORY AND PRACTICE
- ECE 1885 - DEPARTMENTAL SEMINAR
- WOK (A&CE, GH&C, OR S&C)

## Senior Year-Fall Term

- EE 1073 - CONTROL SYSTEMS LABORATORY
- EE 1195 - ENGINEERING PRACTICE AND PROFESSIONAL DEVELOPMENT
- EE 1673 - CONTROL SYSTEMS



- EE 1769 - POWER SYSTEM 1
- ECE 1885 - DEPARTMENTAL SEMINAR
- WOK (A&CE, GH&C, S&C)

## Senior Year-Spring Term

- ECE 1885 - DEPARTMENTAL SEMINAR
- EE 1199 - SENIOR DESIGN: ELECTIVE
- EE 1772 - COMMUNICATION SYSTEMS
- WOK (A&CE, GH&C, or S&C)
- EE ELECTIVE

## Technical Electives:

- COE 1504 - ADVANCED DIGITAL SYSTEMS
- EE 1177 - MEASUREMENT AND INDUSTRIAL CONTROL
- EE 1770 - POWER SYSTEMS II
- EE 1773 - DIGITAL COMMUNICATION SYSTEMS

## Mechanical Engineering, BS

**Faculty:** Roelof DeVries, PE; Amy Miller, EIT; Brian Moyer; Jerry W. Samples, PE; Serdar Tumkor; Daniel Winterscheidt; Eunice Yang

### PROGRAM EDUCATIONAL OBJECTIVES

Graduates will have obtained a broad knowledge of mechanical engineering and the skills necessary to work in a wide spectrum of technical industries.

Graduates will be prepared to advance to higher levels of professional responsibility.

Graduates will acknowledge the need for professional adaptability and will be prepared to pursue graduate study and/or professional growth during their careers.

Graduate will communicate effectively.

Graduates will work well on teams, as well as independently.

### STUDENT OUTCOMES

The following are the Mechanical Engineering program's student outcomes:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. an ability to communicate effectively with a range of audiences.

4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

#### ENROLLED STUDENTS/GRADUATES

Academic Year	Enrolled Students	Graduates
2018-2019	243	18
2017-2018	178	0
2016-2017	109	0
2015-2016	48	0

### Program Requirements

#### Freshman Year-Fall Term

- MATH 0221 - ANALYTIC GEOMETRY AND CALCULUS 1
- CHEM 0150 - GENERAL CHEMISTRY 1 ENGINEERS
- PHYS 0150 - PHYSICS 1
- ENGR 0017 - INTRODUCTION TO ENGINEERING ANALYSIS
- ENGR 0081 - FRESHMAN ENGINEERING SEMINAR 1
- ENGCOMP 0005 - COMPOSITION 1

#### Freshman Year - Spring Term

- MATH 0231 - ANALYTIC GEOMETRY AND CALCULUS 2
- CHEM 0151 - GENERAL CHEMISTRY 2 FOR ENGINEERS
- PHYS 0152 - PHYSICS 2
- ENGR 0018 - INTRODUCTION TO ENGINEERING COMPUTING
- ENGR 0082 - FRESHMAN ENGINEERING SEMINAR 2
- WOK (A&CE, GH&C, OR S&C)

#### Sophomore Year-Fall Term

- MATH 0241 - ANALYTIC GEOMETRY AND CALCULUS 3
- MATH 1181 - LINEAR ALGEBRA
- ENGR 0022 - MATERIALS STRUCTURE AND PROPERTIES
- ENGR 0132 - STATICS

- ME 0024 - INTRODUCTION TO MECHANICAL ENGINEERING DESIGN

## Sophomore Year-Spring Term

- COMMRC 0052 - PUBLIC SPEAKING
- EE 0031 - LINEAR CIRCUITS AND SYSTEMS 1
- ENGR 0142 - MECHANICS OF MATERIALS
- MATH 1271 - ORDINARY DIFFERENTIAL EQUATIONS
- ME 0052 - THERMODYNAMICS 1
- ME 0040 - MATERIALS & MANUFACTURING

## Junior Year-Fall Term

- ENGR 0152 - DYNAMICS
- ME 0071 - FLUID MECHANICS
- ME 1026 - MECHANICAL DESIGN 1
- ENGINEERING ELECTIVE
- WOK (A&CE, GH&C, OR S&C)

## Junior Year-Spring Term

- ME 1013 - DYNAMIC SYSTEMS
- ME 1027 - MECHANICAL DESIGN 2
- ME 1044 - MEASUREMENTS 1
- ME 1053 - APPLIED THERMODYNAMICS

## Senior Year-Fall Term

- ME 1046 - MEASUREMENTS 2
- ME 1054 - HEAT AND MASS TRANSFER
- ME 1095 - PROFESSIONAL PRACTICE
- DYNAMIC SYSTEMS ELECTIVE
- WOK (A&CE, GH&C, OR S&C)

## Senior Year-Spring Term

- ME 1071 - APPLIED FLUIDS
- ME 1099 - SENIOR PROJECT
- ME TECH ELECTIVE
- ME TECH ELECTIVE
- WOK (A&CE, GH&C, OR S&C)

## Technical Electives:

### **DYNAMIC SYSTEMS ELECTIVES:**

- EE 1177 - MEASUREMENT AND INDUSTRIAL CONTROL
- EE 1673 - CONTROL SYSTEMS
- EE 1771 - ELECTRIC MACHINES
- ME 1061 - OFF-ROAD VEHICLE DYNAMICS

**ME TECHNICAL ELECTIVES:**

- CHE 0510 - INTRODUCTION TO COMPUTATIONAL FLUID DYNAMICS
- ME 1056 - ENERGY
- ME 1059 - HEATING, VENTILATING AND AIR CONDITIONING
- ME 1172 - CADD/CAE
- ME 1173 - FINITE ELEMENT METHODS

**ENGINEERING ELECTIVES:**

- CE 1105 - MATERIALS OF CONSTRUCTION
- CE 1330 - INTRODUCTION TO STRUCTURAL ANALYSIS
- CE 1503 - INTRO TO ENVIRONMENTAL ENGRNG
- CE 1610 - ENGINEERING & SUSTAINABLE DEVELOPMENT
- CE 1811 - PRINCIPLES OF SOIL MECHANICS
- CHE 0214 - INTRODUCTION TO CHEMICAL PRODUCT DESIGN
- EE 0445 - PROGRAMMING AND INTRODUCTION TO DATA STRUCTURES
- EE 1177 - MEASUREMENTS & INDUSTRIAL CONTROLS
- EE 1552 - SIGNALS AND SYSTEMS
- EE 1673 - CONTROL SYSTEMS
- EE 1769 - POWER SYSTEM 1
- EE 1771 - ELECTRIC MACHINES
- ENGR 1115 - ENGINEERING LEADERSHIP
- ENGR 1103 - ENGINEERING ECONOMICS

## Minor

In addition to an academic major, a student may elect to pursue a minor in another academic discipline. The specific requirements for each minor are established by the individual academic disciplines. However, all minors require the completion of a minimum of 18 credits of course work.

## Civil Engineering Minor

The Minor in Civil Engineering will be offered to student in other engineering or science departments at the University of Pittsburgh at Johnstown. The applicant must have completed the Engineering Division's common Freshman year courses or their equivalent. Plus the following courses, which are prerequisites for Civil Engineering (CE) courses.

- MATH 0241 - ANALYTIC GEOMETRY AND CALCULUS 3 and MATH 1271 - ORDINARY DIFFERENTIAL EQUATIONS
- ENGR 0132 - STATICS
- ENGR 0142 - MECHANICS OF MATERIALS

Students from other engineering departments must be in good standing. Students from outside the Engineering Division must have an overall GPA of 2.5 or greater.

The Minor requires the completion of 18 credits of course work in Civil Engineering.

## Course Requirements:

A total of six (6) courses are required for the minor. For flexibility, students may choose any six courses offered by the department, but prerequisites must be met.

The following eight courses are introductory courses.

- CE 1105 - MATERIALS OF CONSTRUCTION
- CE 1220 - SURVEYING & LAND DEVELOPMENT
- CE 1330 - INTRODUCTION TO STRUCTURAL ANALYSIS
  
- CE 1402 - FLUID MECHANICS OR
- ME 0071 - FLUID MECHANICS
  
- CE 1412 - HYDROLOGY AND WATER RESOURCES
- CE 1503 - INTRO TO ENVIRONMENTAL ENGRNG
- CE 1703 - TRANSPORTATION ENGINEERING
- CE 1811 - PRINCIPLES OF SOIL MECHANICS

## Electives:

Civil Engineering elective courses are listed below. (Note Prerequisites must be met or permission of the instructor must be obtained to take elective courses).

- CE 1200 - CONSTRUCTION MANAGEMENT
- CE 1340 - CONCRETE STRUCTURES
- CE 1341 - STEEL STRUCTURES
- CE 1420 - HYDRAULIC DESIGN
- CE 1510 - WATER SUPPLY & WASTEWATER
- CE 1714 - PAVEMENT DESIGN AND MANAGEMENT
- CE 1730 - HIGHWAY SURVEYING AND DESIGN
- CE 1814 - SLOPES, SEEPAGE & EARTH STRUCTURES
- CE 1821 - FOUNDATION ENGINEERING

## Computer Science Minor

18 Credits

1. All courses are eligible if pre/co-req's are satisfied, except CS 1171, 1903, 1904. These courses are excluded.
2. No more than 4 credits of non-major course can be used.

### Engineering Minor

In addition to an academic major, a student may elect to pursue a minor in another academic discipline. The specific requirements for each minor are established by the individual academic disciplines. However, all minors require the completion of a minimum of 18 credits of course work.

Minors in Civil, Electrical and Mechanical engineering will be available in the Fall 2019.

## **Electrical Engineering Minor**

For the Minor, students will be required to take 20 credits including laboratory experiences.

### **Course Requirements:**

- EE 0031 - LINEAR CIRCUITS AND SYSTEMS 1
- EE 0132 - DIGITAL LOGIC
- EE 0257 - ANALYSIS AND DESIGN OF ELECTRONIC CIRCUITS
- EE 0500 - DIGITAL AND CIRCUITS LAB
- EE 0501 - DIGITAL & ELECTRONICS LABORATORY
- EE 1552 - SIGNALS AND SYSTEMS

### **Two of the Following Courses (6 credits Minimum):**

- EE 1177 - MEASUREMENT AND INDUSTRIAL CONTROL
- EE 1673 - CONTROL SYSTEMS
- EE 1769 - POWER SYSTEM 1
- EE 1771 - ELECTRIC MACHINES

### **Note:**

Other students desiring to take this minor will need Calculus through MATH 0241 - ANALYTIC GEOMETRY AND CALCULUS 3 and Physics through PHYS 0152 - PHYSICS 2.

## **Mechanical Engineering Minor**

For the Minor in Mechanical Engineering, students will choose a concentration:

- Thermodynamics/Fluids
- Engineering Mechanics

Two options are offered to appeal to students in the other engineering disciplines. Both concentrations require 18 credits.

### **Thermodynamics/Fluids Concentration:**

- ENGR 0152 - DYNAMICS
- ME 0052 - THERMODYNAMICS 1
- ME 1053 - APPLIED THERMODYNAMICS
- ME 0071 - FLUID MECHANICS
- ME 1054 - HEAT AND MASS TRANSFER
  
- ME 1056 - ENERGY OR

- ME 1059 - HEATING, VENTILATING AND AIR CONDITIONING OR
- ME 1071 - APPLIED FLUIDS

### Engineering Mechanics Concentration:

- ENGR 0152 - DYNAMICS
- ME 0024 - INTRODUCTION TO MECHANICAL ENGINEERING DESIGN
- ENGR 0142 - MECHANICS OF MATERIALS
- ENGR 0022 - MATERIALS STRUCTURE AND PROPERTIES
- ME 0040 - MATERIALS & MANUFACTURING
  
- ME 1026 - MECHANICAL DESIGN 1 OR
- ME 1172 - CADD/CAE OR
- ME 1173 - FINITE ELEMENT METHODS

# Humanities

Chair: Michael Stoneham, Ph.D.

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## Division Policies and Requirements

Candidates for graduation in Humanities must have earned a minimum of 120 credits.

The final 30 credits **MUST** be earned at Johnstown.

Degree candidates must have a quality point average of 2.00 (C average) or higher in all work at the University of Pittsburgh at Johnstown or at the University's other campuses.

The courses required for a major must be completed with a minimum quality point average of 2.00.

All students must satisfy all foundational, general education, and all major requirements to graduate with a Bachelor of Arts degree from the University of Pittsburgh Johnstown.

Completion of no fewer than 12 credits in a related area is required in certain major programs. Consultation with an advisor will help students determine the best approach to this requirement; the related area that a student pursues must be approved by the student's respective advisor.

A satisfactory level of competence in English Composition must be demonstrated by the successful completion of UPJ general education writing requirements. For the majority of students, this means successful completion of both ENGCOMP 0005 - COMPOSITION 1 and ENGCOMP 0006 - COMPOSITION 2.

A student may earn no more than two credits in Physical Education per term, to a maximum of eight during his or her entire scholastic career at Pitt-Johnstown. Only the first four Physical Education credits are counted as being in Arts and Sciences; any additional credits are considered as non-Arts and Sciences.

Majors in Humanities may not elect the H/S/U option for courses in their respective majors.

## ADDITIONAL REQUIREMENTS

In addition to the above credits, each Humanities major must complete the following requirements along with major course requirements:

I. Each major must take courses prescribed areas common to all Humanities degrees:

A. Foreign Language and/or Literature:

All students must complete two sequential courses in the same foreign language depending on Placement Exam results or complete three courses designated as Literature in Translation.

B. At least one course in Fine Arts or Music

C. At least one course in Philosophy

D. At least one course in Communication or Theatre Arts or English Literature

II. At least half of the courses in Humanities must be upper-division level courses (1000 series)

These degree requirements apply to students who will complete degrees in Humanities at Pitt-Johnstown. Students who plan to relocate to other schools of the University should be guided by the requirements set forth in the appropriate University catalog.

## HUMANITIES INTERNSHIPS

Students majoring in Communication, Journalism, Multimedia and Digital Culture, or Professional Writing are



encouraged to serve a 1-12 credit internship. Internships are designed to provide students with field experience in their chosen major. Students may take multiple internships, but are limited in the maximum number of credits that can count toward completion of a program. Students must seek permission from the program coordinator for admission.

## **Academic Programs Offered**

### **Major**

### **Communication, BA**

Faculty: Ako Inuzuka , Paul Lucas, Maryl McGinley, Diane Nicodemus, Patty Wharton-Michael, Susan Wieczorek

Adjunct Faculty: Richard Bukoski, Kimberly Flanders, Shelley Johansson, Kimberly Miller

Each student who elects Communication as a major must complete the following requirements:

#### **I. Required Communication Courses (24 credits):**

- COMMRC 0030 - INTRODUCTION TO COMMUNICATION
- COMMRC 0052 - PUBLIC SPEAKING
- COMMRC 0083 - INTERCULTURAL COMMUNICATION
- COMMRC 0320 - MASS COMMUNICATION PROCESS
- COMMRC 0600 - THEORIES OF INTERPERSONAL COMMUNICATION
- COMMRC 0700 - COMMUNICATION RESEARCH METHODS
- COMMRC 1124 - RHETORICAL CRITICISM
- COMMRC 1950 - COMMUNICATION CAPSTONE

#### **II. At least five of the following Communication Electives (15 credits):**

- COMMRC 0650 - THEORIES OF PERSUASION
- COMMRC 1107 - GENDER AND COMMUNICATION
- COMMRC 1130 - BUSINESS AND PROFESSIONAL SPEAKING
- COMMRC 1131 - ORGANIZATIONAL COMMUNICATION
- COMMRC 1132 - POLITICAL COMMUNICATION
- COMMRC 1133 - INTEGRATED MARKETING COMMUNICATION
- COMMRC 1134 - SMALL GROUP COMMUNICATION
- COMMRC 1135 - MEDICAL COMMUNICATION
- COMMRC 1136 - NONVERBAL COMMUNICATION
- COMMRC 1139 - MEDIA CRITICISM
- COMMRC 1144 - VISUAL COMMUNICATION
- COMMRC 1733 - SPECIAL TOPICS IN COMMUNICATION
- COMMRC 1903 - COMMUNICATION INTERNSHIP

#### **III. Related Area Courses (15 credits):**

Each student will construct a related area, in consultation with his or her advisor, consisting of 15 credits in disciplines related to communication. Often, students desiring a minor in a related area satisfy the majority of the their requirements for a minor in this area.

#### **IV. Foreign Language or Literature in Translation Courses (6-9) credits:**

Students must complete two courses of a language sequence or 9 credits of Literature in Translation courses.

#### **V. Required Humanities courses (9 credits):**

Students must complete one Music or Fine Arts course, one English Literature course, and one Philosophy course.

### **English Literature, BA**

Faculty: Catherine Cox, Jeremy Justus, Tuangtip Klinbubpa-Neff, Ann Rea, Michael Stoneham

English Composition Faculty: Kimberly Douglas

Adjunct English Composition Faculty: Rasheedah Alexander, Brian Burke, Nathan Crissman, Karyn Fisher, Brandon Galm, Julia Galm, Lance Harshbarger, Laura Rice, Scott Sheets, Erin Shifflett, Ginger Stepp, Rachel Thomas-Kimmel

Each student who elects English Literature as a major must complete the following requirements:

**Each student who elects English literature as a major must complete at least 36 credits in English, which must include the following courses:**

#### **I. English Literature**

##### **I. Required English Literature Courses (27 credits)**

- ENGLIT 0055 - SURVEY OF ENGLISH LITERATURE
- ENGLIT 0056 - SURVEY OF ENGLISH LITERATURE 2
- ENGLIT 0088 - INTRODUCTION TO LITERATURE
- ENGLIT 0574 - AMERICAN LITERARY TRADITIONS 1
- ENGLIT 0575 - AMERICAN LITERARY TRADITIONS 2
- ENGLIT 0581 - INTRODUCTION TO SHAKESPEARE
- ENGLIT 1021 - HISTORY OF LITERARY CRITICISM
- ENGLIT 1116 - CHAUCER
- ENGLIT 1912 - SENIOR SEMINAR

#### **II. At least four English Literature numbered above 1000**

Excluding ENGLIT 1830 and 1647 (12 credits)

#### **III. Foreign Language or Literature in Translation Courses (6-9 credits)**

Students must complete two courses of a language sequence or 9 credits of Literature in Translation courses.

## IV. Required Humanities Courses (9 credits)

Students must complete one Music or Fine Arts course, one Communication or Theatre course, and one Philosophy course.

## Humanities, BA

Three options are available to students in the program leading to the Bachelor of Arts in Humanities:

### I. Emphasis in Foreign Language and Literature

Faculty: Alvaro Bernal, Catherine Cox, Jeremy Justus, Tuangtip Klinbubpa-Neff, Barbara Petrosky, Ann Rea, Michael Stoneham

Adjunct Faculty: Paulette Parlock, David Petrosky, Reine Turcato

Each student who elects Bachelor of Arts in Humanities with a concentration in Foreign Languages and Literature must complete the following requirements:

1. At least 15 credits in a second language beyond the elementary level
2. At least 15 credits in literature and civilization courses in the same language
3. At least 24 credits in other Division of Humanities courses (Related Area) chosen with an advisor
4. At least 9 credits in Required Humanities

### II. Emphasis in Philosophy and Literature:

Faculty: Derek Leben, Martin Rice, Catherine Cox, Jeremy Justus, Tuangtip Klinbubpa-Neff, Ann Rea, Michael Stoneham

Each student who elects Bachelor of Arts in Humanities with a concentration in Philosophy and Literature must complete the following requirements:

1. At least 15 credits in Philosophy beyond Philosophy PHIL 0083, PHIL 0209, and PHIL 0213
2. At least 15 credits in English Literature or foreign literature in translation
3. At least 24 credits in other Division of Humanities courses chosen with advisor
4. Between 6-9 credits in Foreign Language or Literature in Translation
5. At least 9 credits in Required Humanities

### III. Emphasis in Thematic Cluster:

Faculty: Valerie Grash, Jeffrey Webb, and all Humanities faculty

Adjunct Faculty: Michael Bodolosky, Kim Rauch

Each student who elects Bachelor of Arts in Humanities with a self-designed Thematic Cluster must complete the following requirements:

1. At least 24 credits in Humanities clustered around a theme or field, such as Art History or Music. (Students selecting this option must have the proposed theme approved by the Chair of the Division of Humanities.)

2. At least 30 credits in courses offered by the Division of Humanities; the courses used to meet this requirement are chosen in consultation with an advisor
3. Between 6-9 credits in Foreign Language or Literature in Translation
4. At least 9 credits in Required Humanities

## **Journalism, BA**

Faculty: Leland Wood

Adjunct Faculty: Amy Bradley, Rick Bukoski, Roger Kerekes, Katherine Morris

Each student who elects Journalism as a major must complete the following requirements:

### **I. Required Journalism Courses (24 credits)**

- JOURNL 0053 - INTRODUCTION TO JOURNALISM
- JOURNL 1132 - REPORTING 1
- JOURNL 1134 - FEATURE WRITING
- JOURNL 1136 - COPYREADING/EDITING
- JOURNL 1137 - NEWSPAPER LAYOUT/DESIGN
- JOURNL 1138 - REPORTING 2
- JOURNL 1140 - PHOTOGRAPHY IN COMMUNICATIONS
- JOURNL 1171 - CONFERENCE IN WRITING

### **II. Optional Journalism or Related Course Electives (9 credits)**

Students must select three courses from the following:

- COMMRC 1132 - POLITICAL COMMUNICATION
- COMMRC 1139 - MEDIA CRITICISM
- ENGWRT - ANY ENGWRT CLASS
- JOURNL 1133 - MAGAZINE WRITING
- JOURNL 1135 - EDITORIAL WRITING
- JOURNL 1144 - PUBLIC RELATIONS 1
- JOURNL 1145 - BROADCAST JOURNALISM
- JOURNL 1146 - PUBLIC RELATIONS 2
- JOURNL 1147 - THE MEDIA AND THE LAW

### **III. Internship (6 credits)**

Students can earn 3-12 credits towards graduation; they may enroll in an internship multiple times during their undergraduate experience. However, any internship beyond those required in the major (6 credits) are counted as electives.

### **IV. Literature Requirement Courses (9 credits)**

Students must complete 9 credits of any English Literature course.

## V. Required Related Area Courses (15 credits)

Students will construct a related area in consultation with their advisor, consisting of 15 credits in disciplines related to journalism.

## VI. Foreign Language or Literature in Translation Courses (6-9 credits)

Students must complete two courses of a language sequence or 9 credits of Literature in Translation courses.

## VII. Required Humanities Courses (9 credits)

Students must complete one Music or Fine Arts course, one Communication or Theatre course, and one Philosophy course.

# Multimedia and Digital Culture, BA

Faculty: Alvaro Bernal, Michael Cox, Julia Galm, Jeremy Justus, Marissa Landrigan, Derek Leben, Paul Lucas, Maryl McGinley

Each student who elects Multimedia and Digital Culture (MMDC) as a major must complete the following requirements:

## MMDC Introductory Requirement Courses (19 credits)

- COMMRC 0320 - MASS COMMUNICATION PROCESS
- CS 0015 - INTRODUCTION TO COMPUTER PROGRAM
- CS 0016 - INTRODUCTION TO COMPUTER PROGRAMMING APPLICATIONS
- ENGLIT 0354 - WORDS AND IMAGES
- ENGLIT 0355 - DIGITAL HUMANITIES
- ENGWRIT 0511 - WRITING FOR DIGITAL MEDIA
- HUMAN 0500 - DIGITAL TOOLS & TECHNOLOGIES

## Digital Authorship Requirement Courses (9 credits)

Students must select three courses from the following:

- CS 0417 - INTERMEDIATE PROGRAMMING USING JAVA
- ENGLIT 0522 - INTERACTIVE FICTION AS LITERATURE
- ENGLIT 1265 - SCIENCE FICTION AND VIRTUAL WORLDS
- ENGWRIT 0570 - DIGITAL POETRY
- ENGWRIT 1011 - DIGITAL STORYTELLING
- ENGWRIT 1140 - DIGITAL MAGAZINE PRODUCTION
- SPAN 0107 - DIGITAL SPANISH

## Digital Culture and Philosophy Requirement Courses (6 credits)

Students must select two courses from the following:

- COMMRC 1124 - RHETORICAL CRITICISM
- COMMRC 1139 - MEDIA CRITICISM
- ENGLIT 0351 - GENDER STUDIES
- ENGLIT 0530 - FILM ANALYSIS
- JOURNL 1147 - THE MEDIA AND THE LAW
- PHIL 0440 - MINDS AND MACHINES
- PHIL 0445 - PHILOSOPHY OF TECHNOLOGY

## Advanced Visual Design and Coding Requirement Courses (6 credits)

Students must select two courses from the following:

- IS 1412 - GRAPHIC DESIGN
- IS 1415 - WEB DEVELOPMENT
- IS 1428 - MOBILE APPS
- JOURNL 1137 - NEWSPAPER LAYOUT/DESIGN
- JOURNL 1140 - PHOTOGRAPHY IN COMMUNICATIONS
- JOURNL 1144 - PUBLIC RELATIONS 1
- JOURNL 1145 - BROADCAST JOURNALISM
- JOURNL 1146 - PUBLIC RELATIONS 2
- MRKT 1630 - INTEGRATED DIGITAL MARKETING
- HUMAN 1350 - MULTIMEDIA AND DIGITAL CULTURE INTERNSHIP
- OR JOURNL 1173 - INTERNSHIP

## Digital Capstone Requirement Course (3 credits)

- HUMAN 1500 - MULTIMEDIA AND DIGITAL CULTURE CAPSTONE

## Foreign Language or Literature in Translation Courses (6-9 credits)

Students must complete two courses of a language sequence or 9 credits of Literature in Translation courses.

## Required Humanities Courses (9 credits)

Students must complete one Music or Fine Arts course, one Communication or Theatre course, and one Philosophy course.

## Theatre Arts, BA

Faculty: John Teacher

Adjunct Faculty: Frederick Hartland

Each student who elects Theatre Arts as a major must complete the following requirements:

## I. Foundational Theatre Courses (24 credits)

- PHIL 1370 - PHILOSOPHY OF ART
- THEA 0027 - STAGECRAFT 1
- THEA 0040 - STAGE MANAGEMENT
- THEA 0841 - INTRODUCTION TO THEATRE DESIGN
- THEA 1502 - ACTING 1
- THEA 1510 - DIRECTING 1
- THEA 1551 - CLASSICAL THEATRE
- THEA 1971 - CAPSTONE IN THEATRE

## II. History/Literature Electives Courses (6 credits):

Select two courses from the following:

- ENGLIT 0311 - THE DRAMATIC IMAGINATION
- ENGLIT 0581 - INTRODUCTION TO SHAKESPEARE
- THEA 1765 - PLAYWRITING

## III. Electives in Theatre (12 credits)

Students must select four courses from the following:

- THEA 0028 - STAGE LIGHTING 1
- THEA 0053 - ORAL INTERPRTTN OF LITERATURE
- THEA 0630 - PUPPETRY IN THEATRE
- THEA 1027 - STAGECRAFT 2
- THEA 1500 - VOICE AND MOVEMENT 1
- THEA 1503 - ACTING 2
- THEA 1506 - MODERN ACTING THEORY
- THEA 1507 - SHAKESPEARE IN PERFORMANCE
- THEA 1511 - DIRECTING 2
- THEA 1541 - THEATRE REPERTORY 1
- OR THEA 1542 - THEATRE REPERTORY 2
- THEA 1553 - MODERN THEATRE
- THEA 1627 - RENDERING AND PAINTING
- THEA 1635 - SCENE DESIGN 1
- THEA 1646 - COSTUME DESIGN 1
- THEA 1650 - VISUALLY-BASED DESIGN AND MULTIMEDIA FOR THEATRE
- THEA 1733 - SPECIAL TOPICS
- THEA 1900 - INDEPENDENT STUDY
- THEA 1902 - INTERNSHIP

## IV. Foreign Language or Literature in Translation Courses (6-9 credits)

Students must complete two courses of a language sequence or 9 credits of Literature in Translation courses.

## VI. Required Humanities Courses (9 credits)

Students must complete one Music one Fine Art, and one English Literature course.

## Writing, BA

Faculty: Michael Cox, Marissa Landrigan, Eric Schwerer

Adjunct Faculty: Kristin Baxter, Scott Sheets

### A. Program Emphasis in Creative Writing

Each student who selects Writing-Creative Writing as a major must complete the following requirements:

#### I. Required Writing Courses (27 credits)

Students must satisfy the following requirements.

##### Core Requirements (9 credits):

- ENGWRT 0050 - INTRO TO CREATIVE WRITING
- ENGWRT 0053 - INTRO TO PROFESSIONAL WRITING
- ENGWRT 1130 - GRAMMAR, USAGE, AND STYLE

##### Exploring Genres (9 credits):

Students must select three courses from the following:

- ENGWRT 0500 - CREATIVE NONFICTION WRITING
- ENGWRT 0521 - FICTION WRITING
- ENGWRT 0531 - POETRY WRITING
- ENGWRT 0541 - PLAYWRITING
- ENGWRT 0561 - WRITING FOR SOCIAL CHANGE

##### Creative Writing in the Digital Age (3 credits):

Students must select one course from the following:

- ENGWRT 0570 - DIGITAL POETRY
- ENGWRT 1011 - DIGITAL STORYTELLING
- ENGWRT 1140 - DIGITAL MAGAZINE PRODUCTION

##### Advanced Genre Work (3 credits)

Students must select one course from the following:

- ENGWRT 1000 - ADV CREATV NONFICTION WRITING



- ENGWR 1021 - ADVANCED FICTION WRITING
- ENGWR 1031 - ADVANCED POETRY WRITING

### Required Capstone (3 credits)

- ENGWR 1700 - ADVANCED SEMINAR IN WRITING

## II. Required English Literature Courses (9 credits):

- ENGLIT 0055 - SURVEY OF ENGLISH LITERATURE
- ENGLIT 0056 - SURVEY OF ENGLISH LITERATURE 2
- ENGLIT 0575 - AMERICAN LITERARY TRADITIONS 2

## III. Required English Literature Elective Courses (6 credits)

Students must select two additional English Literature courses.

## IV. Foreign Language or Literature in Translation Courses (6-9 credits)

Students must complete two courses of a language sequence or 9 credits of Literature in Translation courses.

## V. Required Humanities Courses (9 credits)

Students must complete one Music or Fine Arts course, one Communication or Theatre course, and one Philosophy course.

## B. Program Emphasis in Professional Writing

Each student who selects Writing-Professional Writing as a major must complete the following requirements:

### I. Required Writing Courses (27 credits)

Students must satisfy the following requirements.

#### Core Requirements (9 credits)

- ENGWR 0050 - INTRO TO CREATIVE WRITING
- ENGWR 0053 - INTRO TO PROFESSIONAL WRITING
- ENGWR 1130 - GRAMMAR, USAGE, AND STYLE

#### Workplace Writing (6 credits)

- ENGWR 0511 - WRITING FOR DIGITAL MEDIA
- ENGWR 1192 - TECHNICAL WRITING

### Intermediate Electives (3 credits)

Students must select one course from the following:

- ENGWRT 0551 - SCIENCE AND NATURE WRITING
- JOURNL 1133 - MAGAZINE WRITING
- JOURNL 1144 - PUBLIC RELATIONS 1

### Advanced Electives (6 credits)

Students must select two courses from the following:

- ENGWRT 1000 - ADV CREATV NONFICTION WRITING
- ENGWRT 1011 - DIGITAL STORYTELLING
- ENGWRT 1140 - DIGITAL MAGAZINE PRODUCTION
- ENGWRT 1950 - PROFESSIONAL WRITING INTERNSHIP
- JOURNL 1134 - FEATURE WRITING
- JOURNL 1146 - PUBLIC RELATIONS 2

### Required Capstone (3 credits)

- ENGWRT 1700 - ADVANCED SEMINAR IN WRITING

## II. Required English Literature Courses (6 credits)

- ENGLIT 0056 - SURVEY OF ENGLISH LITERATURE 2
- ENGLIT 0575 - AMERICAN LITERARY TRADITIONS 2

## III. Required English Literature Elective Courses (3 credits)

Students must select any one additional English Literature course.

## IV. Required Related Area Courses (15 credits)

Students, in consultation with their advisor will construct a related area, consisting of 15 credits in disciplines related to Professional Writing.

## V. Foreign Language or Literature in Translation Courses (6-9 credits)

Students must complete two courses of a language sequence or 9 credits of Literature in Translation courses.

## VI. Required Humanities Courses (9 credits)

Students must complete one Music or Fine Arts course, one Communication or Theatre course and one Philosophy Course.

## Minor

In addition to an academic major, a student may elect to pursue a minor in another academic discipline. The specific requirements for each minor are established by the individual academic disciplines. However, all minors require the completion of a minimum of 18 credits of course work.

## Art History Minor

The 18-credit minor in Art History includes a strong foundation in the history of Western art and architecture, as well as more detailed period and speciality courses students select based upon their personal and professional interests. The study of Art History provides critical tools particularly relevant in today's increasingly visual world, where students learn to observe, analyze, and effectively articulate how people communicate ideas across different mediums. Minors in this discipline hone skills and develop the critical abilities that make them marketable in an incredible broad range of businesses, disciplines, and markets.

### Required Fine Arts

- FA 0015 - HISTORY OF WESTERN ART 1
- FA 0016 - HISTORY OF WESTERN ART 2

Select 4 of the following courses:

- FA 0031 - MODERN ART
- FA 0050 - MEDIEVAL ART
- FA 0054 - ART LOOTING AND DESTRUCTION
- FA 0080 - WORLD RELIGIOUS ARCHITECTURE
- FA 0150 - ANCIENT ART
- FA 0304 - RENAISSANCE ART
- FA 0351 - BAROQUE ART
- FA 0440 - FRANK LLOYD WRIGHT
- FA 0450 - TWENTIETH CENTURY ARCHITECTURE
- FA 0521 - AMERICAN PAINTING 19TH CENTURY
- FA 0621 - ART OF CHINA
- FA 1902 - INDEPENDENT STUDY

## Communication Minor

The 18-credit Communication minor requires two fundamental courses: COMMRC 0030 - INTRODUCTION TO COMMUNICATION and COMMRC 0052 - PUBLIC SPEAKING. Students are additionally required to choose any four communication courses that complement their academic and professional interests (resulting in 18 total credits). Because Communication is by its own nature an interdisciplinary field, it complements many existing majors in not only the Humanities but in Engineering, Social Sciences, Business, Nursing, Health Sciences, and Natural Sciences.

### Required Communication

- COMMRC 0030 - INTRODUCTION TO COMMUNICATION

- COMMRC 0052 - PUBLIC SPEAKING

## Additional Communication Credits

Select any four (3 credit) courses

- COMMRC 0083 - INTERCULTURAL COMMUNICATION
- COMMRC 0320 - MASS COMMUNICATION PROCESS
- COMMRC 0600 - THEORIES OF INTERPERSONAL COMMUNICATION
- COMMRC 0650 - THEORIES OF PERSUASION
- COMMRC 0700 - COMMUNICATION RESEARCH METHODS
- COMMRC 1107 - GENDER AND COMMUNICATION
- COMMRC 1124 - RHETORICAL CRITICISM
- COMMRC 1130 - BUSINESS AND PROFESSIONAL SPEAKING
- COMMRC 1131 - ORGANIZATIONAL COMMUNICATION
- COMMRC 1132 - POLITICAL COMMUNICATION
- COMMRC 1133 - INTEGRATED MARKETING COMMUNICATION
- COMMRC 1134 - SMALL GROUP COMMUNICATION
- COMMRC 1135 - MEDICAL COMMUNICATION
- COMMRC 1136 - NONVERBAL COMMUNICATION
- COMMRC 1139 - MEDIA CRITICISM
- COMMRC 1144 - VISUAL COMMUNICATION
- COMMRC 1733 - SPECIAL TOPICS IN COMMUNICATION
- COMMRC 1903 - COMMUNICATION INTERNSHIP

## English Literature Minor

The English Literature minor at Pitt-Johnstown consists of 18 credits of study and allows students to explore a broad range of canonical English and American literatures. In this minor, students develop a sophisticated understanding of a broad range of literatures; this allows students to expand their capacity to sympathize with other human beings, enhances their ability to see and imagine our human complexity, and broadens their intellectual horizons by enlarging our power to experience life. Additionally, they are able to pursue their own interests in specific periods of literature or in particular areas of literary scholarship. The minor compliments major programs in all divisions, including business, social and political science, history, and many other programs in which students prepare for graduate study or begin a professional career in the field of their choice.

### British Literature

Select one of the following courses:

- ENGLIT 0055 - SURVEY OF ENGLISH LITERATURE
- ENGLIT 0056 - SURVEY OF ENGLISH LITERATURE 2

### American Literature

Select one of the following courses:

- ENGLIT 0574 - AMERICAN LITERARY TRADITIONS 1

- ENGLIT 0575 - AMERICAN LITERARY TRADITIONS 2

## Literature Electives

Select 9 credits of 1000 level English Literature except EngLit 1830 Film as Literature.

## Additional Literature Elective

Select 3 credits of any English Literature course except EngLit 1830 Film as Literature.

## French Minor

### Foreign Language Minor

**Spanish:** The 18-credit Spanish minor at Pitt-Johnstown allows students to study intermediate Spanish language, Hispanic and/or Latin American literature, and Spanish and/or Latin American culture. Students minoring in Spanish are encouraged to study abroad to complement their classroom work at UPJ and gain an in-depth experience in the culture of one or several Spanish-speaking countries.

**French:** The French minor at Pitt-Johnstown consists of 18 credits of study above the elementary level French language, and a study of French and Francophone literature and culture. Students minoring in French are encouraged to study abroad to complement their classroom work at UPJ and gain an in-depth experience in the culture of one or several Francophone countries. Students wishing to immerse themselves in greater depth in French language and literature can opt to earn a BA in Humanities with a concentration in Foreign Languages and Literature.

## Music Minor

The 18-credit *minor* program in Music offers students an opportunity to hone their musical skills in both performance and musical literacy. Students enrolled in the minor take courses focusing upon a combination of music theory, history, performance ensembles, and applied lessons.

## Music Theory

Complete both of the classes listed below:

- MUSIC 0413 - THEORY AND EAR-TRAINING 1
- MUSIC 0414 - THEORY AND EAR-TRAINING 2

## Performance Ensembles

Complete 3 credits of any combination of the following:

- MUSIC 0062 - CONCERT CHOIR
- MUSIC 0063 - CHAMBER CHOIR
- MUSIC 0065 - WOMEN'S CHORUS
- MUSIC 0069 - CONCERT BAND
- MUSIC 0641 - JAZZ ENSEMBLE

## Music History

Complete both of the classes listed below:

- MUSIC 0223 - HISTORY OF WESTERN MUSIC TO 1750
- MUSIC 0225 - HIST WESTERN MUSIC SINCE 1750

## Applied Lessons

Complete 3 credits of Applied Lessons\*

- MUSIC 0531 - VOICE  
\*Due to a limited number of Applied Lesson offerings, an additional 3-credit course in the Music Department can be taken to complete this requirement. (See Music Department Chairperson for more information)

## Philosophy Minor

The 18-credit *minor* program in Philosophy includes critical examination of philosophical problems, logic and ethics; history of philosophy; philosophy of religion; law and science; and political philosophy. This minor compliments a broad variety of majors, particularly ones in Business, Social and Political Science, History, English Literature, and Communication.

\*NOTE: Two courses must be 1000 level.

### Area 1: Logic

Student must select one course from the following:

- PHIL 0501 - INTRODUCTION TO LOGIC
- PHIL 1501 - SYMBOLIC LOGIC

### Area 2: History

Student must select one course from the following:

- PHIL 0209 - HISTORY OF ANCIENT PHILOSOPHY
- PHIL 0213 - HISTORY OF MODERN PHILOSOPHY
- PHIL 0333 - POLITICAL PHILOSOPHY
- PHIL 1201 - HISTORY OF 20TH-CENTURY ANALYTIC PHILOSOPHY

### Area 3: Core Philosophy

Student must select one course from the following:

- PHIL 0013 - CONCEPTS OF HUMAN NATURE
- PHIL 0083 - INTRODUCTION TO PHILOSOPHICAL PROBLEMS
- PHIL 0440 - MINDS AND MACHINES
- PHIL 0445 - PHILOSOPHY OF TECHNOLOGY

- PHIL 0474 - PHILOSOPHY OF RELIGION
- PHIL 0841 - SCIENCE AND RELIGION
- PHIL 1157 - PHILOSOPHY OF LANGUAGE
- PHIL 1245 - AMERICAN PHILOSOPHY
- PHIL 1461 - EPISTEMOLOGY (THEORY OF KNOWLEDGE)
- PHIL 1480 - METAPHYSICS
- PHIL 1611 - INTRODUCTION TO PHILOSOPHY OF SCIENCE
- PHIL 1660 - PARADOX

## Area 4: Value Theory

Student must select one course from the following:

- PHIL 0120 - ENVIRONMENTAL ETHICS
- PHIL 0214 - BIOETHICS
- PHIL 0303 - INTRODUCTION TO ETHICS
- PHIL 0320 - SOCIAL PHILOSOPHY
- PHIL 0333 - POLITICAL PHILOSOPHY
- PHIL 0353 - PHILOSOPHY AND PUBLIC ISSUES
- PHIL 0850 - PHILOSOPHY AND LIBERAL DEMOCRACY
- PHIL 1370 - PHILOSOPHY OF ART
- PHIL 1380 - BUSINESS ETHICS

## Philosophy Electives

Select two additional Philosophy Courses

## Spanish Minor

### Foreign Language Minor

**Spanish:** The 18-credit Spanish minor at Pitt-Johnstown allows students to study intermediate Spanish language, Hispanic and/or Latin American literature, and Spanish and/or Latin American culture. Students minoring in Spanish are encouraged to study abroad to complement their classroom work at UPJ and gain an in-depth experience in the culture of one or several Spanish-speaking countries. Students wishing to immerse themselves in greater depth in Spanish language and literature can opt to earn a BA in Humanities with a concentration in Foreign Languages and Literature.

**French:** The French minor at Pitt-Johnstown consists of 18 credits of study above the elementary level French language, and a study of French and Francophone literature and culture. Students minoring in French are encouraged to study abroad to complement their classroom work at UPJ and gain an in-depth experience in the culture of one or several Francophone countries.

## Writing Minor

### Writing Minor

The 18 credit Writing minor has been designed to complement any major on campus. Students take introductory, intermediate, and advanced courses that help them refine their written style and teach them how to find the right word every time. Writing faculty offer courses that enhance creativity alongside ones that teach students how to write for media, business, or science.

Complete the following:

- ENGWRT 0050 - INTRO TO CREATIVE WRITING
- ENGWRT 0053 - INTRO TO PROFESSIONAL WRITING

Select 2 of the following:

- ENGWRT 0500 - CREATIVE NONFICTION WRITING
- ENGWRT 0511 - WRITING FOR DIGITAL MEDIA
- ENGWRT 0521 - FICTION WRITING
- ENGWRT 0531 - POETRY WRITING
- ENGWRT 0541 - PLAYWRITING
- ENGWRT 0551 - SCIENCE AND NATURE WRITING
- ENGWRT 0561 - WRITING FOR SOCIAL CHANGE
- ENGWRT 0570 - DIGITAL POETRY
- ENGWRT 1130 - GRAMMAR, USAGE, AND STYLE

Select 2 of the following:

- ENGWRT 1000 - ADV CREATV NONFICTION WRITING
- ENGWRT 1011 - DIGITAL STORYTELLING
- ENGWRT 1021 - ADVANCED FICTION WRITING
- ENGWRT 1031 - ADVANCED POETRY WRITING
- ENGWRT 1140 - DIGITAL MAGAZINE PRODUCTION
- ENGWRT 1192 - TECHNICAL WRITING
- ENGWRT 1294 - FORM AND THEORY
- ENGWRT 1700 - ADVANCED SEMINAR IN WRITING

**COMMRC 0025 - ESL SPEAKING AND LISTENING**

**COMMRC 0030 - INTRODUCTION TO COMMUNICATION**

**COMMRC 0052 - PUBLIC SPEAKING**

**COMMRC 0083 - INTERCULTURAL COMMUNICATION**

**COMMRC 0320 - MASS COMMUNICATION PROCESS**

**COMMRC 0600 - THEORIES OF INTERPERSONAL COMMUNICATION**

**COMMRC 0650 - THEORIES OF PERSUASION**



**COMMRC 0700 - COMMUNICATION RESEARCH METHODS**

**COMMRC 1107 - GENDER AND COMMUNICATION**

**COMMRC 1124 - RHETORICAL CRITICISM**

**COMMRC 1130 - BUSINESS AND PROFESSIONAL SPEAKING**

**COMMRC 1131 - ORGANIZATIONAL COMMUNICATION**

**COMMRC 1132 - POLITICAL COMMUNICATION**

**COMMRC 1133 - INTEGRATED MARKETING COMMUNICATION**

**COMMRC 1134 - SMALL GROUP COMMUNICATION**

**COMMRC 1135 - MEDICAL COMMUNICATION**

**COMMRC 1136 - NONVERBAL COMMUNICATION**

**COMMRC 1139 - MEDIA CRITICISM**

**COMMRC 1144 - VISUAL COMMUNICATION**

**COMMRC 1733 - SPECIAL TOPICS IN COMMUNICATION**

**COMMRC 1902 - INDEPENDENT STUDY**

**COMMRC 1903 - COMMUNICATION INTERNSHIP**

**COMMRC 1950 - COMMUNICATION CAPSTONE**

**ENGCOMP 0001 - FRESHMAN COMPOSITION 1 TUTORIAL**

**ENGCOMP 0003 - COMMUNICATION 1**

**ENGCOMP 0004 - COMMUNICATION 2**

**ENGCOMP 0005 - COMPOSITION 1**

**ENGCOMP 0006 - COMPOSITION 2**

**ENGCOMP 0008 - ESL WRITING WORKSHOP**

**ENGLIT 0040 - ESL READING SKILLS**

**ENGLIT 0055 - SURVEY OF ENGLISH LITERATURE**

**ENGLIT 0056 - SURVEY OF ENGLISH LITERATURE 2**

**ENGLIT 0080 - NARRATIVE LITERATURE**

**ENGLIT 0088 - INTRODUCTION TO LITERATURE**

**ENGLIT 0311 - THE DRAMATIC IMAGINATION**

**ENGLIT 0316 - READING POETRY**

**ENGLIT 0318 - WRITING IN PARIS**

**ENGLIT 0326 - SHORT STORY IN CONTEXT**

**ENGLIT 0333 - PARIS THROUGH THE AGES**

**ENGLIT 0345 - LITERATURE AND THE ENVIRONMENT**

**ENGLIT 0351 - GENDER STUDIES**

**ENGLIT 0354 - WORDS AND IMAGES**

**ENGLIT 0355 - DIGITAL HUMANITIES**

**ENGLIT 0361 - WOMEN AND LITERATURE**

**ENGLIT 0365 - IMAGINING SOCIAL JUSTICE**

**ENGLIT 0367 - THE LAW IN LITERATURE**

**ENGLIT 0368 - THE LITERATURE OF SCIENCE**

**ENGLIT 0400 - GLOBAL LITERARY TRADITIONS**

**ENGLIT 0401 - GLOBAL LITERATURE 1**

**ENGLIT 0410 - GLOBAL LITERATURE 2**

**ENGLIT 0522 - INTERACTIVE FICTION AS LITERATURE**

**ENGLIT 0523 - MARS IN LITERARY IMAGINATION**

**ENGLIT 0530 - FILM ANALYSIS**

**ENGLIT 0557 - INTRO TO LITERATURE FOR ADOLESCENTS**

**ENGLIT 0574 - AMERICAN LITERARY TRADITIONS 1**

**ENGLIT 0575 - AMERICAN LITERARY TRADITIONS 2**

**ENGLIT 0581 - INTRODUCTION TO SHAKESPEARE**

**ENGLIT 0598 - BIBLE AS LITERATURE**

**ENGLIT 0615 - LITERATURE AND RACE**

**ENGLIT 0616 - EXILES, NOMADS, AND MIGRANTS**

**ENGLIT 0619 - THE LITERATURE OF THE GREAT WAR**

**ENGLIT 0621 - AFRICAN-AMERICAN LITERATURE**

**ENGLIT 0625 - DETECTIVE FICTION**

**ENGLIT 0626 - SCIENCE FICTION**

**ENGLIT 0634 - LIVING ON THE EDGE: LITERATURE ON THE EXTREME**

**ENGLIT 0690 - LITERATURE OF TERRORISM**

**ENGLIT 0695 - WAR LITERATURE AND ITS DISCONTENTS**

**ENGLIT 1021 - HISTORY OF LITERARY CRITICISM**

**ENGLIT 1033 - DANTE'S DIVINE COMEDY**

**ENGLIT 1106 - MIDDLE ENGLISH LITERATURE**

**ENGLIT 1116 - CHAUCER**

**ENGLIT 1120 - RESTORATION AND 18TH CENTURY LIT**

**ENGLIT 1129 - ADVANCED SHAKESPEARE**

**ENGLIT 1151 - ROMANTIC POETRY**

**ENGLIT 1171 - THE ROMANTIC PERIOD**

**ENGLIT 1175 - 19TH CENTURY BRITISH LITERATURE**

**ENGLIT 1182 - VICTORIAN LITERATURE**

**ENGLIT 1200 - AMERICAN LITERATURE TO 1860**

**ENGLIT 1210 - THE AMERICAN RENAISSANCE**

**ENGLIT 1239 - SPECIAL TOPICS IN AMER LITRATUR**

**ENGLIT 1241 - JANE AUSTEN: BOOKS & FILM**

**ENGLIT 1248 - LITERATURE OF MINORITY WOMEN**

**ENGLIT 1252 - 20THC AMERICAN LITERATURE**

**ENGLIT 1253 - CONTEMPORARY POETRY**

**ENGLIT 1260 - AMERICAN POETRY**

**ENGLIT 1265 - SCIENCE FICTION AND VIRTUAL WORLDS**

**ENGLIT 1280 - CNTMPRY AMERICAN WOMEN WRITERS**

**ENGLIT 1294 - FORM AND THEORY**

**ENGLIT 1312 - 19TH CENTURY AMERICAN NOVEL**

**ENGLIT 1320 - THE 20TH CENTURY NOVEL**

**ENGLIT 1360 - TOPICS IN 20TH CENTURY LIT**

**ENGLIT 1362 - WORLD WAR IN 20TH-CENTURY LITERATURE, FILM, AND DIGITAL ARCHIVES**

**ENGLIT 1363 - SPY FICTION IN 20TH-CENTURY LITERATURE, FILM, AND DIGITAL ARCHIVES**

**ENGLIT 1364 - LONDON IN CURRENT BRITISH FICTION**

**ENGLIT 1365 - CONTEM AMERICAN LITERATURE**

**ENGLIT 1371 - MAKERS OF MODERN DRAMA**

**ENGLIT 1381 - WORLD LITERATURE IN ENGLISH**

**ENGLIT 1500 - INDEPENDENT STUDY**

**ENGLIT 1553 - HISTORY OF THE ENGLISH LANGUAGE**

**ENGLIT 1630 - THE AMERICAN DREAM**

**ENGLIT 1647 - LITERATURE FOR ADOLESCENTS**

**ENGLIT 1701 - TOPICS IN WOMEN'S STUDIES**

**ENGLIT 1704 - WOMEN NOVELISTS**

**ENGLIT 1705 - WOMEN AND DRAMA**

**ENGLIT 1830 - FILM AS LITERATURE**

**ENGLIT 1912 - SENIOR SEMINAR**

**ENGWRT 0050 - INTRO TO CREATIVE WRITING**

**ENGWRT 0053 - INTRO TO PROFESSIONAL WRITING**

**ENGWRT 0500 - CREATIVE NONFICTION WRITING**

**ENGWRT 0511 - WRITING FOR DIGITAL MEDIA**

**ENGWRT 0521 - FICTION WRITING**

**ENGWRT 0531 - POETRY WRITING**

**ENGWRT 0541 - PLAYWRITING**

**ENGWRT 0551 - SCIENCE AND NATURE WRITING**

**ENGWRT 0561 - WRITING FOR SOCIAL CHANGE**

**ENGWRT 0570 - DIGITAL POETRY**

**ENGWRT 1000 - ADV CREATV NONFICTION WRITING**

**ENGWRT 1011 - DIGITAL STORYTELLING**

**ENGWRT 1021 - ADVANCED FICTION WRITING**

**ENGWRT 1031 - ADVANCED POETRY WRITING**

**ENGWRT 1130 - GRAMMAR, USAGE, AND STYLE**

**ENGWRT 1140 - DIGITAL MAGAZINE PRODUCTION**

**ENGWRT 1192 - TECHNICAL WRITING**

**ENGWRT 1294 - FORM AND THEORY**

**ENGWRT 1700 - ADVANCED SEMINAR IN WRITING**

**ENGWRT 1902 - INDEPENDENT STUDY**

**ENGWRT 1950 - PROFESSIONAL WRITING INTERNSHIP**

**FA 0015 - HISTORY OF WESTERN ART 1**

**FA 0016 - HISTORY OF WESTERN ART 2**

**FA 0031 - MODERN ART**

**FA 0050 - MEDIEVAL ART**

**FA 0054 - ART LOOTING AND DESTRUCTION**

**FA 0080 - WORLD RELIGIOUS ARCHITECTURE**

**FA 0150 - ANCIENT ART**

**FA 0304 - RENAISSANCE ART**

**FA 0351 - BAROQUE ART**

**FA 0440 - FRANK LLOYD WRIGHT**

**FA 0450 - TWENTIETH CENTURY ARCHITECTURE**

**FA 0521 - AMERICAN PAINTING 19TH CENTURY**

**FA 0621 - ART OF CHINA**

**FA 1902 - INDEPENDENT STUDY**

**FR 0052 - FRENCH FOR READING KNOWLEDGE**

**FR 0054 - FRENCH CONVERSATION FOR BUSINESS AND TRAVEL**

**FR 0101 - ELEMENTARY FRENCH 1**

**FR 0102 - ELEMENTARY FRENCH 2**

**FR 0211 - INTERMEDIATE FRENCH 1**

**FR 0212 - INTERMEDIATE FRENCH 2**

**FR 0311 - BUSINESS FRENCH**

**FR 0320 - INTRODUCTION TO CIVILIZATION**

**FR 0321 - APPROACHES TO FRENCH LITERATURE**

**FR 0355 - FRENCH CONVERSATION**

**FR 0356 - WRITTEN FRENCH 1**

**FR 0452 - INDEPENDENT STUDY**

**FR 0610 - FRENCH HUMANIST WRITERS OF THE RENAISSANCE (ENGLISH OR FRENCH)**

**FR 0620 - NINETEENTH-CENTURY FRENCH SHORT STORIES (ENGLISH OR FRENCH)**

**FR 0630 - MEDIEVAL EPIC POETRY (ENGLISH OR FRENCH)**

**FR 0640 - MEDIEVAL FRENCH COURTLY ROMANCE (ENGLISH OR FRENCH)**

**FR 0650 - FRENCH LITERATURE AND MODERN CINEMA (ENGLISH OR FRENCH)**

**FR 1019 - 20TH CENTURY TOPICS**

**FR 1060 - FRANCOPHONE LITERATURE**

**FR 1062 - ALGERIAN LITERATURE**

**FR 1083 - SPECIAL TOPICS IN LIT (ENGLISH)**

**FR 1090 - INTRODUCTION TO TRANSLATION STUDIES**

**HUMAN 0500 - DIGITAL TOOLS & TECHNOLOGIES**

**HUMAN 1350 - MULTIMEDIA AND DIGITAL CULTURE INTERNSHIP**

**HUMAN 1500 - MULTIMEDIA AND DIGITAL CULTURE CAPSTONE**

**ITAL 1033 - DANTE'S DIVINE COMEDY**

**ITAL 1181 - DANTE'S DIVINE COMEDY**

**JOURNL 0053 - INTRODUCTION TO JOURNALISM**

**JOURNL 1132 - REPORTING 1**

**JOURNL 1133 - MAGAZINE WRITING**

**JOURNL 1134 - FEATURE WRITING**

**JOURNL 1135 - EDITORIAL WRITING**

**JOURNL 1136 - COPYREADING/EDITING**

**JOURNL 1137 - NEWSPAPER LAYOUT/DESIGN**

**JOURNL 1138 - REPORTING 2**

**JOURNL 1140 - PHOTOGRAPHY IN COMMUNICATIONS**

**JOURNL 1142 - JOURNALISM PRACTICUM**

**JOURNL 1144 - PUBLIC RELATIONS 1**

**JOURNL 1145 - BROADCAST JOURNALISM**

**JOURNL 1146 - PUBLIC RELATIONS 2**

**JOURNL 1147 - THE MEDIA AND THE LAW**

**JOURNL 1171 - CONFERENCE IN WRITING**

**JOURNL 1173 - INTERNSHIP**

**MUSIC 0062 - CONCERT CHOIR**

**MUSIC 0063 - CHAMBER CHOIR**

**MUSIC 0065 - WOMEN'S CHORUS**

**MUSIC 0069 - CONCERT BAND**

**MUSIC 0123 - BASIC MUSICIANSHIP: CLASS VOICE**



**MUSIC 0212 - INTRO TO WESTERN ART MUSIC**

**MUSIC 0223 - HISTORY OF WESTERN MUSIC TO 1750**

**MUSIC 0225 - HIST WESTERN MUSIC SINCE 1750**

**MUSIC 0230 - BEETHOVEN SYMPHONIES**

**MUSIC 0243 - MAJOR COMPOSERS 1**

**MUSIC 0244 - MAJOR COMPOSERS 2**

**MUSIC 0413 - THEORY AND EAR-TRAINING 1**

**MUSIC 0414 - THEORY AND EAR-TRAINING 2**

**MUSIC 0425 - WRITING ABOUT MUSIC**

**MUSIC 0531 - VOICE**

**MUSIC 0641 - JAZZ ENSEMBLE**

**MUSIC 0712 - JAZZ**

**MUSIC 0801 - HISTORY OF ROCK AND ROLL**

**MUSIC 0802 - MUSIC FOR SOCIAL CHANGE**

**MUSIC 0845 - SPECIAL TOPICS IN MUSIC**

**MUSIC 0846 - THE BEATLES**

**MUSIC 0897 - MUSIC AND FILM**

**MUSIC 1905 - INDEPENDENT STUDY**

**PHIL 0013 - CONCEPTS OF HUMAN NATURE**

**PHIL 0083 - INTRODUCTION TO PHILOSOPHICAL PROBLEMS**

**PHIL 0120 - ENVIRONMENTAL ETHICS**

**PHIL 0203 - PHILOSOPHY IN LITERATURE**

**PHIL 0209 - HISTORY OF ANCIENT PHILOSOPHY**

**PHIL 0213 - HISTORY OF MODERN PHILOSOPHY**

**PHIL 0214 - BIOETHICS**

**PHIL 0220 - INTRODUCTION TO EXISTENTIALISM**

**PHIL 0230 - PHILOSOPHY AND FILM**

**PHIL 0303 - INTRODUCTION TO ETHICS**

**PHIL 0320 - SOCIAL PHILOSOPHY**

**PHIL 0333 - POLITICAL PHILOSOPHY**

**PHIL 0353 - PHILOSOPHY AND PUBLIC ISSUES**

**PHIL 0440 - MINDS AND MACHINES**

**PHIL 0445 - PHILOSOPHY OF TECHNOLOGY**

**PHIL 0474 - PHILOSOPHY OF RELIGION**

**PHIL 0501 - INTRODUCTION TO LOGIC**

**PHIL 0841 - SCIENCE AND RELIGION**

**PHIL 0850 - PHILOSOPHY AND LIBERAL DEMOCRACY**

**PHIL 0891 - TOPICS IN PHILOSOPHY (VARIOUS)**

**PHIL 1157 - PHILOSOPHY OF LANGUAGE**

**PHIL 1201 - HISTORY OF 20TH-CENTURY ANALYTIC PHILOSOPHY**

**PHIL 1245 - AMERICAN PHILOSOPHY**

**PHIL 1370 - PHILOSOPHY OF ART**

**PHIL 1380 - BUSINESS ETHICS**

**PHIL 1440 - PHILOSOPHY OF MIND**

**PHIL 1461 - EPISTEMOLOGY (THEORY OF KNOWLEDGE)**

**PHIL 1480 - METAPHYSICS**

**PHIL 1501 - SYMBOLIC LOGIC**

**PHIL 1611 - INTRODUCTION TO PHILOSOPHY OF SCIENCE**

**PHIL 1660 - PARADOX**

**PHIL 1891 - ISSUES IN PHILOSOPHY (VARIOUS)**

**PHIL 1904 - INDEPENDENT STUDY--UNDERGRADUATE**

**RELGST 0116 - BIBLE AS LITERATURE**

**SPAN 0082 - LATIN AMERICA TODAY**

**SPAN 0101 - ELEMENTARY SPANISH 1**

**SPAN 0102 - ELEMENTARY SPANISH 2**

**SPAN 0106 - SPANISH FOR SCIENCE AND ENGINEERING**

**SPAN 0107 - DIGITAL SPANISH**

**SPAN 0108 - SPANISH FOR READING AND TRANSLATION**

**SPAN 0109 - SPANISH FOR BUSINESS PROFESSIONALS**

**SPAN 0110 - SPANISH FOR HEALTHCARE PROFESSIONALS**

**SPAN 0211 - INTERMEDIATE SPANISH 1**

**SPAN 0212 - INTERMEDIATE SPANISH 2**

**SPAN 0320 - CONVERSATION**

**SPAN 0325 - GRAMMAR AND COMPOSITION**

**SPAN 0351 - LATIN AMERICAN CIVILIZATION**

**SPAN 0355 - INTRODUCTION HISPANIC LITERATURE 1**

**SPAN 0356 - INTRODUCTION TO HISPANIC LITERATURE 2**

**SPAN 0451 - SEMINAR IN CERVANTES**

**SPAN 1021 - ADVANCED CONVERSATION**

**SPAN 1026 - ADVANCED GRAMMAR**

**SPAN 1193 - LITERARY AND NON-LITERARY TRANSLATION**

**SPAN 1308 - ADVANCED SPANISH**

**SPAN 1331 - STRUCTURE OF MODERN SPANISH**

**SPAN 1443 - LATIN AMERICAN NARRATIVE**

**SPAN 1444 - LATIN AMERICAN TOPICS**

**SPAN 1640 - SURVEY OF SPANISH LITERATURE**

**SPAN 1805 - CONTEMPORARY HISPANIC LITERATURE AND SOCIETY**

**SPAN 1841 - DON QUIXOTE AND THE NOVEL**

**SPAN 1844 - CONTEMP LATIN AMER LITERATURE**

**SPAN 1847 - HISPANIC SPECIAL TOPICS**

**SPAN 1941 - INDEPENDENT STUDY**

**SPAN 1942 - DIRECTED STUDY**

**THEA 0027 - STAGECRAFT 1**

**THEA 0028 - STAGE LIGHTING 1**

**THEA 0040 - STAGE MANAGEMENT**

**THEA 0053 - ORAL INTERPRTTN OF LITERATURE**

**THEA 0630 - PUPPETRY IN THEATRE**

**THEA 0841 - INTRODUCTION TO THEATRE DESIGN**

**THEA 1027 - STAGECRAFT 2**

**THEA 1500 - VOICE AND MOVEMENT 1**

**THEA 1502 - ACTING 1**

**THEA 1503 - ACTING 2**

**THEA 1506 - MODERN ACTING THEORY**

**THEA 1507 - SHAKESPEARE IN PERFORMANCE**

**THEA 1510 - DIRECTING 1**

**THEA 1511 - DIRECTING 2**

**THEA 1541 - THEATRE REPERTORY 1**

**THEA 1542 - THEATRE REPERTORY 2**

**THEA 1551 - CLASSICAL THEATRE**

**THEA 1553 - MODERN THEATRE**

**THEA 1627 - RENDERING AND PAINTING**

**THEA 1635 - SCENE DESIGN 1**

**THEA 1646 - COSTUME DESIGN 1**

**THEA 1650 - VISUALLY-BASED DESIGN AND MULTIMEDIA FOR THEATRE**

**THEA 1733 - SPECIAL TOPICS**

**THEA 1765 - PLAYWRITING**

**THEA 1900 - INDEPENDENT STUDY**

**THEA 1902 - INTERNSHIP**

**THEA 1971 - CAPSTONE IN THEATRE**

# Natural Sciences

Chair: Steven Stern, PhD

An understanding of natural sciences contributes significantly to a liberal education, and all students at Pitt-Johnstown are encouraged to explore the division's resources. For those planning careers in medical and health sciences, engineering, engineering technology, and a variety of other fields, a strong foundation in natural sciences is essential. Students with interest in research, applications, and teaching in the sciences can acquire the background necessary for graduate study or a broad range of occupations. For those students wanting a broad education in the sciences, it is possible to complete a double major in two natural sciences departments (e.g., chemistry and psychology; biology and chemistry; etc.). Please contact the division office for more details.

## Division Policies and Requirements

Candidates for graduation in natural sciences must have earned a minimum of 120 credits. Of the 120, a maximum of 15 credits may be earned in other non-arts and sciences programs of the University (e.g., engineering) or in courses offered for the convenience of students with particular professional goals (e.g., chemistry for nursing).

The final 30 credits **MUST** be earned at Pitt-Johnstown.

Degree candidates must have a grade point average of 2.00 (C average) or higher in all work at the University of Pittsburgh at Johnstown or at the University's other campuses.

The courses required for a major must be completed with a minimum grade point average of 2.00.

Completion of no fewer than 12 credits in a related area is required in certain major programs. Consultation with an advisor will determine a student's responsibility in this matter. A related area and the specific courses taken to constitute it must be approved by a student's major advisor.

A satisfactory level of competence in writing, speaking, and quantitative reasoning must be demonstrated by the successful completion of general education requirements: competency areas as described earlier in this bulletin.

Students may earn no more than 2 credits in physical education per term, to a maximum of 8 during their entire scholastic career at Pitt-Johnstown. Only the first 4 physical education credits are counted as being in arts and sciences; any additional credits are considered non-arts and sciences.

Majors in natural sciences may not elect the H/S/U option for courses in their major.

There are no second language requirements for majors in the Division of Natural Sciences. However, it should be noted that many graduate programs require a reading knowledge of one or two second languages or computer science. Therefore, students planning graduate study should seriously consider course work in a foreign language, or Computer Science.

All students, unless specifically noted in the major requirements, must complete the general education requirements, in addition to major requirements, by earning at least 12 credits in each of the three divisions of arts and sciences: the humanities, the social sciences, and the natural sciences. The 12 credits in each division must be distributed in the manner described in the General Education Requirements: Knowledge Areas section. All major programs in the division require at least 12 credits in the humanities and social sciences divisions as described earlier in this bulletin. For general education natural sciences knowledge area requirements in these three majors, courses must be distributed as described in handouts obtained from the department of interest.

These degree requirements apply to students who will complete degrees in natural sciences at Pitt-Johnstown. Students who plan to relocate to other schools of the University should be guided by the requirements set forth in the appropriate University bulletin.

## Natural Sciences Internships

A limited number of students majoring in the division may serve a one to six credit internship in biology, chemistry, energy and earth resources, mathematics, or psychology. This experience is designed to provide students with field experience in their chosen majors. Students must seek permission from the department coordinator for admission.

# Academic Programs Offered

## Major

### Biochemistry, BS

#### I. Required Biology Courses

- BIOL 0110 - GENERAL BIOLOGY 1
- BIOL 0111 - GENERAL BIOLOGY LABORATORY 1
- BIOL 0120 - GENERAL BIOLOGY 2
- BIOL 0121 - GENERAL BIOLOGY LABORATORY 2

#### II. Required Chemistry Courses

- CHEM 0111 - GENERAL CHEMISTRY 1
- CHEM 0112 - GENERAL CHEMISTRY 2
- CHEM 0113 - GENERAL CHEMISTRY LABORATORY 1
- CHEM 0114 - GENERAL CHEMISTRY LABORATORY 2
- CHEM 0231 - ORGANIC CHEMISTRY 1
- CHEM 0232 - ORGANIC CHEMISTRY 2
- CHEM 0233 - ORGANIC CHEMISTRY LABORATORY 1
- CHEM 0234 - ORGANIC CHEMISTRY LABORATORY 2
- CHEM 0325 - ANALYTICAL CHEMISTRY
- CHEM 1131 - INORGANIC CHEMISTRY
- CHEM 1133 - SYNTHESIS & CHARACTERIZATION LAB
- CHEM 1321 - BIOCHEMISTRY 1
- CHEM 1322 - BIOCHEMISTRY 2
- CHEM 1341 - PHYSICAL CHEMISTRY 1

#### III. Required Mathematics Courses

- MATH 0221 - ANALYTIC GEOMETRY AND CALCULUS 1
- MATH 0231 - ANALYTIC GEOMETRY AND CALCULUS 2

#### IV. Required Physics Courses

- PHYS 0150 - PHYSICS 1

- PHYS 0151 - PHYSICS LABORATORY 1
- PHYS 0152 - PHYSICS 2
- PHYS 0153 - PHYSICS LABORATORY 2

## V. Required Elective Courses

Select either

- BIOL 0360 - CELL BIOLOGY
- BIOL 0361 - CELL BIOLOGY LABORATORY

Select either

- BIOL 1225 - ANIMAL PHYSIOLOGY LABORATORY or
- BIOL 1130 - BIOLOGY OF PLANTS

Select one additional elective

- BIOL 1137 - MOLECULAR GENETICS
- BIOL 1186 - IMMUNOLOGY

## Biology, BS

Faculty: Luis Bonachea, Marissa Brainard, Christine Dahlin, Alex Dececchi, Jill Henning, Stephen Kilpatrick, Jennifer Manges, Bruce Robart, Rebecca Webb, Kimberly Ziance

Although there are required courses in biology, mathematics, chemistry, and physics, the upper level of both biology tracks is designed by the student, with advisement, to reflect his/her interests and needs. Both options require 24 credits in biology including at least three laboratory or field courses beyond the freshman year.

## Required Biology Courses

- BIOL 0130 - FRESHMAN SEMINAR
- BIOL 0110 - GENERAL BIOLOGY 1
- BIOL 0111 - GENERAL BIOLOGY LABORATORY 1
- BIOL 0120 - GENERAL BIOLOGY 2
- BIOL 0121 - GENERAL BIOLOGY LABORATORY 2
- BIOL 0340 - GENERAL ECOLOGY
- BIOL 0360 - CELL BIOLOGY
- BIOL 0361 - CELL BIOLOGY LABORATORY

## Required Chemistry Courses

- CHEM 0111 - GENERAL CHEMISTRY 1
- CHEM 0113 - GENERAL CHEMISTRY LABORATORY 1



- CHEM 0112 - GENERAL CHEMISTRY 2
- CHEM 0114 - GENERAL CHEMISTRY LABORATORY 2
- MATH 0221 - ANALYTIC GEOMETRY AND CALCULUS 1

## Required Upper Level Chem Options

- CHEM 0231 - ORGANIC CHEMISTRY 1
- CHEM 0233 - ORGANIC CHEMISTRY LABORATORY 1
- CHEM 0232 - ORGANIC CHEMISTRY 2
- CHEM 0234 - ORGANIC CHEMISTRY LABORATORY 2
- OR
- CHEM 0230 - FUNDAMENTALS OF ORGANIC CHEMISTRY
- CHEM 0235 - FUNDAMENTALS OF ORGANIC CHEMISTRY LAB
- CHEM 0325 - ANALYTICAL CHEMISTRY

## Required Physics Options

- PHYS 0140 - INTRODUCTION TO PHYSICS 1
- PHYS 0141 - INTRODUCTION TO PHYSICS 1 LAB
- OR
- PHYS 0150 - PHYSICS 1
- PHYS 0151 - PHYSICS LABORATORY 1

## Cellular and Molecular Elective

Select one course from the following courses:

- BIOL 0352 - GENETICS
- BIOL 1137 - MOLECULAR GENETICS
- BIOL 1140 - CANCER BIOLOGY
- BIOL 1186 - IMMUNOLOGY
- BIOL 1236 - DEVELOPMENTAL BIOLOGY
- BIOL 1240 - MICROBIOLOGY
- BIOL 1280 - SPECIAL TOPICS IN BIOLOGY

## Organismal Elective

Select one course from the following courses:

- BIOL 1122 - VERTEBRATE ANATOMY
- BIOL 1130 - BIOLOGY OF PLANTS
- BIOL 1144 - INVERTEBRATE BIOLOGY
- BIOL 1224 - ANIMAL PHYSIOLOGY
- BIOL 1269 - VERTEBRATE BIOLOGY
- BIOL 1274 - ORNITHOLOGY
- BIOL 1280 - SPECIAL TOPICS IN BIOLOGY

## Ecology and Evolution Elective

Select one course from the following courses:

- BIOL 1110 - BIODIVERSITY CONSERVATION
- BIOL 1162 - LOCAL FLORA
- BIOL 1165 - EVOLUTION
- BIOL 1197 - ECOLOGY OF INFECTIOUS DISEASE
- BIOL 1220 - WILDLIFE MANAGEMENT
- BIOL 1232 - ANIMAL BEHAVIOR
- BIOL 1280 - SPECIAL TOPICS IN BIOLOGY
- BIOL 1520 - AQUATIC ECOLOGY

## Capstone Experience

Minimum 1 credit, included as Biol Elective Credit

- BIOL 1161 - INTERNSHIP
- BIOL 1137 - MOLECULAR GENETICS
- BIOL 1200 - INDEPENDENT STUDY
- BIOL 1236 - DEVELOPMENTAL BIOLOGY
- BIOL 1237 - DEVELOPMENTAL BIOLOGY LAB

## Biology Lab Requirements

Minimum 2 Labs

## Additional Biology Electives

You must complete a minimum of 17 Biology Elective credits

## Upper Level Interdiscipline Science Elective

Select one course from the following courses.

(Pre-req's must be fulfilled)

\* Pre-req may be waived.

- CHEM 0231 - ORGANIC CHEMISTRY 1
- GEOL 1061 - GEOMORPHOLOGY \*
- GEOL 1106 - HYDROGEOLOGY \*
- GEOL 1139 - GEOLOGY OF SOILS \*
- GEOL 1202 - INTRODUCTION TO PALEONTOLOGY \*
- MATH 0231 - ANALYTIC GEOMETRY AND CALCULUS 2
- PHYS 0142 - INTRODUCTION TO PHYSICS 2
- PHYS 0143 - INTRODUCTION TO PHYSICS 2 LAB

- PHYS 0152 - PHYSICS 2
- PHYS 0153 - PHYSICS LABORATORY 2
- PSY 0211 - COMPARATIVE PSYCHOLOGY
- PSY 1216 - HEALTH PSYCHOLOGY
- PSY 1440 - PSYCHOLOGY OF LEARNING
- PSY 1441 - PSYCHOLOGY OF LEARNING LABORATORY
- PSY 1500 - PHYSIOLOGICAL PSYCHOLOGY
- PSY 1650 - ADVANCED SEMINARS

## Chemistry, BS

Faculty: Elisabeth Bell-Loncella, Ryan Bird, Tracy Fisanick, Marsha Grimminger, Robert Grimminger, Thomas Malosh, Simeon Martinus, Manisha Nigam, Laura Ritchey, Matt Tracey

The chemistry program offers courses in all of the traditional areas of chemistry including biochemistry. The program provides students with opportunities to participate in research and/or engage in internships. The program prepares students for employment at the baccalaureate-degree level, for graduate study, or for professional programs in health-related areas. The program also offers students the necessary chemistry courses for subsequent enrollment in pharmacy programs.

### I. Required Chemistry Courses

- CHEM 0111 - GENERAL CHEMISTRY 1
- CHEM 0112 - GENERAL CHEMISTRY 2
- CHEM 0113 - GENERAL CHEMISTRY LABORATORY 1
- CHEM 0114 - GENERAL CHEMISTRY LABORATORY 2
- CHEM 0231 - ORGANIC CHEMISTRY 1
- CHEM 0232 - ORGANIC CHEMISTRY 2
- CHEM 0233 - ORGANIC CHEMISTRY LABORATORY 1
- CHEM 0234 - ORGANIC CHEMISTRY LABORATORY 2
- CHEM 0325 - ANALYTICAL CHEMISTRY
- CHEM 1131 - INORGANIC CHEMISTRY
- CHEM 1327 - INSTRUMENTAL ANALYSIS
- CHEM 1341 - PHYSICAL CHEMISTRY 1
- CHEM 1342 - PHYSICAL CHEMISTRY 2
- CHEM 1343 - PHYSICAL CHEMISTRY LABORATORY

### II. Additional Required Courses

- MATH 0221 - ANALYTIC GEOMETRY AND CALCULUS 1
- MATH 0231 - ANALYTIC GEOMETRY AND CALCULUS 2
- MATH 0241 - ANALYTIC GEOMETRY AND CALCULUS 3
- PHYS 0150 - PHYSICS 1
- PHYS 0152 - PHYSICS 2
- PHYS 0151 - PHYSICS LABORATORY 1
- PHYS 0153 - PHYSICS LABORATORY 2

### III. Nine elective credits in Chemistry

(See division handout for specific courses.)

- CHEM 1133 - SYNTHESIS & CHARACTERIZATION LAB
- CHEM 1321 - BIOCHEMISTRY 1
- CHEM 1322 - BIOCHEMISTRY 2
- CHEM 1323 - BIOCHEMISTRY LABORATORY
- CHEM 1371 - UNDERGRADUATE RESEARCH (up to 3 credits)

The Chemistry Department offers the following courses for non-majors

Chemistry for non-science majors:

- CHEM 0085 - DRUGS AND THE HUMAN BODY

Health Related Professions:

- CHEM 0190 - CHEMISTRY FOR THE HEALTH PROFESSIONS
- CHEM 0192 - CHEMISTRY FOR HEALTH PROFESSIONS LABORATORY

For biology and psychology majors:

- CHEM 0230 - FUNDAMENTALS OF ORGANIC CHEMISTRY
- CHEM 0235 - FUNDAMENTALS OF ORGANIC CHEMISTRY LAB

## Energy and Earth Resources, BS

Faculty: Christopher Coughenour, Ryan Kerrigan

Adjunct Faculty: Neil Coleman, Steve Lindberg, Teresa McConnell,

### I. Core Courses

The following courses constitute the EER core and are required of all students electing the EER major:

- GEOL 0061 - HISTORICAL GEOLOGY
- GEOL 1108 - RPT WRITNG & COMP APPLIC IN GEOL
- GEOL 1157 - GEOLOGIC FIELD METHODS
- GEOL 1170 - INTERNSHIPS
- CHEM 0111 - GENERAL CHEMISTRY 1
- CHEM 0112 - GENERAL CHEMISTRY 2
- CHEM 0113 - GENERAL CHEMISTRY LABORATORY 1
- CHEM 0114 - GENERAL CHEMISTRY LABORATORY 2
- GEOG 0420 - CARTOGRAPHY
- GEOG 1440 - GEOGRAPHIC INFORMATION SYSTEMS

- ENVSTD 0100 - INTRO TO ENVIRONMENTAL STUDIES or
- GEOG 1260 - ENERGY, ENVIRONMENT AND SOCIETY
- MATH 0221 - ANALYTIC GEOMETRY AND CALCULUS 1
- MET 1144 - ENERGY

## II. Concentrations:

### Energy Concentration

- GEOL 0210 - EARTH MATERIALS
- GEOL 0220 - FOSSIL FUELS
- GEOL 1005 - SEDIMENTATION & STRATIGRAPHY
- GEOL 1110 - STRUCTURAL GEOLOGY
- GEOL 1406 - INTRO TO SOLID-EARTH GEOPHYSICS
- MATH 0231 - ANALYTIC GEOMETRY AND CALCULUS 2
- PHYS 0140 - INTRODUCTION TO PHYSICS 1 or
- PHYS 0150 - PHYSICS 1 and
- PHYS 0141 - INTRODUCTION TO PHYSICS 1 LAB or
- PHYS 0151 - PHYSICS LABORATORY 1

### Environmental Concentration

- GEOL 1105 - HYDROLOGY
- GEOL 1106 - HYDROGEOLOGY
- GEOL 1061 - GEOMORPHOLOGY
- GEOL 1139 - GEOLOGY OF SOILS
- CHEM 0230 - FUNDAMENTALS OF ORGANIC CHEMISTRY
- CHEM 0235 - FUNDAMENTALS OF ORGANIC CHEMISTRY LAB
- BIOL 0110 - GENERAL BIOLOGY 1
- BIOL 0111 - GENERAL BIOLOGY LABORATORY 1
- BIOL 0120 - GENERAL BIOLOGY 2
- BIOL 0121 - GENERAL BIOLOGY LABORATORY 2

### Note:

*Additional electives must be taken, to make the total 120 required for graduation.*

## Mathematics, BS

Faculty: Jacqueline Baird, Miron Bekker, Dawn Cable, Elena Constantin, Stephen Curran, Victoria Czarnek, Michael Ferencak, Elizabeth Hoffman, Linda Mantini, Sofya Masharipova, John Thompson, Linda Tully, Joseph Wilson

Adjunct Faculty: Anita Thompson

The Department of Mathematics in the Division of Natural Sciences at the University of Pittsburgh at Johnstown offers a four-year program leading to the degree of Bachelor of Science in the natural sciences (mathematics). The Department of Mathematics currently offers two tracks in the mathematics major. The Applied Option is a typical degree in mathematics with an added minor from within the natural sciences. The Actuarial Option is primarily designed for those students that wish to pursue employment in the actuarial sciences.

## Applied Option:

### I. Required Mathematics Courses (40 or 41 credits)

- MATH 0221 - ANALYTIC GEOMETRY AND CALCULUS 1
- MATH 0231 - ANALYTIC GEOMETRY AND CALCULUS 2
- MATH 0241 - ANALYTIC GEOMETRY AND CALCULUS 3
- MATH 0401 - DISCRETE MATHEMATICAL STRUCTURES
- MATH 1012 - INTRODUCTION TO THEORETICAL MATHEMATICS
- MATH 1019 - TECHNICAL SPEAKING IN MATHEMATICS
- MATH 1153 - INTRODUCTION TO PROBABILITY AND STATISTICS 1
- MATH 1154 - INTRODUCTION TO PROBABILITY AND STATISTICS 2
- MATH 1163 - MATHEMATICS SEMINAR 1
- MATH 1181 - LINEAR ALGEBRA
- MATH 1271 - ORDINARY DIFFERENTIAL EQUATIONS

#### One course from Group I:

- MATH 1125 - ABSTRACT ALGEBRA
- MATH 1531 - ADVANCED CALCULUS
- MATH 1561 - COMPLEX VARIABLES AND APPLICATIONS
- MATH 1701 - INTRODUCTION TO TOPOLOGY

#### One course from Group II:

- MATH 1071 - NUMERICAL ANALYSIS
- MATH 1175 - TOPICS IN APPLIED MATHEMATICS
- MATH 1178 - OPERATIONS RESEARCH
- MATH 1296 - TOPICS IN APPLIED STATISTICS

### II. Required Computer Science Courses (7 credits)

- CS 0100 - PERSPECTIVES IN COMPUTER SCIENCE
- CS 0410 - INTRO TO COMPTR SCI PRGM APPLC
- CS 0411 - INTRO COMPUTER SCI PROGRAMMING

### III. Mathematics Electives (6 credits):

Selected from the following:

- MATH 1051 - COMBINATORIAL MATHEMATICS

- MATH 1071 - NUMERICAL ANALYSIS
- MATH 1117 - HISTORY OF MATHEMATICS
- MATH 1125 - ABSTRACT ALGEBRA
- MATH 1178 - OPERATIONS RESEARCH
- MATH 1291 - TOPICS IN GEOMETRY
- MATH 1531 - ADVANCED CALCULUS
- MATH 1561 - COMPLEX VARIABLES AND APPLICATIONS
- MATH 1701 - INTRODUCTION TO TOPOLOGY
- or any other three or four credit 1000-level Mathematics course, with departmental approval.

Note:

Neither MATH 1019 nor MATH 1035 can be used as a mathematics elective to fulfill this requirement.

#### IV. Required minor in one of the following areas:

Biology, Chemistry, Computer Science, Geology, Physics, or Psychology. This may be waived for some double majors.

#### V. General Degree Requirements

##### Actuarial Science Option:

##### I. Required Mathematics Courses (41 or 42 credits)

- MATH 0221 - ANALYTIC GEOMETRY AND CALCULUS 1
- MATH 0231 - ANALYTIC GEOMETRY AND CALCULUS 2
- MATH 0241 - ANALYTIC GEOMETRY AND CALCULUS 3
- MATH 0401 - DISCRETE MATHEMATICAL STRUCTURES
- MATH 1012 - INTRODUCTION TO THEORETICAL MATHEMATICS
- MATH 1019 - TECHNICAL SPEAKING IN MATHEMATICS
- MATH 1153 - INTRODUCTION TO PROBABILITY AND STATISTICS 1
- MATH 1154 - INTRODUCTION TO PROBABILITY AND STATISTICS 2
- MATH 1163 - MATHEMATICS SEMINAR 1
- MATH 1164 - MATHEMATICS SEMINAR 2
- MATH 1181 - LINEAR ALGEBRA
- MATH 1271 - ORDINARY DIFFERENTIAL EQUATIONS

One course from Group I:

- MATH 1125 - ABSTRACT ALGEBRA
- MATH 1531 - ADVANCED CALCULUS
- MATH 1561 - COMPLEX VARIABLES AND APPLICATIONS
- MATH 1701 - INTRODUCTION TO TOPOLOGY

One course from Group II:

- MATH 1071 - NUMERICAL ANALYSIS
- MATH 1175 - TOPICS IN APPLIED MATHEMATICS
- MATH 1178 - OPERATIONS RESEARCH
- MATH 1296 - TOPICS IN APPLIED STATISTICS

## II. Required Computer Science Courses (7 credits)

- CS 0100 - PERSPECTIVES IN COMPUTER SCIENCE
- CS 0410 - INTRO TO COMPTR SCI PRGM APPLC
- CS 0411 - INTRO COMPUTER SCI PROGRAMMING

## III. Required Business and Economics Courses (12 credits)

- ECON 0105 - INTRO MICROECONOMIC THEORY
- ECON 0115 - INTRO TO MACROECONOMIC THEORY

## IV. Mathematics Electives (6 credits)

Select from the following:

- MATH 1051 - COMBINATORIAL MATHEMATICS
- MATH 1071 - NUMERICAL ANALYSIS
- MATH 1125 - ABSTRACT ALGEBRA
- MATH 1175 - TOPICS IN APPLIED MATHEMATICS
- MATH 1178 - OPERATIONS RESEARCH
- MATH 1291 - TOPICS IN GEOMETRY
- MATH 1531 - ADVANCED CALCULUS
- MATH 1561 - COMPLEX VARIABLES AND APPLICATIONS
- MATH 1701 - INTRODUCTION TO TOPOLOGY or
- any other 3- or 4-credit 1000-level Mathematics course, with department approval.

Note:

Neither MATH 1019 nor MATH 1035 can be used as a mathematics elective to fulfill this requirement.

## V. Business Electives (6 credits)

Select from the following:

- BUS 1110 - COST ACCOUNTING CONCEPTS
- ECON 1141 - ECONOMIC FORECASTING
- ECON 1151 - FINANCIAL ECONOMICS

VI. To be admitted to the actuarial science option students must have earned a cumulative grade point average of at least 3.35 in



- MATH 0221 - ANALYTIC GEOMETRY AND CALCULUS 1
- MATH 0231 - ANALYTIC GEOMETRY AND CALCULUS 2
- MATH 0241 - ANALYTIC GEOMETRY AND CALCULUS 3
- MATH 0401 - DISCRETE MATHEMATICAL STRUCTURES
- MATH 1012 - INTRODUCTION TO THEORETICAL MATHEMATICS

## VII. General Degree Requirements

### Natural Sciences, BS

The program of study leading to the Bachelor of Science in natural sciences combines a broad base in science with experiences and areas of study largely of the student's choosing. The three options of study are broad natural sciences environmental geology, broad natural sciences biopsychology, and broad natural sciences physics. Through the careful selection of courses, students can prepare for a range of careers or for study at graduate or professional schools.

### Physics Emphasis

#### I. Required Physics Courses

- PHYS 0150 - PHYSICS 1
- PHYS 0151 - PHYSICS LABORATORY 1
- PHYS 0152 - PHYSICS 2
- PHYS 0153 - PHYSICS LABORATORY 2
- PHYS 0400 - CLASSICAL MECHANICS
- PHYS 0450 - ELECTROMAGNETISM
- PHYS 0480 - ASTROPHYSICS
- PHYS 1300 - QUANTUM PHYSICS
- PHYS 1400 - ADVANCED LAB

#### II. Additional Required Courses (40 credits)

- BIOL 0110 - GENERAL BIOLOGY 1
- BIOL 0111 - GENERAL BIOLOGY LABORATORY 1
- BIOL 0120 - GENERAL BIOLOGY 2
- BIOL 0121 - GENERAL BIOLOGY LABORATORY 2
- CHEM 0111 - GENERAL CHEMISTRY 1
- CHEM 0112 - GENERAL CHEMISTRY 2
- CHEM 0113 - GENERAL CHEMISTRY LABORATORY 1
- CHEM 0114 - GENERAL CHEMISTRY LABORATORY 2
- Geology (at least seven credits)
- MATH 0221 - ANALYTIC GEOMETRY AND CALCULUS 1
- MATH 0231 - ANALYTIC GEOMETRY AND CALCULUS 2
- MATH 0241 - ANALYTIC GEOMETRY AND CALCULUS 3
- One course in computer science or
- ET 0030 - COMPUTR SYMS PRGMG & APPLCTNS

# Psychology, BS

Faculty: Sharon Bertsch, Stephanie Jimenez, John Mullennix, Steven Stern, Alan Teich

Adjunct Faculty: Emily Kist

The psychology program provides a solid and practical theoretical grounding in the science of behavior. In addition to basic course work, students are provided with opportunities to conduct hands-on research or to participate in internship experiences. Graduates of the program will possess the necessary skills and background to enter the work force or to attend graduate programs related to the field.

## I. Required courses in Psychology

- PSY 0200 - INTRODUCTION TO PSYCHOLOGY
- PSY 0270 - INTRODUCTORY STATISTICS
- PSY 1000 - PSYCHOLOGY SEMINAR (two semesters)
- PSY 1031 - RESEARCH METHODS
- PSY 1650 - ADVANCED SEMINARS

## II. Theoretical Foundations (one course)

Choose from

- PSY 0210 - SOCIAL PSYCHOLOGY
- PSY 0211 - COMPARATIVE PSYCHOLOGY
- PSY 0230 - CHILD DEVELOPMENT
- PSY 0240 - THEORIES OF PERSONALITY
- PSY 0351 - PSYCHOPHARMACOLOGY
- PSY 0384 - ADULT DEVELOPMENT & AGING
- PSY 1141 - PSYCHOPATHOLOGY

## III. Laboratory/Systems (two courses)

Choose from

- PSY 1065 - COGNITIVE PSYCHOLOGY
- PSY 1121 - TESTS AND MEASUREMENTS
- PSY 1440 - PSYCHOLOGY OF LEARNING
- PSY 1441 - PSYCHOLOGY OF LEARNING LABORATORY
- PSY 1500 - PHYSIOLOGICAL PSYCHOLOGY
- PSY 1570 - HISTORY AND SYSTEMS OF PSYCHOLOGY

## IV. Applications (one course)

Choose from

- PSY 0470 - INTRODUCTION TO BEHAVIOR MODIFICATION
- PSY 0501 - LIFESPAN DEVELOPMENT

- PSY 1178 - HUMAN SEXUALITY
- PSY 1216 - HEALTH PSYCHOLOGY
- PSY 1251 - MODELS OF PSYCHOTHERAPY
- PSY 1636 - ORGANIZATIONAL PSYCHOLOGY

## V. Research/Internship (3 credits)

Choose from

- PSY 1548 - SENIOR PROJECT 1
- PSY 1549 - SENIOR PROJECT 2
- PSY 1555 - INTERNSHIP
- PSY 1560 - INTERNSHIP
- PSY 1904 - DIRECTED INDIVIDUAL READING
- PSY 1906 - DIRECTED INDIVIDUAL RESEARCH
- OR Any additional course from II, III, or IV

## VI. Related area (four courses)

## VII. Biology

(general education requirements: knowledge area sections 3 and 4)

- BIOL 0110 - GENERAL BIOLOGY 1
- BIOL 0111 - GENERAL BIOLOGY LABORATORY 1
- BIOL 0120 - GENERAL BIOLOGY 2
- BIOL 0121 - GENERAL BIOLOGY LABORATORY 2

## Minor

In addition to an academic major, a student may elect to pursue a minor in another academic discipline. The specific requirements for each minor are established by the individual academic disciplines. However, all minors require the completion of a minimum of 18 credits of course work.

## Biology Minor

### Natural Sciences Minors

In addition to an academic major, a student may elect to pursue a minor in another academic discipline. The specific requirements for each minor are established by the individual academic disciplines. However, all minors require the completion of a minimum of 18 credits of course work. There are minors in biology, chemistry, biochemistry, geology, mathematics, physics and psychology.

## Chemistry Minor

### Natural Sciences Minors

In addition to an academic major, a student may elect to pursue a minor in another academic discipline. The specific requirements for each minor are established by the individual academic disciplines. However, all minors require the completion of a minimum of 18 credits of course work. There are minors in biology, chemistry, biochemistry, geology, mathematics, physics and psychology.

## General Requirement

- CHEM 0111 - GENERAL CHEMISTRY 1
- CHEM 0113 - GENERAL CHEMISTRY LABORATORY 1
- CHEM 0112 - GENERAL CHEMISTRY 2
- CHEM 0114 - GENERAL CHEMISTRY LABORATORY 2

## Organic Requirement

- CHEM 0231 - ORGANIC CHEMISTRY 1
- CHEM 0234 - ORGANIC CHEMISTRY LABORATORY 2
- CHEM 0232 - ORGANIC CHEMISTRY 2
- CHEM 0233 - ORGANIC CHEMISTRY LABORATORY 1

## Elective Requirement

Any Chem course above 0300 AND the accompanying Lab OR

Any Chem course above 1000 AND CHEM 1133 LAB

## Geology Minor

### Natural Sciences Minors

In addition to an academic major, a student may elect to pursue a minor in another academic discipline. The specific requirements for each minor are established by the individual academic disciplines. However, all minors require the completion of a minimum of 18 credits of course work. There are minors in biology, chemistry, biochemistry, computer science, geology, mathematics, physics and psychology.

## Required Geology Courses

- GEOL 0061 - HISTORICAL GEOLOGY

## Geology Electives

Choose 10 credits from the following courses

(At least one course must be 1000 level)

- GEOL 0010 - PRINCIPLES OF ASTRONOMY
- GEOL 0024 - METEOROLOGY

- GEOL 0083 - INTRO TO PHYSICAL OCEANOGRAPHY
- GEOL 0086 - ENVIRONMENTAL GEOLOGY
- GEOL 0090 - EARTHQUAKES AND VOLCANOES
- GEOL 1000 - MINERALOGY & OPTICAL MINERALOGY
- GEOL 1004 - IGNEOS & METM PETRLGY & PETGRPHY
- GEOL 1005 - SEDIMENTATION & STRATIGRAPHY
- GEOL 1061 - GEOMORPHOLOGY
- GEOL 1105 - HYDROLOGY
- GEOL 1106 - HYDROGEOLOGY
- GEOL 1110 - STRUCTURAL GEOLOGY
- GEOL 1139 - GEOLOGY OF SOILS
- GEOL 1157 - GEOLOGIC FIELD METHODS
- GEOL 1202 - INTRODUCTION TO PALEONTOLOGY
- GEOL 1406 - INTRO TO SOLID-EARTH GEOPHYSICS

## Mathematics Minor

### Natural Sciences Minors

In addition to an academic major, a student may elect to pursue a minor in another academic discipline. The specific requirements for each minor are established by the individual academic disciplines. However, all minors require the completion of a minimum of 18 credits of course work. There are minors in biology, chemistry, biochemistry, computer science, geology, mathematics, physics and psychology.

### Required Mathematics Courses

- MATH 0231 - ANALYTIC GEOMETRY AND CALCULUS 2
- MATH 0241 - ANALYTIC GEOMETRY AND CALCULUS 3
- MATH 0221 - ANALYTIC GEOMETRY AND CALCULUS 1

### Mathematics Electives

Select any 2 additional Math 1000 level courses

(except Math 1019)

## Physics Minor

Faculty: Allan Walstad, Rajendra Khanal, Beta Keramati, Kevin Martin

Students interested in physics can structure a divisional concentration to obtain the Bachelor of Science degree in the natural sciences program, pursue a physics minor or students can enroll in introductory, elective, and laboratory courses in physics before relocating to the Pittsburgh campus for degree completion.

The requirements for a physics minor are:

### 1) Physics (10 credits total)

- PHYS 0150 - PHYSICS 1
- PHYS 0151 - PHYSICS LABORATORY 1
- PHYS 0152 - PHYSICS 2
- PHYS 0153 - PHYSICS LABORATORY 2

### 2) Math (8 credits total)

- MATH 0221 - ANALYTIC GEOMETRY AND CALCULUS 1
- MATH 0231 - ANALYTIC GEOMETRY AND CALCULUS 2

### 3) A minimum of 8 credits among the following:

- PHYS 0400 - CLASSICAL MECHANICS
- PHYS 0450 - ELECTROMAGNETISM
- PHYS 0480 - ASTROPHYSICS
- PHYS 1111 - SPECIAL TOPICS
- PHYS 1300 - QUANTUM PHYSICS

#### Note:

One (but not more than one) of the following courses may be counted in Category 2 above:

- CHEM 1341 - PHYSICAL CHEMISTRY 1
- EET 0121 - ELECTRONICS 1
- MET 1110 - THERMODYNAMICS

## Psychology Minor

#### Natural Sciences Minors

In addition to an academic major, a student may elect to pursue a minor in another academic discipline. The specific requirements for each minor are established by the individual academic disciplines. However, all minors require the completion of a minimum of 18 credits of course work. There are minors in biology, chemistry, biochemistry, computer science, geology, mathematics, physics and psychology.

### Required Psychology Course

- PSY 0200 - INTRODUCTION TO PSYCHOLOGY

### Additional Psychology Courses

Select 5 courses from Theoretical Foundations and Applications sections below.

#### Theoretical Foundations

(Select at least one course from this section)

- PSY 0210 - SOCIAL PSYCHOLOGY
- PSY 0211 - COMPARATIVE PSYCHOLOGY
- PSY 0230 - CHILD DEVELOPMENT
- PSY 0240 - THEORIES OF PERSONALITY
- PSY 0351 - PSYCHOPHARMACOLOGY
- PSY 0384 - ADULT DEVELOPMENT & AGING
- PSY 1141 - PSYCHOPATHOLOGY

## Applications

(Select at least one course from this section)

- PSY 0470 - INTRODUCTION TO BEHAVIOR MODIFICATION
- PSY 0501 - LIFESPAN DEVELOPMENT
- PSY 1178 - HUMAN SEXUALITY
- PSY 1216 - HEALTH PSYCHOLOGY
- PSY 1251 - MODELS OF PSYCHOTHERAPY
- PSY 1636 - ORGANIZATIONAL PSYCHOLOGY

## Relocation Options

The following programs are designed to allow a student to begin studies at the Johnstown campus then complete the program at the Pittsburgh campus. Students take general and prerequisite work at Pitt-Johnstown for two years, usually 60 credits. After completion of 45 credits, the SHRS undergraduate application must be completed for the following programs: clinical dietetics and nutrition, health information management, and rehabilitation science and athletic training. Students interested in majoring in communication science and emergency medicine programs are only required to complete the relocation form for academic program change. The relocation form can be obtained at the Office of the Registrar. For further information, please contact the Division of Natural Sciences office and ask for the appropriate program advisor. Additional information about these programs can be found at the Web page for the School of Health and Rehabilitation Sciences, [www.shrs.pitt.edu](http://www.shrs.pitt.edu). Or from Shameem Gangjee, director of admissions, School of Health and Rehabilitation Sciences, 4021 Forbes Tower, Pittsburgh, PA, 15261; [Shameem@shrs.pitt.edu](mailto:Shameem@shrs.pitt.edu); or 412-383-6557.

## Athletic Training within the Rehabilitation Science

In addition to the prerequisite courses for rehabilitation science majors, students applying to the program in athletic training would need the following:

### Additional Prerequisites Courses:

#### Communication/Public Speaking (3 credits)

- COMMRC 0052 - PUBLIC SPEAKING

#### Emergency Medical Technician (with lab) (4 credits)

- Emergency Medical Technician with lab \*

## Basic Athletic Training with lab

(Not offered at Pitt-Johnstown) \*

- HRS 1811
- HRS 1812

## Note:

\*These courses are not offered at Pitt-Johnstown and are only available at the Pittsburgh campus. During their second semester at Pitt-Johnstown, students should contact the School of Health and Rehabilitation Sciences about satisfying these requirements.

## Communication Science

This major focuses on the physical and psychological foundations of speech, language, hearing, and swallowing to prepare students for graduate work in speech-language pathology, audiology, and related fields. Completion of a professional graduate program is required to become a speech-language pathologist or audiologist.

Students should complete the relocation form to transfer to the communication science program after successful completion of at least 45 of the required general education credits. It is not necessary to complete all of the listed prerequisites, as any prerequisite courses not completed can be taken after relocation. It is advisable, however, to include as many as possible in the 60 prerequisite credits. There is no minimum grade requirement for each course, but students must earn a cumulative QPA of 2.5.

## Prerequisite Courses:

### English Composition (6 credits)

- ENGCOMP 0005 - COMPOSITION 1
- ENGCOMP 0006 - COMPOSITION 2

### W(Writing-Enhanced) Courses (3 credits)

- Any writing-enhanced course

### Second Language or American Sign Language (6 credits)

If not exempt\*

### Algebra (3 credits)

- MATH 0002 - COLLEGE ALGEBRA or higher



### Statistics (3-4 credits)

- STAT 1020 - SOCIAL STATISTICS or
- STAT 1040 - STATISTICS FOR BUSINESS/ECONOMICS or
- PSY 0270 - INTRODUCTORY STATISTICS

### Literature (3 credits)

- Any literature course

### Music or Art (3 credits)

- Any fine arts course or any music course except 0060, 0062, 0064, 0069, 0531 and 1905

### Second Literature, Music, or Art (3 credits)

Select from those described above

### History (3 credits)

- Any History course

### Social Science/Public Policy (6 credits)

- Any Social Science course except History

### Philosophy (3 credits)

- Any Philosophy course

### Natural Sciences (9 credits)

- Two courses from Life Sciences, e.g., Biology, Psychology and one course from either Geology, Physics, or Chemistry

### International Culture (6 credits)

- Course dealing with Western cultures, e.g., History of Western Civilization Course dealing with Western cultures, e.g., History of Western Civilization

### International Culture (3 credits)

- Courses dealing with non-Western cultures, e.g., Caribbean cultures offered in anthropology

Note:

\*Second language requirement satisfied by three years of second language in high school.

## Emergency Medicine

This program is designed to prepare students for the technical, clinical, and administrative challenges in the emergency medical professions. The dynamic curriculum provides a strong foundation in research fundamentals, clinical experiences, educational expertise, and administrative leadership.

Students should complete the relocation form after successful completion of at least 45 credits. Students should contact the School of Health and Rehabilitation Sciences during their second semester at Pitt-Johnstown to determine how and when they will complete the Emergency Medical Technician course-with a laboratory-which is not offered at Pitt-Johnstown. Some of the prerequisite courses can be satisfied while enrolled in the emergency medicine program at the Pittsburgh campus.

### Prerequisite Courses:

#### Natural Sciences (3-4 credits)

- Any Natural Science Course

#### Algebra/Advanced Mathematics (3-4 credits)

- MATH 0002 - COLLEGE ALGEBRA or higher

#### English Composition/Writing (6 credits)

- ENGCOMP 0005 - COMPOSITION 1
- ENGCOMP 0006 - COMPOSITION 2

#### Communication/Public Speaking (3 credits)

- COMMRC 0052 - PUBLIC SPEAKING

#### Emergency Medical Technician (with lab) (4 credits)

Not offered at Pitt-Johnstown

#### Addition General Education Courses (35-36 credits)

Note:

\*Must include all body systems, e.g., digestive system, respiratory system, etc.

# Health Information Management

Graduates of this program are responsible for the electronic health record and information systems for patient care, research, and reimbursement. The application of information technology throughout the curriculum prepares the student for the health system of today and the future.

The admissions criteria for this program are the same as for the other programs in the School of Health and Rehabilitation Sciences.

## Prerequisite Course Work:

- 60 credits minimum,
- A 2.5 minimum cumulative QPA
- A minimum QPA of 2.5 for prerequisites courses
- A minimum grade of C- in all courses designated as prerequisites

### Prerequisites Courses:

#### Biology (3-4 credits)

- BIOL 0110 - GENERAL BIOLOGY 1 and lab
- BIOL 0111 - GENERAL BIOLOGY LABORATORY 1 optional but recommended

#### Chemistry (3-5 credits)

- CHEM 0111 - GENERAL CHEMISTRY 1 and its lab
- CHEM 0113 - GENERAL CHEMISTRY LABORATORY 1 or
- CHEM 0105 - PREPARATION GENERAL CHEMISTRY

#### Communication (3 credits)

- COMMRC 0052 - PUBLIC SPEAKING

#### English Composition (6 credits)

- ENGCOMP 0005 - COMPOSITION 1  
and
- ENGCOMP 0006 - COMPOSITION 2 or
- Any writing-enhanced course

#### Mathematics (3-4 credits)

- MATH 0002 - COLLEGE ALGEBRA or
- MATH 0004 - PRE-CALCULUS: FUNCTIONS AND TRIGONOMETRY

## Psychology (3 credits)

- PSY 0200 - INTRODUCTION TO PSYCHOLOGY

## Statistics (3-4 credits)

- STAT 1020 - SOCIAL STATISTICS or
- STAT 1040 - STATISTICS FOR BUSINESS/ECONOMICS or
- PSY 0270 - INTRODUCTORY STATISTICS

## Computer Science (10 credits)

- CS 0015 - INTRODUCTION TO COMPUTER PROGRAM and its corequisite
- CS 0016 - INTRODUCTION TO COMPUTER PROGRAMMING APPLICATIONS
- CS 0081 - COMPUTER LITERACY
- CS 0100 - PERSPECTIVES IN COMPUTER SCIENCE

### Note:

Volunteer or paid work experience in the health information management field is recommended.

## Pre-Pharmacy

The School of Pharmacy program requires two years of preprofessional courses and four years of professional courses. Students enrolled in the professional program are full-time students. Pitt-Johnstown offers the courses required for students to fulfill their preprofessional (prepharmacy) requirements. There are no provisions for part-time students in the professional program. Applicants to the Pittsburgh campus School of Pharmacy must have successfully completed, or be in the process of completing, all prerequisite mathematics and science subjects no later than the spring term of the year of admission. All other preprofessional courses must be completed prior to the first day of the fall term of admission.

Each year, approximately 96 students are accepted from a pool of approximately 1,000 applicants. Admission is competitive and is based on all aspects of the application, in addition to grade point average (GPA). This includes science grades, curriculum, recommendations, and essays. Competition varies from year to year depending upon the size and strength of the applicant pool. Although there are minimum grade point average requirements, the average GPA of applicants admitted to the fall 2005 class was 3.43.

### Required Preprofessional Courses:

#### General Biology (with lab) (8 credits)

- BIOL 0110 - GENERAL BIOLOGY 1
- BIOL 0111 - GENERAL BIOLOGY LABORATORY 1
- BIOL 0120 - GENERAL BIOLOGY 2

#### General Chemistry (with lab) (10 credits)

- CHEM 0111 - GENERAL CHEMISTRY 1
- CHEM 0112 - GENERAL CHEMISTRY 2
- CHEM 0113 - GENERAL CHEMISTRY LABORATORY 1
- CHEM 0114 - GENERAL CHEMISTRY LABORATORY 2

### Organic Chemistry (with lab) (10 credits)

- CHEM 0231 - ORGANIC CHEMISTRY 1
- CHEM 0233 - ORGANIC CHEMISTRY LABORATORY 1
- CHEM 0232 - ORGANIC CHEMISTRY 2
- CHEM 0234 - ORGANIC CHEMISTRY LABORATORY 2

### English Composition (6 credits)

- ENGCMP 0005 - COMPOSITION 1 and
- ENGCMP 0006 - COMPOSITION 2

### Calculus (4 credits)

- MATH 0121 - BUSINESS CALCULUS or
- MATH 0221 - ANALYTIC GEOMETRY AND CALCULUS 1

### Statistics (3-4 credits)

- STAT 1020 - SOCIAL STATISTICS or
- STAT 1040 - STATISTICS FOR BUSINESS/ECONOMICS or
- PSY 0270 - INTRODUCTORY STATISTICS

### Psychology (3 credits)

- PSY 0200 - INTRODUCTION TO PSYCHOLOGY

### Economics (3 credits)

- ECON 0080 or
- ECON 0105 - INTRO MICROECONOMIC THEORY or
- ECON 0115 - INTRO TO MACROECONOMIC THEORY

### Humanities (6 credits)

- One course from two different departments

### Social Sciences (6 Credits)

- One course from two different departments

## Electives (6 credits)

### Note:

\*Must be in humanities, social sciences or psychology. Public speaking is recommended.

## Application Procedures for the Doctor of Pharmacy program at the University of Pittsburgh:

- Completion of prepharmacy course requirements
- Minimum quality point average of 3.0
- A grade of C or above required in math and science courses without repeating the course
- Application through the PharmCAS, the Web-based Pharmacy College Application Service at [www.pharmcas.org](http://www.pharmcas.org)
- Pharmacy College Admission Test at [www.pcatweb.info](http://www.pcatweb.info)
- School of Pharmacy supplemental application at [www.pharmacy.pitt.edu](http://www.pharmacy.pitt.edu)
- If accepted into the program, Pitt-Johnstown students must complete a relocation form that can be obtained at the Office of the Registrar, 279 Blackington Hall.

## Rehabilitation Science

This major is designed to prepare students interested in graduate education in occupational and physical therapy, rehabilitation technology and counseling, and other areas of health care.

The admissions criteria for this program in the School of Health and Rehabilitation Sciences. include:

- 60 credits minimum
- A 2.5 minimum cumulative QPA
- A minimum QPA of 2.5 for prerequisites courses
- A minimum grade of C- in all courses designated as prerequisites

## Prerequisite Courses:

### Biology (4 credits)

- BIOL 0110 - GENERAL BIOLOGY 1 and lab
- BIOL 0111 - GENERAL BIOLOGY LABORATORY 1

### Chemistry (5 credits)

- CHEM 0111 - GENERAL CHEMISTRY 1 and its lab
- CHEM 0113 - GENERAL CHEMISTRY LABORATORY 1

### Physics (5 credits)

- PHYS 0140 - INTRODUCTION TO PHYSICS 1 and its lab
- PHYS 0141 - INTRODUCTION TO PHYSICS 1 LAB

### Mathematics (3-4 credits)

- MATH 0002 - COLLEGE ALGEBRA or higher

### Statistics (3-4 credits)

- STAT 1020 - SOCIAL STATISTICS or
- STAT 1040 - STATISTICS FOR BUSINESS/ECONOMICS or
- PSY 0270 - INTRODUCTORY STATISTICS

### Psychology (3 credits)

- PSY 0200 - INTRODUCTION TO PSYCHOLOGY and any additional psychology course that has PSY 0200 as a prerequisite
- PSY 0470 - INTRODUCTION TO BEHAVIOR MODIFICATION is highly recommended

### Writing/English Composition (10 credits)

- ENGCOMP 0005 - COMPOSITION 1 and
- ENGCOMP 0006 - COMPOSITION 2 or
- Any writing-enhanced course

### Computer Science (3-4 credits)

- CS 0015 - INTRODUCTION TO COMPUTER PROGRAM and its corequisite
- CS 0016 - INTRODUCTION TO COMPUTER PROGRAMMING APPLICATIONS  
or
- CS 0081 - COMPUTER LITERACY or
- CS 0100 - PERSPECTIVES IN COMPUTER SCIENCE

### Note:

*Students planning to apply to the Doctor of Physical Therapy (DPT) program are encouraged to complete most of the prerequisite courses (e.g., Physics II, Biology II, Chemistry II) prior to matriculation to SHRS.*

# Nursing and Health Sciences

- Academic Programs Offered

## Nursing, BSN

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Our undergraduate program combines the latest in clinical theory with traditional nursing values that emphasize holistic patient care. The distinct advantage of a four-year program is that it gives students the opportunity to combine a strong theoretical base of biological and behavioral sciences with a foundation in the liberal arts. The BSN Program at Pitt-Johnstown offers the same curriculum as the School of Nursing in Oakland, accredited by The Commission on Collegiate Nursing Education (CCNE), One DuPont Circle, NW, Suite 530, Washington, DC, 20036.

### Purpose

The purpose of the baccalaureate program is to prepare a professional nurse whose practice is based upon nursing science, related sciences and the arts in order to promote, restore, and maintain the health of human beings. Graduates of the program are generalists with the necessary base for graduate education and continuing professional development. High school graduates are directly admitted to the freshman class of the four-year, full-time pre-licensure baccalaureate nursing program. Pitt-Johnstown students may apply for internal transfer to the freshman class. Students who are enrolled in other colleges and universities may apply for external transfer to the freshman class.

### Description

Education for the practice of professional nursing demands a substantial knowledge of nursing, using the behavioral and biological sciences as a theoretical base. Throughout the program, nursing courses are taken concurrently with courses in the Humanities, Social Sciences, and Natural Sciences Divisions, contributing to the development of the liberally educated practitioner.

The freshman year establishes the foundation for the study of nursing with an introduction to concepts and theories related to understanding nursing practice. Clinical study is introduced in the sophomore year with the focus on health promotion and identification of risk factors. Clinical nursing skills are practiced first in the Nursing Department's Skills Laboratory. Clinical nursing skills are also enhanced with the utilization of a Simulation Laboratory that allows students to practice critical thinking and decision-making skills on a variety of clinical scenarios.

Clinical experiences take place in a variety of settings such as schools, hospitals, senior citizens' centers, and long term and acute care facilities. Junior year nursing courses focus on the care of individuals and families of all ages who are experiencing the stress of illness. Clinical experiences take place in acute care settings. During the senior year, student clinical experiences are planned to encourage synthesis of knowledge gained in preceding years and focus on individuals, families, and communities. Students provide care to those experiencing more complex illnesses and problems.

Professional role behaviors that are introduced in the freshman year and augmented during the years of subsequent study are expanded during the senior year. During the senior year, students have a culminating clinical course that provides a transition into clinical practice. Students have an opportunity to work on evidence-based projects with faculty and clinical mentors.

The program provides a foundation for graduate education in nursing and serves as a stimulus for continuing professional development. A series of NCLEX Preparation Practice Tests are integrated throughout the nursing program. A Diagnostic Prep, a Predictor exam, and a 4 day NCLEX Review are scheduled at end of program to provide students with prep resources to take the National Nursing License exam.



Registered nurses, who are graduates of diploma or associate degree programs in nursing, may choose to enroll in the RN Options. See the RN Options section for further information.

#### Objectives

The graduate of the baccalaureate (BSN) program will:

1. Synthesize knowledge from liberal education with professional nursing.
2. Apply leadership concepts, skills, and decision making in the provision of high quality nursing care, healthcare team coordination, and the oversight and accountability for care delivery in a variety of settings.
3. Integrate evidence, clinical judgement, interprofessional perspectives, and patient preferences in planning, implementing, and evaluating outcomes of care.
4. Demonstrate skills in using patient care technologies, information systems, and communication devices that support safe, effective nursing practice.
5. Explore the impact of sociocultural, economic, legal, and political factors influencing patient care quality, workplace safety, and the scope of nursing and other health professionals' practice.
6. Incorporate effective communication skills to contribute the nursing perspective to interprofessional teams to optimize patient outcomes.
7. Collaborate with members of the interprofessional team to develop an assessment and intervention plan that takes into account determinants of health and available resources that contribute clinical prevention and population health.
8. Assume accountability for personal and professional behaviors that demonstrate the nursing standards of moral, ethical, and legal conduct.
9. Implement holistic, evidence-based, safe patient-centered care across the health illness continuum, across the lifespan, and in all healthcare settings.

#### Admission Policy

All students wishing to obtain a Bachelor of Science in nursing degree must apply and be accepted to the Pitt-Johnstown campus and the Nursing Program. Qualified applicants are admitted without discrimination on the basis of race, color, religion, national origin, ancestry, sex, age, marital status, familial status, sexual orientation, disability, or status as a disabled veteran or a veteran of the Vietnam era.

Prospective Students convicted of any felonious act may be prohibited from licensure as a Registered Nurse by the Board of Nursing in various states. Applicants who plan to practice in the Commonwealth of Pennsylvania (as well as most other states) should be advised that upon application for the Registered Nurse Licensure Examination, the Board of Nursing will inquire as to whether the applicant has been convicted of a misdemeanor, felony, felonious act, or crime of moral turpitude, an illegal act associated with alcohol, or an illegal act associated with substance abuse(s).

Sample section from Pennsylvania State Board Application:

#### Section 6. fees:

Qualifications for Licensure. No application for licensure as a registered nurse shall be considered unless accompanied by a fee determined by the Board by regulation. Every applicant, to be eligible for examination for licensure as a registered nurse, shall furnish evidence satisfactory to the Board that he or she is of good moral character, has completed work equal to a standard high school course as evaluated by the Board and has satisfactorily completed an approved program of professional nursing. Approved programs shall include baccalaureate degree, associate degree and diploma nursing programs. The Board shall not issue a license or certificate to an applicant who has been convicted of a felonious act prohibited by the act of April 14, 1972 (P.L. 233, No. 64), known as "The Controlled Substance Drug, Device and Cosmetic Act," or convicted of a felony relating to a controlled substance in a court of law of the United States or any other state, territory or country unless:

1. At least ten (10) years have elapsed from the date of conviction.
2. The applicant satisfactorily demonstrates to the Board that he has made significant progress in personal rehabilitation since the conviction such that licensure of the applicant should not be expected to create a substantial risk of harm to the health and safety of patients or the public or a substantial risk of further criminal violations
3. The applicant otherwise satisfies the qualifications contained in or authorized by this act.

As used in this subsection the term "convicted" shall include a judgment, an admission of guilt or a plea of nolo contendere. An applicant's statement on the application declaring the absence of a conviction shall be deemed satisfactory evidence of the absence of a conviction, unless the Board has some evidence to the contrary. (6 amended Dec. 15, 1986, P.L. 1607, No. 179) (Professional Nurse Law)

Moreover, because of the mandate of the laws relating to character requirements (good moral character) (Sections 13, 14 and 15.1 of the Professional Nursing Law), the Board has the duty and the right to ask for this information.

If you have a criminal conviction, you are advised to contact:

State Board of Nursing  
P. O. Box 2649  
Harrisburg, PA 17105-2649  
(717) 783-7142

All undergraduate, pre-licensure students are required by the clinical site agencies to obtain and maintain valid Pennsylvania Act 33/34 (child abuse and criminal record check) and ACT 73 (fingerprinting background check). Clearances will be reviewed by the clinical sites where students are scheduled to do clinical. Failure to obtain the necessary clearances may prevent students from completing clinical requirements.

To request additional information, please contact the Pitt-Johnstown Office of Admissions:

• Phone: 814-269-7050  
Toll Free: 1-800-765-4875  
email: [upjadmit@pitt.edu](mailto:upjadmit@pitt.edu)

## **Respiratory Care, AS**

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**The 83-credit Respiratory Care program is an American Medical Association-approved 20-month Associate Degree Program that qualifies graduates to become candidates for the national registry examination.**

Graduates are involved in all aspects of patient assessment, therapeutic planning, and intervention for patients with cardiopulmonary disease. Extensive clinical experiences will take place at a variety of settings including hospital-based settings, home care, skilled nursing facilities, physician offices, and rehabilitation departments. In addition, students will manage advanced life support equipment and perform and interpret diagnostic procedures. A maximum of 20 students are chosen from those who have a 2.25 or higher QPA at the end of the first term of study. All students who attempt the program must maintain a minimum QPA of 2.25 in required professional courses each semester. Once this degree is obtained, a student may continue at Pitt-Johnstown to receive a Bachelor of Science in Healthcare.

Pitt-Johnstown's Respiratory Care program provides classroom and up-to-date clinical education as required by the Commission on Accreditation for Respiratory Care, 1248 Harwood Road, Bedford, TX 76021-4244, (817) 283-2835, <http://www.coarc.com>.

Courses are team taught by Pitt-Johnstown faculty and hospital instructors within their area of expertise.

## **Surgical Technology, AS**

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**This 74-credit program will allow individuals completing the required course work to receive a Surgical Technologist Certificate as well as an associate degree and will qualify them to sit for the Surgical Technologist National Certifying Examination.**

The surgical technologist is involved in many aspects of a patient's care in the operating room setting as well as ambulatory surgery, delivery, and emergency rooms. Supervised by either surgeons, anesthesiologists, or nurses, surgical technologists prepare patients for surgery, prepare instruments and equipment, prepare fluids for intravenous administration, prepare specimens for laboratory analysis, and prepare wound dressings. The technologist also assists the surgeon in some procedures.

Prior to official admission to the program, the applicant must be accepted to both the University of Pittsburgh at Johnstown and Conemaugh Memorial Medical Center's School of Surgical Technology via an application and interview process. Individuals who currently have a valid surgical technologist certification may receive an associate degree by successfully completing the necessary course requirements. Once this degree is obtained, a student may continue at Pitt-Johnstown to receive a Bachelor of Science in Healthcare.

Courses are team taught by Pitt-Johnstown faculty and hospital instructors within their area of expertise.

## **Academic Programs Offered**

### **Major**

### **Healthcare Management and Supervision, BS**

**In the Fall of 2019, the Healthcare, BS was renamed to Healthcare Management and Supervision. Students who were enrolled prior to the Fall 2019 term have the option to complete the program under the current name and requirements, or have the option to move to the Healthcare Management and Supervision, BS. Students who choose to complete the program under the Healthcare name must do so by the end of Spring 2022.**

This program allows graduates from associate degree (or equivalent) health care programs or accredited hospital-based programs for health professionals with acceptable academic credits to prepare for positions as educators or supervisors/administrators within the health care field. Candidates for this program must have graduated with a minimum QPA of 2.25 (based on a 4.00 scale) from their professional program. In order to complete the requirements for the degree, the following criteria must be met:

- All general education requirements as described in this catalog must be completed.
- The student's previous health care professional curriculum must be evaluated, and as many as 48 technical credits can be awarded. If fewer than 48 credits are awarded, the students must make up the additional credits in consultation with their advisor.

## General Education Requirements

### Required Courses

#### Foundational Courses

- ENGCOMP 0003 - COMMUNICATION 1  
Or
- ENGCOMP 0005 - COMPOSITION 1
- ENGCOMP 0004 - COMMUNICATION 2  
Or
- ENGCOMP 0006 - COMPOSITION 2
- COMMRC 0052 - PUBLIC SPEAKING

#### Basic Algebra or Placement Test

- MATH 0001 - ALGEBRA 1

#### Quantitative Reasoning (QR) - 1 Course

*Note - a student cannot test out of their QR requirement.*

## Worlds of Knowledge

**Each student must take 2 courses in each World of Knowledge. The two courses taken within each World must be from different subjects. A student must take two additional "Follow-Up" courses from any World.**

- The minimum number of courses taken in the Worlds must be 10.
- The Follow-Up courses may repeat a subject previously taken in a World.
- A student cannot use a major required Subject course in one of the Worlds.
- *For example: A Biology student cannot use BIOL 0110 to fulfill a requirement in the Science and Nature World.*
- Students cannot use a course to count both in their QR requirement and one of the Worlds.
- Students can choose QR and Worlds of Knowledge courses from published course lists.

Aesthetic and Creative Expression

Societies & Civics

Global History & Culture

Science & Nature

Follow-Up Courses

Free Electives

Free electives are the balance of credits required for graduation (120) that are not used to satisfy competencies, knowledge areas, major requirements, electives, or any related area required by the department.

## Major Requirements

### Required Courses

- IS 0400 - INTRO TO INFORMATION SYSTEMS
- MGMT 0500 - PRINCIPLES OF MANAGEMENT
- MGMT 1510 - HUMAN RESOURCES MANAGEMENT
- MGMT 1520 - ORGANIZATIONAL BEHAVIOR
- HLTHCR 1054 - HEALTH CARE MANAGEMENT
- HLTHCR 1095 - HEALTH CARE INTERNSHIP
- HLTHCR 1119 - LEGAL ASPECTS OF HEALTH CARE
- NUR 0086 - NURSING INFORMATICS

Requirement Satisfied: 23

### Required Stats Course

- STAT 1020 - SOCIAL STATISTICS
- Or
- EDPSY 1121 - EDUCATIONAL ASSESSMENT FOR INCLUSION CLASSROOM
- Or
- NUR 0088 - INTRODUCTION TO BASIC STATISTICS FOR EVIDENCE-BASED PRACTICE

Requirement Satisfied: 3

### Pre-Professional/Technical

Maximum of 48 credits allowed

Requirement Satisfied: 48

Total Credits: 120

## **Nursing, BSN**

- Our undergraduate program combines the latest in clinical theory with traditional nursing values that emphasize holistic patient care. The distinct advantage of a four-year program is that it gives students the opportunity to combine a strong theoretical base of biological and behavioral sciences with a foundation in the liberal arts. The BSN Program at Pitt-Johnstown offers the same curriculum as the School of Nursing in Oakland, accredited by The Commission on Collegiate Nursing Education (CCNE), One DuPont Circle, NW, Suite 530, Washington, DC, 20036.

## **Admission Policy**

All students wishing to obtain a Bachelor of Science in nursing degree must apply and be accepted to the Pitt-Johnstown campus and the Nursing Program. Qualified applicants are admitted without discrimination on the basis of race, color, religion, national origin, ancestry, sex, age, marital status, familial status, sexual orientation, disability, or status as a disabled veteran or a veteran of the Vietnam era.

## **Curriculum Plan - Baccalaureate Program in Nursing (BSN) - Class of 2020**

### **Freshman**

#### **Fall Term**

- BIOL 0950 - ANATOMY AND PHYSIOLOGY 1
  - BIOL 0951 - ANATOMY AND PHYSIOLOGY LAB 1
  - CHEM 0190 - CHEMISTRY FOR THE HEALTH PROFESSIONS
  - CHEM 0192 - CHEMISTRY FOR HEALTH PROFESSIONS LABORATORY
  - ENGCOMP 0005 - COMPOSITION 1
  - PSY 0200 - INTRODUCTION TO PSYCHOLOGY
- Humanities Elective: Music/FA/Theatre

Total 17 Credits

#### **Spring Term**

- BIOL 0970 - ANATOMY AND PHYSIOLOGY 2
- BIOL 0971 - ANATOMY AND PHYSIOLOGY LAB 2
- BIOL 0980 - MEDICAL MICROBIOLOGY
- BIOL 0981 - MEDICAL MICROBIOLOGY LABORATORY
- NUR 0051 - INTRODUCTION TO PROFESSIONAL NURSING
- NUR 0086 - NURSING INFORMATICS

- NUR 0088 - INTRODUCTION TO BASIC STATISTICS FOR EVIDENCE-BASED PRACTICE

Total 16 Credits

## Sophomore

### Fall Term

- NUR 0020 - PATHOPHYSIOLOGIC FOUNDATIONS OF NURSING CARE
- NUR 0080 - FOUNDATIONS OF NURSING PRACTICE 1
- NUR 0080C - FOUNDATIONS OF NURSING PRACTICE 1 CLINICAL
- NUR 0087 - PHARMACOLOGY AND THERAPEUTICS ACROSS THE LIFESPAN
- NUR 1680 - INTRODUCTION TO GENETICS AND MOLECULAR THERAPEUTICS

Total 15 Credits

### Spring Term

- NUR 0081 - FOUNDATIONS OF NURSING PRACTICE 2
- NUR 0082 - NURSING MANAGEMENT OF ADULT WITH ACUTE/CHRONIC HEALTH PROBLEMS
- NUR 0082C - NURSING MANAGEMENT OF ADULT WITH ACUTE/CHRONIC HEALTH PROBLEMS CLINICAL
- NUR 0066 - NUTRITION FOR CLINICAL PRACTICE ++
- NUR 0067 - NURSING RESEARCH: AN INTRODUCTION TO CRITICAL APPRAISAL AND EVIDENCE-BASED PRACTICE +
- SOC 0100 - INTRODUCTION TO SOCIOLOGY

Total 18 Credits

## Junior

### Fall Term

- NUR 1050 - NURSING CARE OF MOTHERS, NEWBORNS AND FAMILIES
- NUR 1050C - NURSING CARE OF MOTHERS, NEWBORNS AND FAMILIES CLINICAL
- NUR 1052 - NURSING CARE OF CHILDREN AND THEIR FAMILIES
- NUR 1052C - NURSING CARE OF CHILDREN AND THEIR FAMILIES CLINICAL
- NUR 1085 - ETHICS IN NURSING AND HEALTH CARE
- ANTH 0800 - INTRODUCTION TO CULTURAL ANTHROPOLOGY

Total 16 Credits

### Spring Term

- NUR 1054 - NURSING CARE OF OLDER ADULTS
- NUR 1054C - NURSING CARE OF OLDER ADULTS CLINICAL

- NUR 1060 - NURSING CARE OF CLIENTS WITH PSYCHIATRIC MENTAL HEALTH PROBLEMS
- NUR 1060C - NURSING CARE OF CLIENTS WITH PSYCHIATRIC MENTAL HEALTH PROBLEMS CLINICAL
- NUR 1120 - ADVANCED NURSING MANAGEMENT ADULT ACUTE/COMPLEX HEALTH PROBLEMS
- NUR 1120C - ADVANCED NURSING MANAGEMENT OF THE ADULT WITH ACUTE/COMPLEX HEALTH PROBLEMS CLINICAL
- COMMRC 0052 - PUBLIC SPEAKING

Total 16 Credits

## Senior

### Fall Term

- NUR 1100 - SPECIAL TOPICS
- NUR 1121 - ADVANCED CLINICAL PROBLEM SOLVING
- NUR 1121C - ADVANCED CLINICAL PROBLEM SOLVING CLINICAL
- NUR 1128 - COMMUNITY HEALTH NURSING
- NUR 1128C - COMMUNITY HEALTH NURSING CLINICAL

Total 12 or 13 Credits

### Spring Term

- NUR 1134 - TRANSITION INTO PROFESSIONAL NURSING PRACTICE
- NUR 1134C - TRANSITION INTO PROFESSIONAL NURSING PRACTICE CLINICAL
- NUR 1990 - SENIOR SEMINAR
- Elective (2-3 credits)
- Directed Elective (3 credits)

Total 14 or 15 Credits

A series of Kaplan Preparation Practice Tests are integrated throughout the nursing program. A Diagnostic Prep, a Predictor exam, and a 4 day Kaplan Review are scheduled at the end of the program to provide students with prep resources to take the National Nursing License exam.

**Total Credits: 124**

Key:

- + Must be taken prior to NUR 1060
- ++ Must be taken prior to NUR 1054
- \* Placement varies in the junior year
- \*\* Placement varies in the senior year

**Curriculum Plan - Baccalaureate Program in Nursing (BSN) - Class of 2021**



## Freshman

### Fall Term

- BIOL 0950 - ANATOMY AND PHYSIOLOGY 1
- BIOL 0951 - ANATOMY AND PHYSIOLOGY LAB 1
- CHEM 0190 - CHEMISTRY FOR THE HEALTH PROFESSIONS
- CHEM 0192 - CHEMISTRY FOR HEALTH PROFESSIONS LABORATORY
- ENGCOMP 0005 - COMPOSITION 1
- PSY 0200 - INTRODUCTION TO PSYCHOLOGY
- Humanities Elective

Total 17 Credits

### Spring Term

- BIOL 0970 - ANATOMY AND PHYSIOLOGY 2
- BIOL 0971 - ANATOMY AND PHYSIOLOGY LAB 2
- BIOL 0980 - MEDICAL MICROBIOLOGY
- BIOL 0981 - MEDICAL MICROBIOLOGY LABORATORY
- NUR 0051 - INTRODUCTION TO PROFESSIONAL NURSING
- NUR 0086 - NURSING INFORMATICS
- NUR 0088 - INTRODUCTION TO BASIC STATISTICS FOR EVIDENCE-BASED PRACTICE

Total 16 credits

## Sophomore

### Fall Term

- NUR 0020 - PATHOPHYSIOLOGIC FOUNDATIONS OF NURSING CARE
- NUR 0080 - FOUNDATIONS OF NURSING PRACTICE 1
- NUR 0087 - PHARMACOLOGY AND THERAPEUTICS ACROSS THE LIFESPAN
- NUR 0090 - FOUNDATIONS OF NURSING PRACTICE 1 CLINICAL
- NUR 1680 - INTRODUCTION TO GENETICS AND MOLECULAR THERAPEUTICS
- Elective

Total 17.5 credits

### Spring Term

- NUR 0066 - NUTRITION FOR CLINICAL PRACTICE
- NUR 0067 - NURSING RESEARCH: AN INTRODUCTION TO CRITICAL APPRAISAL AND EVIDENCE-BASED PRACTICE
- NUR 0081 - FOUNDATIONS OF NURSING PRACTICE 2
- NUR 0082 - NURSING MANAGEMENT OF ADULT WITH ACUTE/CHRONIC HEALTH PROBLEMS

- NUR 0092 - NURSING MANAGEMENT OF ADULT WITH ACUTE/CHRONIC HEALTH PROBLEMS CLINICAL
- SOC 0100 - INTRODUCTION TO SOCIOLOGY

Total 17.5 credits

## Junior

### Fall Term

- NUR 1042 - NURSING CARE OF CHILDREN AND THEIR FAMILIES CLINICAL
- NUR 1050 - NURSING CARE OF MOTHERS, NEWBORNS AND FAMILIES
- NUR 1052 - NURSING CARE OF CHILDREN AND THEIR FAMILIES
- NUR 1057 - NURSING CARE OF MOTHERS, NEWBORNS AND FAMILIES CLINICAL
- NUR 1085 - ETHICS IN NURSING AND HEALTH CARE
- ANTH 0800 - INTRODUCTION TO CULTURAL ANTHROPOLOGY

Total 15 credits

### Spring Term

- NUR 1020 - ADVANCED NURSING MANAGEMENT OF THE ADULT WITH ACUTE/COMPLEX HEALTH PROBLEMS CLINICAL
- NUR 1054 - NURSING CARE OF OLDER ADULTS
- NUR 1060 - NURSING CARE OF CLIENTS WITH PSYCHIATRIC MENTAL HEALTH PROBLEMS
- NUR 1066 - NURSING CARE OF CLIENTS WITH PSYCHIATRIC MENTAL HEALTH PROBLEMS CLINICAL
- NUR 1120 - ADVANCED NURSING MANAGEMENT ADULT ACUTE/COMPLEX HEALTH PROBLEMS
- COMMRC 0052 - PUBLIC SPEAKING

Total 14 credits

## Senior

### Fall Term

- NUR 1121 - ADVANCED CLINICAL PROBLEM SOLVING
- NUR 1121C - ADVANCED CLINICAL PROBLEM SOLVING CLINICAL
- NUR 1128 - COMMUNITY HEALTH NURSING
- NUR 1138 - COMMUNITY HEALTH NURSING CLINICAL
- Senior Special Topics Elective (4 to 5 credits)

Total 13.5 to 14.5 credits

### Spring Term

- NUR 1134 - TRANSITION INTO PROFESSIONAL NURSING PRACTICE
- NUR 1135 - TRANSITION INTO PROFESSIONAL NURSING PRACTICE CLINICAL
- NUR 1990 - SENIOR SEMINAR
- Directed Elective (3 credits)
- Elective (3 to 4 credits)

Total 13.5 to 14.5 credits

## Kaplan Preparation

A series of Kaplan Preparation Practice Tests are integrated throughout the Nursing Program. A Diagnostic Prep, a Predictor Exam, and a 4 day Kaplan Review are scheduled at the end of the program to provide students with prep resources to take the National Nursing License Exam.

## Curriculum Plan - Baccalaureate Program in Nursing (BSN) - Class of 2022 and Forward

### Freshman

Fall Term

Fall Term

- BIOL 0950 - ANATOMY AND PHYSIOLOGY 1
  - BIOL 0951 - ANATOMY AND PHYSIOLOGY LAB 1
  - CHEM 0190 - CHEMISTRY FOR THE HEALTH PROFESSIONS
  - CHEM 0192 - CHEMISTRY FOR HEALTH PROFESSIONS LABORATORY
  - ENGCOMP 0005 - COMPOSITION 1
  - NUR 0001 - FIRST YEAR SEMINAR
  - PSY 0200 - INTRODUCTION TO PSYCHOLOGY
- Humanities Elective

Total 18 Credits

### Spring Term

Spring Term

- BIOL 0970 - ANATOMY AND PHYSIOLOGY 2
  - BIOL 0971 - ANATOMY AND PHYSIOLOGY LAB 2
  - BIOL 0980 - MEDICAL MICROBIOLOGY
  - BIOL 0981 - MEDICAL MICROBIOLOGY LABORATORY
  - NUR 0051 - INTRODUCTION TO PROFESSIONAL NURSING
  - NUR 0053 - INTRODUCTION TO INCLUSION, EQUITY, AND DIVERSITY IN HEALTH CARE
  - NUR 0088 - INTRODUCTION TO BASIC STATISTICS FOR EVIDENCE-BASED PRACTICE
- ELECTIVE

Total 17 Credits

## Sophomore

Sophomore

### Fall Term

Fall Term

- NUR 0020 - PATHOPHYSIOLOGIC FOUNDATIONS OF NURSING CARE
- NUR 0080 - FOUNDATIONS OF NURSING PRACTICE 1
- NUR 0086 - NURSING INFORMATICS
- NUR 0087 - PHARMACOLOGY AND THERAPEUTICS ACROSS THE LIFESPAN
- NUR 0090 - FOUNDATIONS OF NURSING PRACTICE 1 CLINICAL
- NUR 1680 - INTRODUCTION TO GENETICS AND MOLECULAR THERAPEUTICS

Total 16.5 Credits

### Spring Term

- NUR 0066 - NUTRITION FOR CLINICAL PRACTICE
- NUR 0067 - NURSING RESEARCH: AN INTRODUCTION TO CRITICAL APPRAISAL AND EVIDENCE-BASED PRACTICE
- NUR 0081 - FOUNDATIONS OF NURSING PRACTICE 2
- NUR 0082 - NURSING MANAGEMENT OF ADULT WITH ACUTE/CHRONIC HEALTH PROBLEMS
- NUR 0092 - NURSING MANAGEMENT OF ADULT WITH ACUTE/CHRONIC HEALTH PROBLEMS CLINICAL
- SOC 0100 - INTRODUCTION TO SOCIOLOGY

Total 17.5 Credits

## Junior

Junior

### Fall Term

Fall Term

- NUR 1042 - NURSING CARE OF CHILDREN AND THEIR FAMILIES CLINICAL
- NUR 1050 - NURSING CARE OF MOTHERS, NEWBORNS AND FAMILIES
- NUR 1052 - NURSING CARE OF CHILDREN AND THEIR FAMILIES
- NUR 1057 - NURSING CARE OF MOTHERS, NEWBORNS AND FAMILIES CLINICAL
- NUR 1085 - ETHICS IN NURSING AND HEALTH CARE
- ANTH 0800 - INTRODUCTION TO CULTURAL ANTHROPOLOGY

Total 15 Credits

## Spring Term

Spring Term

- NUR 1020 - ADVANCED NURSING MANAGEMENT OF THE ADULT WITH ACUTE/COMPLEX HEALTH PROBLEMS CLINICAL
- NUR 1054 - NURSING CARE OF OLDER ADULTS
- NUR 1060 - NURSING CARE OF CLIENTS WITH PSYCHIATRIC MENTAL HEALTH PROBLEMS
- NUR 1066 - NURSING CARE OF CLIENTS WITH PSYCHIATRIC MENTAL HEALTH PROBLEMS CLINICAL
- NUR 1120 - ADVANCED NURSING MANAGEMENT ADULT ACUTE/COMPLEX HEALTH PROBLEMS
- COMMRC 0052 - PUBLIC SPEAKING

Total 14 Credits

## Senior

Senior

### Fall Term

- NUR 1121 - ADVANCED CLINICAL PROBLEM SOLVING
- NUR 1121C - ADVANCED CLINICAL PROBLEM SOLVING CLINICAL
- NUR 1128 - COMMUNITY HEALTH NURSING
- NUR 1138 - COMMUNITY HEALTH NURSING CLINICAL  
Senior Special Topics Elective

Total 12.5 to 13.5 Credits

## Spring Term

Spring Term

- NUR 1134 - TRANSITION INTO PROFESSIONAL NURSING PRACTICE
- NUR 1135 - TRANSITION INTO PROFESSIONAL NURSING PRACTICE CLINICAL
- NUR 1990 - SENIOR SEMINAR  
DIRECTED ELECTIVE  
ELECTIVE

Total 13.5 to 14.5 Credits

## Kaplan Preparation

Kaplan Preparation

A series of Kaplan Preparation Practice Tests are integrated throughout the nursing program. A Diagnostic Prep, a Predictor exam, and a 4 day Kaplan Review are scheduled at the end of the program to provide students with prep resources to take the National Nursing License exam

## Respiratory Care, AS

The 83-credit Respiratory Care program is an American Medical Association-approved 20-month Associate Degree Program that qualifies graduates to become candidates for the national registry examination. Graduates are involved in all aspects of patient assessment, therapeutic planning, and intervention for patients with cardiopulmonary disease. Extensive clinical experiences will take place at a variety of settings including hospital-based settings, home care, skilled nursing facilities, physician offices, and rehabilitation departments. In addition, students will manage advanced life support equipment and perform and interpret diagnostic procedures. A maximum of 20 students are chosen from those who have a 2.25 or higher QPA at the end of the first term of study. All students who attempt the program must maintain a minimum QPA of 2.25 in required professional courses each semester. Once this degree is obtained, a student may continue at Pitt-Johnstown to receive a Bachelor of Science in Healthcare.

Pitt-Johnstown's Respiratory Care program provides classroom and up-to-date clinical education as required by the Commission on Accreditation for Respiratory Care, 1248 Harwood Road, Bedford, TX 76021-4244, (817) 283-2835, <http://www.coarc.com>.

Courses are team taught by Pitt-Johnstown faculty and hospital instructors within their area of expertise.

### First Year-Fall Term (15 credits)

- BIOL 0950 - ANATOMY AND PHYSIOLOGY 1
- BIOL 0951 - ANATOMY AND PHYSIOLOGY LAB 1
- ENGCOMP 0005 - COMPOSITION 1
- CHEM 0190 - CHEMISTRY FOR THE HEALTH PROFESSIONS
- CHEM 0192 - CHEMISTRY FOR HEALTH PROFESSIONS LABORATORY
- RESCA 0020 - RESPIRATORY CARE TECHNIQUES 1
- CAS 0001 - UNIVERSITY SCHOLARSHIP

### First Year-Spring Term (18 credits)

- BIOL 0970 - ANATOMY AND PHYSIOLOGY 2
- BIOL 0971 - ANATOMY AND PHYSIOLOGY LAB 2
- RESCA 1022 - RESPIRATORY PHARMACOLOGY
- RESCA 1026 - RESPIRATORY PHYSIOLOGY
- RESCA 1028 - RESPIRATORY PATHOLOGY
- RESCA 1041 - SELECTED TOPICS
- MATH 0001 - ALGEBRA 1

### First Year-Summer Term (18 credits)

- RESCA 1024 - RESPIRATORY CARE TECHNIQUES 2
- RESCA 1030 - CLINICAL PRACTICUM 1
- RESCA 1031 - EKG/ABG
- Elective

## Second Year-Fall Term (18 credits)

- RESCA 1032 - RESPIRATORY CARE TECHNIQUES 3
- RESCA 1034 - CLINICAL PRACTICUM 2
- Elective
- Elective

## Second Year-Spring Term (15 credits)

- RESCA 1038 - Respiratory Care Clinical Practicum 3
- RESCA 1039 - Respiratory Care Advanced Techniques
- Elective

## Surgical Technology, AS

This 74-credit program will allow individuals completing the required course work to receive a Surgical Technologist Certificate as well as an associate degree and will qualify them to sit for the Surgical Technologist National Certifying Examination.

The surgical technologist is involved in many aspects of a patient's care in the operating room setting as well as ambulatory surgery, delivery, and emergency rooms. Supervised by either surgeons, anesthesiologists, or nurses, surgical technologists prepare patients for surgery, prepare instruments and equipment, prepare fluids for intravenous administration, prepare specimens for laboratory analysis, and prepare wound dressings. The technologist also assists the surgeon in some procedures.

Prior to official admission to the program, the applicant must be accepted to **both** the University of Pittsburgh at Johnstown **and** Conemaugh Memorial Medical Center's School of Surgical Technology via an application and interview process. Individuals who currently have a valid surgical technologist certification may receive an associate degree by successfully completing the necessary course requirements. Once this degree is obtained, a student may continue at Pitt-Johnstown to receive a Bachelor of Science in Healthcare.

Courses are team taught by Pitt-Johnstown faculty and hospital instructors within their area of expertise.

## First Year-Fall Term (14 credits)

- BIOL 0950 - ANATOMY AND PHYSIOLOGY 1
- BIOL 0951 - ANATOMY AND PHYSIOLOGY LAB 1
- ENGCOMP 0005 - COMPOSITION 1
- Elective
- PSY 0200 - INTRODUCTION TO PSYCHOLOGY
- CAS 0001 - UNIVERSITY SCHOLARSHIP

## First Year-Spring Term (17 credits)

- BIOL 0970 - ANATOMY AND PHYSIOLOGY 2
- BIOL 0971 - ANATOMY AND PHYSIOLOGY LAB 2
- BIOL 0980 - MEDICAL MICROBIOLOGY
- BIOL 0981 - MEDICAL MICROBIOLOGY LABORATORY

- MATH 0001 - ALGEBRA 1
- Elective
- Elective

## Second Year-Fall Term (17 credits)

- SURTEC 1010 - OR TECHNIQUES 1
- SURTEC 1020 - OR TECHNIQUES 1-CLNCL COMPONENT
- SURTEC 1030 - PHARMACOLOGY

## Second Year-Spring Term (17 credits)

- SURTEC 1040 - OR TECHNIQUES 2
- SURTEC 1050 - OR TECHNIQUES 2-CLNCL COMPONENT

## Second Year-Summer Term (10 credits)

- SURTEC 1060 - OR TECHNIQUES 3
- SURTEC 1070 - OR TECHNIQUES 3-CLNCL COMPONENT

## Certificate

### School Nurse Certificate

#### Overview

The Pennsylvania Department of Education School Nurse Certificate is offered jointly through the PittJohnstown's Division of Education and the Division of Nursing & Health Sciences. The purpose of the School Nurse Certification Program is to prepare registered nurses to meet the health needs of children of all ages in diverse school settings. This certificate may be completed while enrolled in or after completion of the BSN program. Upon completion of the School Nurse Certificate curriculum, students are eligible to apply for the School Nurse Certificate (Education Specialist I) issued by the Pennsylvania (PA) Department of Education. *(Note: BSN and valid registered nurse license from PA are required)*

### Curriculum Format

- Part-time (~ 3 terms)

### Objective

Graduates of the School Nurse Certificate are prepared to apply nursing knowledge, skills, and abilities in the care of school age children in diverse elementary and secondary school settings.



## Admission Criteria

- 3.0 GPA in the BSN degree or higher nursing degree from a CCNE, NLN, ACEN accredited program.
- Current Criminal Record Clearance (ACT 34 and ACT 73)
- Current Pennsylvania Child Abuse History Clearance (ACT 33)
- Current American Heart Association - BLS Healthcare Provider Course Certification
- Complete application packet
- Fall, Spring and Summer term admissions

## Curriculum (PA Department of Education Requirements)

- EDPSY 1021 - STUDENTS WITH SPECIAL NEEDS \*
- EDPSY 1025 - INCLUSION STRATEGIES
- Math + (6 credits)
- English Composition + (3 credits)
- English Literature + (3 credits)
- NUR 1077 - SCHOOL NURSE SEMINAR
- NUR 1078 - SCHOOL NURSE PRACTICUM

### Note:

+ Courses taken at other institutions will be evaluated for equivalency to Pitt-Johnstown courses and academic credit will be granted for comparable coursework.

\* Prerequisites for NUR 1077 and NUR 1078

EDPSY 1021 and EDPSY 1025 must be completed at Pitt-Johnstown unless an equivalent course was completed in prior baccalaureate degree coursework.

### For More Information Contact:

- Susanne Bodenschatz, Nursing Department 814-269-2995 or sub15@pitt.edu

## Relocation Options

## Nursing, RN to DNP

University of Pittsburgh School of Nursing offers the **RN Options Program with options of obtaining either a BSN or BSN with Early Admission to MSN/DNP** to give professional nurses an opportunity to enhance their knowledge and career prospects at a school of nursing with an international reputation for excellence. The curriculum is designed to build upon the professional nurse's experience and skill sets resulting in the completion of a BSN degree or complete the BSN and continue on and earn an advanced degree (either the Master's or the Doctor of Nursing Practice).

The RN Options program is offered in an online format for the RN-BSN and RN-MSN programs (exception Neonatal Nurse Practitioner AOC is onsite) allowing more flexibility for the practicing nurse wishing to advance their education. The School accepts up to 68 transfer credits (restrictions apply and are explained here) and if pursuing an advanced degree, 24 credits of the RN Options curriculum are bridge credits - they also count towards the first-year's

core courses for the graduate degree. So, you earn both the BSN and a graduate degree from an internationally-renown university while saving a YEAR of coursework.

RN Options students may complete the RN-BSN and RN-MSN curriculums on a part-time or full-time basis. All RN-DNP curriculums, except Nurse Anesthesia, may be completed on a part-time or full-time basis. The Nurse Anesthesia DNP curriculum is offered as full-time only. Students may begin coursework in any term (fall/spring/summer).

Courses are taught by the same faculty as the traditional four-year BSN program, nursing leaders who are experts in their field. Students also have many opportunities for hands-on learning in UPMC and its nationally-recognized healthcare facilities.

The RN Options track and curriculum are designed for:

- Registered nurses with either an ACEN (NLN), ACICS, or CCNE accredited diploma or associate degree
- Registered nurses without a BSN who want to enter the Master's program via the RN Options track, and gain early admission to MSN or DNP programs.

## RN Option Information

RN Option curriculum and application/admission information is available through the University of Pittsburgh School of Nursing at: <http://www.nursing.pitt.edu/degree-programs/rn-options/rn-options-curriculum-early-admission-msn-or-dnp>.

# Social Sciences

Chair: Raymond B. Wrabley, PhD

## Division Policies and Requirements

Candidates for graduation in social sciences must have earned a minimum of 120 credits. Of the 120, a maximum of 15 credits may be earned in non-Arts and Science programs of the University (e.g., education) or in courses offered for the convenience of students with particular professional goals (e.g., chemistry for nursing).

The final 30 credits MUST be earned at Pitt-Johnstown.

Degree candidates must have a grade point average of 2.000 (C average) or higher in all work at the University of Pittsburgh at Johnstown or at the University's other campuses.

The courses required for a major must be completed with a minimum grade point average of 2.000.

All students must complete the general education requirements in addition to major requirements. These include core competencies in English writing demonstrated by the successful completion of ENGCOMP 0005 - COMPOSITION 1, and ENGCOMP 0006 - COMPOSITION 2; public speaking (demonstrated by successful completion of COMMRC 0052 - PUBLIC SPEAKING); and quantitative reasoning (demonstrated by successful completion of one of the Quantitative Reasoning courses listed elsewhere in this catalog). In addition, students must pass ten other General Education courses from at least eight different disciplines, distributed over four Worlds of Knowledge (Aesthetic and Creative Expression, Society and Civics, Global History and Culture, and Science and Nature).

Students may earn no more than 2 credits in physical education per term, to a maximum of 8 during their entire academic career at Pitt-Johnstown. Only the first four physical education credits are counted as being in arts and sciences; any additional credits are considered as non-arts and sciences.

There is no foreign language requirement for social sciences division majors. However, many graduate programs require a reading knowledge of a second language or statistical analysis. Therefore, students planning graduate study should seriously consider course work in French or Spanish and statistics.

## Social Sciences Internships

Students majoring in the social sciences may serve an internship that provides field experience in some aspect of the students' career interests. Students interested in serving an internship during their junior or senior year should discuss this with their academic advisor. Such internship credits under SOCSCI 1910 - INTERNSHIP must be in addition to all requirements for the major and related areas. Internships are graded S/U only.

## Academic Programs Offered

### Major

### Environmental Studies, BA

Director: Mitzy Schaney

## I. Core requirements

- ENVSTD 0100 - INTRO TO ENVIRONMENTAL STUDIES
- ENVSTD 1200 - INTERNSHIP
- ENVSTD 1700 - SENIOR SEMNR IN ENVIRON STUDIES

## II. Environmental Policy

Select seven courses from the following.

### Biology

- BIOL 1110 - BIODIVERSITY CONSERVATION
- BIOL 1220 - WILDLIFE MANAGEMENT

### Economics

- ECON 1370 - ECONOMICS AND THE ENVIRONMENT

### English Literature

- ENGLIT 0345 - LITERATURE AND THE ENVIRONMENT

### English Writing

- ENGWRT 0551 - SCIENCE AND NATURE WRITING

### Geography

- GEOG 0320 - GEOGRAPHY OF AFRICA
- GEOG 1160 - POPULATION GEOGRAPHY
- GEOG 1190 - GEODEMOGRAPHY
- GEOG 1200 - ENVIRONMENTAL PLANNING
- GEOG 1230 - RESOURCE MANAGEMENT
- GEOG 1260 - ENERGY, ENVIRONMENT AND SOCIETY
- GEOG 1300 - RUSSIA AND EURASIAN STATES
- GEOG 1610 - URBAN PLANNING

### Philosophy

- PHIL 0120 - ENVIRONMENTAL ETHICS

### Political Science

- PS 1245 - ENVIRONMENTAL POLITICS & POLICY

## Sociology

- SOC 1113 - ENVIRONMENTAL SOCIOLOGY

Or other electives as approved

## III. Environmental Science

Select eight courses from the following. A minimum of three departments must be represented with a maximum of four courses from any one department.

### Biology

- BIOL 0080 - LIFE SCIENCES  
or preferably
- BIOL 0110 - GENERAL BIOLOGY 1
- BIOL 0111 - GENERAL BIOLOGY LABORATORY 1 and
- BIOL 0120 - GENERAL BIOLOGY 2 and
- BIOL 0121 - GENERAL BIOLOGY LABORATORY 2
- BIOL 0340 - GENERAL ECOLOGY
- BIOL 1130 - BIOLOGY OF PLANTS
- BIOL 1162 - LOCAL FLORA
- BIOL 1165 - EVOLUTION
- BIOL 1232 - ANIMAL BEHAVIOR
- BIOL 1274 - ORNITHOLOGY
- BIOL 1520 - AQUATIC ECOLOGY

### Chemistry

- CHEM 0111 - GENERAL CHEMISTRY 1 and
- CHEM 0113 - GENERAL CHEMISTRY LABORATORY 1
- CHEM 0112 - GENERAL CHEMISTRY 2 and
- CHEM 0114 - GENERAL CHEMISTRY LABORATORY 2

### Civil Engineering

- CE 1503 - INTRO TO ENVIRONMENTAL ENGRNG
- CE 1610 - ENGINEERING & SUSTAINABLE DEVELOPMENT

### Environmental Studies

- ENVSTD 1400 - SOIL IN THE ENVIRONMENT

## Geography

- GEOG 0210 - PHYSICAL GEOGRAPHY
- GEOG 1200 - ENVIRONMENTAL PLANNING
- GEOG 1220 - NATURAL HAZARDS
- GEOG 1240 - WATERSHEDS

## Geology

- GEOL 0024 - METEOROLOGY
- GEOL 0061 - HISTORICAL GEOLOGY
- GEOL 0083 - INTRO TO PHYSICAL OCEANOGRAPHY
- GEOL 0086 - ENVIRONMENTAL GEOLOGY
- GEOL 1061 - GEOMORPHOLOGY
- GEOL 1105 - HYDROLOGY
- GEOL 1139 - GEOLOGY OF SOILS

## Physics

- PHYS 0140 - INTRODUCTION TO PHYSICS 1 and
- PHYS 0141 - INTRODUCTION TO PHYSICS 1 LAB
- PHYS 0142 - INTRODUCTION TO PHYSICS 2 and
- PHYS 0143 - INTRODUCTION TO PHYSICS 2 LAB

Or other electives as approved

## IV. Methodology and tools

Students must complete at least two of the following:

- CHEM 0325 - ANALYTICAL CHEMISTRY
- ENGWR 0551 - SCIENCE AND NATURE WRITING
- ENGWR 1192 - TECHNICAL WRITING
- FR 0212 - INTERMEDIATE FRENCH 2
- GEOG 1425 - REMOTE SENSING
- GEOG 1440 - GEOGRAPHIC INFORMATION SYSTEMS
- GEOL 1108 - RPT WRITNG & COMP APPLIC IN GEOL
- GEOL 1157 - GEOLOGIC FIELD METHODS
- SOC 0300 - SOCIAL RESEARCH METHODS
- SPAN 0212 - INTERMEDIATE SPANISH 2
- STAT 1020 - SOCIAL STATISTICS
- Other methodology options as approved

## Geography, BA

Faculty: Ola Johansson; William Kory; Ahmad Massasati; Mitzy Schaney

Students electing Geography as a major must earn a minimum of 30 credits in Geography distributed as follows:

## A. Geography

- GEOG 0210 - PHYSICAL GEOGRAPHY
- GEOG 0810 - EARTH AND PEOPLE
- GEOG 0420 - CARTOGRAPHY
  
- GEOG 0100 - ECONOMIC GEOGRAPHY or
- GEOG 0610 - URBAN DEVELOPMENT

## B. Six additional Geography courses

At least three of which must be upper-level (1000 series), distributed so that at least one course is represented in each of the three concentrations below:

### 1. Urban/Human Geography/Population:

- GEOG 1130 - POLITICAL GEOGRAPHY
- GEOG 1160 - POPULATION GEOGRAPHY
- GEOG 1190 - GEODEMOGRAPHY
- GEOG 1600 - JOHNSTOWN AREA STUDY
- GEOG 1610 - URBAN PLANNING

### 2. Physical/Environmental Geography:

- GEOG 1200 - ENVIRONMENTAL PLANNING
- GEOG 1220 - NATURAL HAZARDS
- GEOG 1230 - RESOURCE MANAGEMENT
- GEOG 1240 - WATERSHEDS
- GEOG 1260 - ENERGY, ENVIRONMENT AND SOCIETY

### 3. Regional Geography:

- GEOG 0310 - GEOGRAPHY OF THE UNITED STATES
- GEOG 0320 - GEOGRAPHY OF AFRICA
- GEOG 0325 - GEOGRAPHY OF EUROPE
- GEOG 0350 - GEOGRAPHY OF THE MIDDLE EAST
- GEOG 1300 - RUSSIA AND EURASIAN STATES

## Note:

Geography GEOG 1410, GEOG 1800, GEOG 1810, GEOG 1820 may be substituted for one of these courses with department approval.

## C. An internship in geography

(SOCSCI 1910 - INTERNSHIP) may be counted as a free elective and taken on a H/S/U grading option only. The number of credits will be determined by the instructor.

## D. Methodology:

- SOC 0300 - SOCIAL RESEARCH METHODS or
- STAT 1020 - SOCIAL STATISTICS

# History, BA

Faculty: Robert Matson, Paul Newman, Katherine Reist, Veronica Wilson

Students electing history as a major must earn 30 credits in history, including:

## A.

- HIST 0120 - WESTERN CIVILIZATION 1
- HIST 0130 - WESTERN CIVILIZATION 2

## B.

- HIST 0610 - UNITED STATES TO 1877 or
- HIST 0620 - UNITED STATES 1877 - PRESENT

## C.

- HIST 0424 - CLASSICAL EAST ASIA or
- HIST 0425 - MODERN EAST ASIA

## D.

- HIST 1002 - WRITING SEMINAR FOR MAJORS

## E. Five additional courses in history

At least four must be 1000-level, including:

### 1. At least one additional course in American history from the following:

- HIST 0610 - UNITED STATES TO 1877 or
- HIST 0620 - UNITED STATES 1877 - PRESENT
- HIST 1400 - COLONIAL AMERICA



- HIST 1405 - SLAVERY IN AMERICA, 1619-1865
- HIST 1409 - THE EARLY REPUBLIC: US 1789-1848
- HIST 1410 - AMERICAN REVOLUTION 1763-1783
- HIST 1413 - AMERICAN LABOR HISTORY
- HIST 1416 - AMERICAN WOMEN'S HISTORY TO 1890
- HIST 1417 - AMERICAN WOMEN'S HISTORY SINCE 1890
- HIST 1430 - CIVIL WAR HISTORY
- HIST 1535 - COLD WAR CULTURES
- HIST 1605 - RECONSTRUCTION AND REFORM, 1865-1916
- HIST 1608 - NOTORIOUS WOMEN I
- HIST 1609 - NOTORIOUS WOMEN II
- HIST 1617 - UNITED STATES IN THE 1960'S
- HIST 1624 - AGE OF REAGAN: 1980 & BEYOND
- HIST 1810 - SPECIAL TOPICS as appropriate

2. At least one additional course in European history from the following:

- HIST 1113 - MEDIEVAL EUROPE: 1100-1500
- HIST 1127 - MODERN BRITAIN
- HIST 1170 - RENAISSANCE AND REFORMATION
- HIST 1300 - ENGLAND TO 1689
- HIST 1342 - RUSSIA SINCE 1860
- HIST 1381 - EUROPE 1914-1945
- HIST 1385 - EUROPE SINCE 1945 or
- HIST 1810 - SPECIAL TOPICS as appropriate

3. At least one course in non-Western history or another history from the following:

- HIST 0424 - CLASSICAL EAST ASIA or
- HIST 0425 - MODERN EAST ASIA
- HIST 0760 - INTRODUCTION TO PUBLIC HISTORY
- HIST 1505 - FILM AND HISTORY
- HIST 1521 - THE PACIFIC WAR
- HIST 1600 - POSTWAR JAPAN
- HIST 1602 - RELIGIONS OF THE WORLD or
- RELGST 1602 - RELIGIONS OF THE WORLD
- HIST 1603 - JUDAISM, CHRISTIANITY AND ISLAM or
- RELGST 1603 - JUDAISM, CHRISTIANITY AND ISLAM
- HIST 1613 - PEOPLE'S REPUBLIC OF CHINA
- HIST 1620 - THE VIETNAM WAR
- HIST 1679 - MEXICO or
- HIST 1774 - HISTORY OF CHRISTIANITY
- HIST 1810 - SPECIAL TOPICS as appropriate

F. Methodology:

Select one option.

- HIST 0750 - HISTORICAL METHODS & THEORIES  
or
- SOC 0300 - SOCIAL RESEARCH METHODS or
- STAT 1020 - SOCIAL STATISTICS or
- Any Second Language at the Intermediate 2 level

## **Justice Administration and Criminology, BA**

Faculty: Ross Kleinstuber

Students electing Justice Administration and Criminology as a major must earn the following:

### **A. Required JAC courses (12 credits)**

- JAC 0715 - INTRODUCTION TO CRIMINAL JUSTICE
- JAC 0720 - CRIMINOLOGY
- JAC 0725 - CRIMINAL COURT PROCEDURE
- JAC 0726 - DIGITAL AGE CRIME AND JUSTICE

### **B. Senior Seminar (3 credits)**

- JAC 1700 - JUSTICE ADMINISTRATION AND CRIMINOLOGY SENIOR SEMINAR

### **C. Practicum Requirement (6 credits)**

- JAC 1900 - JUSTICE ADMINISTRATION AND CRIMINOLOGY PRACTICUM

### **D. Community Lab Credits (3 credits)**

- JAC 0100 (6 projects x 0.5 credits)

### **E. Methodology Requirement (6 credits)**

- GEOG 0420 - CARTOGRAPHY
- STAT 1020 - SOCIAL STATISTICS

**Students Must Also Complete The Following Courses:**

- PHIL 0303 - INTRODUCTION TO ETHICS
- PSY 0200 - INTRODUCTION TO PSYCHOLOGY

**Law And Justice Track Requirements:**

- JAC 1150 - SOCIOLOGY OF LAW
- JAC 0735 - CONTEMPORARY ISSUES IN CRIMINAL JUSTICE

## Law And Justice Electives

Select At Least Three Of The Following:

- ACCT 1570 - BUSINESS LAW 1
- HIST 1416 - AMERICAN WOMEN'S HISTORY TO 1890
- HIST 1417 - AMERICAN WOMEN'S HISTORY SINCE 1890
- JAC 0200 - CORRECTIONS
- JAC 0265 - INEQUALITY, CRIME, AND JUSTICE
- JAC 0400 - BASIC COMPUTER FORENSICS
- JAC 1400 - ADVANCED COMPUTER FORENSICS
- JAC 1433 - JUVENILE DELINQUENCY
- PSY 1141 - PSYCHOPATHOLOGY
- SOC 0320 - WEALTH AND POWER

## Political Science, BA

Faculty: James Alexander, Christopher Cook, Raymond Wrabley

Students electing political science as a major must earn a minimum of 30 credits in political science, 9 credits of these must be 1000+ level.

### Including at least four subfield introductory courses

Selected from

- PS 0206 - AMERICAN POLITICAL PROCESS
- PS 0210 - NATIONAL POLICYMAKING
- PS 0302 - COMPARATIVE POLITICS
- PS 0501 - WORLD POLITICS
- PS 0601 - POLITICAL IDEOLOGIES

### Methodology: Choose one of the following:

- SOC 0300 - SOCIAL RESEARCH METHODS or
- STAT 1020 - SOCIAL STATISTICS or
- STAT 1040 - STATISTICS FOR BUSINESS/ECONOMICS

### Senior Seminar

- PS 1700 - POLITICAL SCIENCE RESEARCH

## Social Sciences - Option A, BA

## Bachelor of Arts Degree

Considerable flexibility is afforded to students in the social sciences who wish to concentrate their studies in two social sciences fields without necessarily completing a full major in either, or who wish to concentrate their studies around a theme (a selfdesigned concentration). These students would then pursue a degree in social sciences, which requires completion of a social science methodology course selected from SOC 0300, STAT 1020, or STAT 1040 and a minimum of 54 credits in the Division of Social Sciences under one of two options:

### Option A

A minimum of 15 credits in each of two social science non-business fields (such as anthropology and history, or sociology and political science, or economics and geography) and the remaining 24 credits in the other social sciences fields (except business or internships), with at least one course in each.

## Social Sciences - Option B, BA

## Bachelor of Arts Degree

Considerable flexibility is afforded to students in the social sciences who wish to concentrate their studies in two social sciences fields without necessarily completing a full major in either, or who wish to concentrate their studies around a theme (a selfdesigned concentration). These students would then pursue a degree in social sciences, which requires completion of a social science methodology course selected from SOC 0300, STAT 1020, or STAT 1040 and a minimum of 54 credits in the Division of Social Sciences under one of two options:

### Option B

A minimum of 24 credits in social sciences courses clustered around a designated theme. The theme and appropriate courses are chosen by mutual consent of the student and advisor. The remaining 30 credits must be distributed among the social sciences fields (except business or internships), with at least one course in each. Students should note that interdisciplinary self-designed majors may be constructed across divisions as well.

## Sociology, BA

Faculty: Jeremiah Coldsmith, Ross Kleinstuber, Daniel Santoro

Students electing Sociology as a major must earn a minimum of 30 credits in Sociology, including:

### A. Sociology

- SOC 0100 - INTRODUCTION TO SOCIOLOGY
- SOC 0300 - SOCIAL RESEARCH METHODS
- SOC 0400 - CLASSICAL SOCIOLOGICAL THEORIES
- SOC 1700 - SENIOR SEMINAR IN SOCIOLOGY

Note:

SOC 0100 is a prerequisite for all higher-numbered courses.

## B. Social Organization Core

One course from each of two categories: social organization and society and self.

- SOC 0320 - WEALTH AND POWER
- SOC 0340 - POLITICAL SOCIOLOGY
- SOC 0440 - URBAN SOCIOLOGY
- SOC 0520 - SOCIAL MOVEMENTS

## C. Society & Self Core

Select 3 credits from the following:

- SOC 0221 - SOCIAL PSYCHOLOGY
- SOC 1670 - IDENTITY AND CULTURE

## Minor

In addition to an academic major, a student may elect to pursue a minor in another academic discipline. The specific requirements for each minor are established by the individual academic disciplines. However, all minors require the completion of a minimum of 18 credits of course work.

## Geography Minor

### 18 Credits in Geography, including:

#### Core Courses

#### Two (6 cr.) of the following four courses:

- GEOG 0100 - ECONOMIC GEOGRAPHY
- GEOG 0210 - PHYSICAL GEOGRAPHY
- GEOG 0610 - URBAN DEVELOPMENT
- GEOG 0810 - EARTH AND PEOPLE

Four additional courses (12 cr.), at least two of which must be upper level, i.e. numbered 1000+.

Note: GEOG 0420 - CARTOGRAPHY is strongly recommended.

#### Note:

Minors: A minimum of 9 credits towards your minor must be taken at Pitt-Johnstown.

## History Minor

18 Credits in History, including:

### Core Courses

- HIST 0120 - WESTERN CIVILIZATION 1
  - HIST 0130 - WESTERN CIVILIZATION 2
- Four additional courses (12 cr.), at least two of which must be upper level, i.e. numbered 1000+.

## Political Science Minor

18 credits in Political Science, including:

### Core Courses

- PS 0206 - AMERICAN POLITICAL PROCESS
- At least two (6 cr.) of the following five introductory courses:
- PS 0210 - NATIONAL POLICYMAKING
  - PS 0302 - COMPARATIVE POLITICS
  - PS 0501 - WORLD POLITICS
  - PS 0601 - POLITICAL IDEOLOGIES
- Three additional courses (9 cr.), at least two of which must be upper level, i.e. numbered 1000+.

### NOTE:

Minors: A minimum of 9 credits towards your minor must be taken at Pitt Johnstown.

## Sociology Minor

18 credits in Sociology, including:

### Core Courses

- SOC 0100 - INTRODUCTION TO SOCIOLOGY
  - SOC 0300 - SOCIAL RESEARCH METHODS or
  - PSY 1031 - RESEARCH METHODS
- Three additional courses (9 cr.)
- \*\*Note:** *Students taking PSY 1031 to satisfy Research Methods must take one additional Sociology class\*\**
- SOC 0400 - CLASSICAL SOCIOLOGICAL THEORIES

### Certificate

## Geographic Information Systems Certificate

This certificate requires the completion of 18 credits, consisting of five core courses and one elective, with no grade lower than a C in each class.

The GIS certificate program has two components:

Core Courses (15 credits):

- GEOG 0420 - CARTOGRAPHY
- GEOG 1420 - GIS SPECIAL PROJECTS
- GEOG 1425 - REMOTE SENSING
- GEOG 1440 - GEOGRAPHIC INFORMATION SYSTEMS
- STAT 1020 - SOCIAL STATISTICS

Comparable Courses:

- MATH 0212 - INTRODUCTION TO BIOSTATISTICS or
- MATH 1153 - INTRODUCTION TO PROBABILITY AND STATISTICS 1
- PSY 0270 - INTRODUCTORY STATISTICS
- STAT 1040 - STATISTICS FOR BUSINESS/ECONOMICS

Elective (3 credits):

Choose one from the pre-approved list below or in consultation with the certificate program advisor. This course should be completed prior to beginning the "GIS Special Projects" course so that its content and perspectives can be drawn upon for the final project.

- BIOL 1110 - BIODIVERSITY CONSERVATION
- BIOL 1130 - BIOLOGY OF PLANTS
- BIOL 1520 - AQUATIC ECOLOGY
- GEOG 1160 - POPULATION GEOGRAPHY
- GEOG 1230 - RESOURCE MANAGEMENT
- GEOG 1240 - WATERSHEDS
- GEOG 1610 - URBAN PLANNING
- GEOL 1061 - GEOMORPHOLOGY
- GEOL 1105 - HYDROLOGY
- GEOL 1139 - GEOLOGY OF SOILS
- IS 1410 - DATABASE MANAGEMENT SYSTEMS
- SOC 0440 - URBAN SOCIOLOGY
- SOC 1113 - ENVIRONMENTAL SOCIOLOGY

## **International Studies Certificate - Business Focus**

### **International Studies Certificate**

Director: Christopher Cook

The International Studies Certificate, is a multidisciplinary program that is flexibly structured to complement any major. It is designed to promote the interests of both the career-oriented student and the student whose expectations of a liberal arts education include enhancement of one's capacity to understand and enjoy the world.

For the student who already has made a career choice such as business or journalism, the International Studies Certificate provides the opportunity to demonstrate flexibility, a breadth of perspective, and interests that are increasingly attractive to prospective employers.

As a complement to any major, the International Studies Certificate facilitates entry into such careers as the U.S. government (both domestic and foreign service), private interest groups, national and international service agencies, journalism, and international business.

The program is also excellent preparation for admission to such highly marketable specialized graduate programs as international management, international communications, foreign service, international business, and international studies. More information about placement and about the International Studies Certificate program or study abroad is available from the director of international studies.

Students focus their study by selecting one of the following certificate programs:

## International Studies - Business

Total Credits Required: 39

Tools (6 credits)

Foreign Language - Any foreign language (second year competency required)

- FR 0212 - INTERMEDIATE FRENCH 2 or
- SPAN 0212 - INTERMEDIATE SPANISH 2 (or equivalency)

Core Courses from Social Sciences (12-18 credits)

Political & Historical Context: (3-9 credits)

- PS 0302 - COMPARATIVE POLITICS
- PS 0501 - WORLD POLITICS
- PS 1356 - THE GOVERNMENT AND POLITICS OF AFRICA
- HIST 0424 - CLASSICAL EAST ASIA
- HIST 0425 - MODERN EAST ASIA
- HIST 1385 - EUROPE SINCE 1945
- HIST 1600 - POSTWAR JAPAN

Geographic-Sociocultural Context: (3-9 credits)

- HIST 1613 - PEOPLE'S REPUBLIC OF CHINA
- HIST 1679 - MEXICO
- GEOG 0100 - ECONOMIC GEOGRAPHY
- GEOG 1300 - RUSSIA AND EURASIAN STATES
- GEOG 0325 - GEOGRAPHY OF EUROPE
- SOC 1113 - ENVIRONMENTAL SOCIOLOGY
- SOC 1517 - GLOBAL POLITICAL ECONOMY



Advanced Courses: (9 credits)

- ECON 0501 - INTRODUCTION TO INTERNATIONAL ECONOMICS
- Business (Business course taken abroad) under advisement
- Business (Business course taken abroad) under advisement
- Business (Business course taken abroad) under advisement

Study Abroad: (6-12 credits) Spend one semester abroad

- Study Abroad Program

## **International Studies Certificate - Europe and Modern Asia Focus**

### **International Studies Certificate**

Director: Christopher Cook

The International Studies Certificate, is a multidisciplinary program that is flexibly structured to complement any major. It is designed to promote the interests of both the career-oriented student and the student whose expectations of a liberal arts education include enhancement of one's capacity to understand and enjoy the world.

For the student who already has made a career choice such as business or journalism, the International Studies Certificate provides the opportunity to demonstrate flexibility, a breadth of perspective, and interests that are increasingly attractive to prospective employers.

As a complement to any major, the International Studies Certificate facilitates entry into such careers as the U.S. government (both domestic and foreign service), private interest groups, national and international service agencies, journalism, and international business.

The program is also excellent preparation for admission to such highly marketable specialized graduate programs as international management, international communications, foreign service, international business, and international studies. More information about placement and about the International Studies Certificate program or study abroad is available from the director of international studies.

Students focus their study by selecting one of the following certificate programs:

### **International Studies - General (Focus: Europe and Modern Asia)**

Total Credits Required: 36

Tools required (3-14 credits)

Foreign Language - 2nd year competency required

- FR 0212 - INTERMEDIATE FRENCH 2 or
- SPAN 0212 - INTERMEDIATE SPANISH 2 (or equivalency)

## Research Methods

### Core Courses from Social Sciences (15 credits)

#### Political and Historical Context (at least 3 credits)

- PS 0302 - COMPARATIVE POLITICS
- PS 0501 - WORLD POLITICS
- HIST 1385 - EUROPE SINCE 1945

#### Geographic and Sociocultural Context (at least 3 credits)

- GEOG 0100 - ECONOMIC GEOGRAPHY
- GEOG 0210 - PHYSICAL GEOGRAPHY
- GEOG 0810 - EARTH AND PEOPLE
- HIST 1170 - RENAISSANCE AND REFORMATION
- RELGST 1602 - RELIGIONS OF THE WORLD
- SOC 0340 - POLITICAL SOCIOLOGY
- SOC 0520 - SOCIAL MOVEMENTS

#### Advanced/Upper-level Courses (at least 9 credits)

- ECON 0501 - INTRODUCTION TO INTERNATIONAL ECONOMICS
- PS 1507 - INTERNATIONAL ORGANIZATION
- PS 1515 - AMERICAN FOREIGN POLICY
- Or appropriate other courses upon advisement

### Area Specialization (9 credits from Humanities or Social Sciences)

Specialization courses must be selected from at least two separate fields, and may be substituted partially or entirely by: study abroad and/or summer study in a specialized field at another university Geographic Areas

#### Asia

- HIST 0425 - MODERN EAST ASIA
- HIST 1521 - THE PACIFIC WAR
- HIST 1600 - POSTWAR JAPAN

#### Europe

- HIST 1381 - EUROPE 1914-1945
- HIST 1385 - EUROPE SINCE 1945
- PHIL 0213 - HISTORY OF MODERN PHILOSOPHY

#### Britain

- ENGLIT 1116 - CHAUCER
- ENGLIT 1120 - RESTORATION AND 18TH CENTURY LIT
- ENGLIT 1158 - 19th Century British Novel
- ENGLIT 1182 - VICTORIAN LITERATURE
- HIST 1300 - ENGLAND TO 1689

#### France

- FR 1083 - SPECIAL TOPICS IN LIT (ENGLISH)

#### Germany

#### Russia/Eastern Europe

- GEOG 1300 - RUSSIA AND EURASIAN STATES
- HIST 1342 - RUSSIA SINCE 1860

#### Southern Europe

- SPAN 0451 - SEMINAR IN CERVANTES
- SPAN 1841 - DON QUIXOTE AND THE NOVEL

Or other appropriate courses upon advisement

Study Abroad (6-12 credits) Strongly encouraged

- Study Abroad Program

## **International Studies Certificate - French Focus**

### International Studies Certificate

Director: Christopher Cook

The International Studies Certificate, is a multidisciplinary program that is flexibly structured to complement any major. It is designed to promote the interests of both the career-oriented student and the student whose expectations of a liberal arts education include enhancement of one's capacity to understand and enjoy the world.

For the student who already has made a career choice such as business or journalism, the International Studies Certificate provides the opportunity to demonstrate flexibility, a breadth of perspective, and interests that are increasingly attractive to prospective employers.

As a complement to any major, the International Studies Certificate facilitates entry into such careers as the U.S. government (both domestic and foreign service), private interest groups, national and international service agencies, journalism, and international business.

The program is also excellent preparation for admission to such highly marketable specialized graduate programs as international management, international communications, foreign service, international business, and international

studies. More information about placement and about the International Studies Certificate program or study abroad is available from the director of international studies.

Students focus their study by selecting one of the following certificate programs:

## International Studies - French

Total Credits Required: 36

Tools (12 credits)

French Language

- FR 0211 - INTERMEDIATE FRENCH 1
- FR 0212 - INTERMEDIATE FRENCH 2
- FR 0355 - FRENCH CONVERSATION
- FR 0356 - WRITTEN FRENCH 1

Core Courses (9 credits)

French Culture & Literature

- FR 0320 - INTRODUCTION TO CIVILIZATION
- FR 0321 - APPROACHES TO FRENCH LITERATURE
- FR 1019 - 20TH CENTURY TOPICS

Area Specialization & Context (9-12 credits)

Humanities

- FA 1412 - REALISM & IMPRESSIONISM
- COMMRC 0052 - PUBLIC SPEAKING
- COMMRC 0083 - INTERCULTURAL COMMUNICATION

Social Sciences

- PS 0302 - COMPARATIVE POLITICS
- PS 1517 - GLOBAL POLITICAL ECONOMY
- GEOG 0325 - GEOGRAPHY OF EUROPE
- HIST 1113 - MEDIEVAL EUROPE: 1100-1500
- HIST 1381 - EUROPE 1914-1945
- HIST 1385 - EUROPE SINCE 1945
- ANTH 0800 - INTRODUCTION TO CULTURAL ANTHROPOLOGY
- SOC 1670 - IDENTITY AND CULTURE

Study Abroad: (6-12 credits) Spend one semester abroad

- Study Abroad Program

## International Studies Certificate - Geography Focus

### International Studies Certificate

Director: Christopher Cook

The International Studies Certificate, is a multidisciplinary program that is flexibly structured to complement any major. It is designed to promote the interests of both the career-oriented student and the student whose expectations of a liberal arts education include enhancement of one's capacity to understand and enjoy the world.

For the student who already has made a career choice such as business or journalism, the International Studies Certificate provides the opportunity to demonstrate flexibility, a breadth of perspective, and interests that are increasingly attractive to prospective employers.

As a complement to any major, the International Studies Certificate facilitates entry into such careers as the U.S. government (both domestic and foreign service), private interest groups, national and international service agencies, journalism, and international business.

The program is also excellent preparation for admission to such highly marketable specialized graduate programs as international management, international communications, foreign service, international business, and international studies. More information about placement and about the International Studies Certificate program or study abroad is available from the director of international studies.

Students focus their study by selecting one of the following certificate programs:

### International Studies - Geography

Total Credits Required: 36

Tools: (9-12 credits)

Foreign Language (French, German, Spanish or any other language)

- Intermediate I
- Intermediate II
- Conversation

Core Courses from Social Sciences

Geography (12 credits)

Required:

- GEOG 0810 - EARTH AND PEOPLE

One regional course:

- GEOG 0320 - GEOGRAPHY OF AFRICA
- GEOG 0325 - GEOGRAPHY OF EUROPE
- GEOG 1300 - RUSSIA AND EURASIAN STATES

Two thematic courses:

- GEOG 0100 - ECONOMIC GEOGRAPHY
- GEOG 1130 - POLITICAL GEOGRAPHY
- GEOG 1160 - POPULATION GEOGRAPHY
- GEOG 1220 - NATURAL HAZARDS

Society (6-9 credits)

- ANTH 0800 - INTRODUCTION TO CULTURAL ANTHROPOLOGY
- ECON 0501 - INTRODUCTION TO INTERNATIONAL ECONOMICS
- PS 0302 - COMPARATIVE POLITICS
- PS 0501 - WORLD POLITICS
- PS 1356 - THE GOVERNMENT AND POLITICS OF AFRICA
- HIST 0425 - MODERN EAST ASIA
- HIST 1602 - RELIGIONS OF THE WORLD

Culture (3 - 6 credits)

- ANTH 0800 - INTRODUCTION TO CULTURAL ANTHROPOLOGY
- ECON 0501 - INTRODUCTION TO INTERNATIONAL ECONOMICS
- PS 0302 - COMPARATIVE POLITICS
- PS 0501 - WORLD POLITICS
- PS 1356 - THE GOVERNMENT AND POLITICS OF AFRICA
- HIST 0425 - MODERN EAST ASIA
- HIST 1602 - RELIGIONS OF THE WORLD

Study Abroad: (6-12 credits) Strong encouraged

- Study Abroad Program

## **International Studies Certificate - Global South Focus**

### **International Studies Certificate**

Director: Christopher Cook

The International Studies Certificate, is a multidisciplinary program that is flexibly structured to complement any major. It is designed to promote the interests of both the career-oriented student and the student whose expectations of a liberal arts education include enhancement of one's capacity to understand and enjoy the world.

For the student who already has made a career choice such as business or journalism, the International Studies Certificate provides the opportunity to demonstrate flexibility, a breadth of perspective, and interests that are increasingly attractive to prospective employers.

As a complement to any major, the International Studies Certificate facilitates entry into such careers as the U.S. government (both domestic and foreign service), private interest groups, national and international service agencies, journalism, and international business.

The program is also excellent preparation for admission to such highly marketable specialized graduate programs as international management, international communications, foreign service, international business, and international studies. More information about placement and about the International Studies Certificate program or study abroad is available from the director of international studies.

Students focus their study by selecting one of the following certificate programs:

## International Studies - General (Focus: Global South)

Total Credits Required: 36

Tools: (3-14 credits)

Foreign Language - 2nd year competency required

- FR 0212 - INTERMEDIATE FRENCH 2 or
- SPAN 0212 - INTERMEDIATE SPANISH 2 (or equivalency)

Research Methods

Core Courses from Social Sciences (15 credits)

Political and Historical Context (at least 3 credits)

Geographic and Sociocultural Context (at least 3 credits)

- ANTH 0800 - INTRODUCTION TO CULTURAL ANTHROPOLOGY
- GEOG 0100 - ECONOMIC GEOGRAPHY
- GEOG 0610 - URBAN DEVELOPMENT
- GEOG 0810 - EARTH AND PEOPLE
- SOC 0340 - POLITICAL SOCIOLOGY
- GEOG 0350 - GEOGRAPHY OF THE MIDDLE EAST
- RELGST 1602 - RELIGIONS OF THE WORLD
- SOC 0520 - SOCIAL MOVEMENTS

Advanced/Upper-level Courses (at least 9 credits)

- GEOG 1160 - POPULATION GEOGRAPHY
- GEOG 1230 - RESOURCE MANAGEMENT
- GEOG 1240 - WATERSHEDS
- ECON 0501 - INTRODUCTION TO INTERNATIONAL ECONOMICS
- PS 1356 - THE GOVERNMENT AND POLITICS OF AFRICA
- PS 1507 - INTERNATIONAL ORGANIZATION

Or appropriate other courses upon advisement

### Area Specialization (9 credits from Humanities or Social Sciences)

Specialization courses must be selected from at least two separate fields, and may be substituted partially or entirely by: study abroad and/or summer study in a specialized field at another university Geographic Areas

#### Asia

- HIST 0424 - CLASSICAL EAST ASIA
- HIST 0425 - MODERN EAST ASIA
- HIST 1613 - PEOPLE'S REPUBLIC OF CHINA
- HIST 1620 - THE VIETNAM WAR

#### Latin America

- HIST 1679 - MEXICO
- SPAN 1844 - CONTEMP LATIN AMER LITERATURE

#### Africa

- GEOG 0320 - GEOGRAPHY OF AFRICA
- PS 1356 - THE GOVERNMENT AND POLITICS OF AFRICA

#### Middle East

- GEOG 0350 - GEOGRAPHY OF THE MIDDLE EAST

Or appropriate other courses upon advisement

Study Abroad (6-12 credits) Strongly encouraged

- Study Abroad Program

## **International Studies Certificate - Media Communication Focus**

### International Studies Certificate

Director: Christopher Cook

The International Studies Certificate, is a multidisciplinary program that is flexibly structured to complement any major. It is designed to promote the interests of both the career-oriented student and the student whose expectations of a liberal arts education include enhancement of one's capacity to understand and enjoy the world.



For the student who already has made a career choice such as business or journalism, the International Studies Certificate provides the opportunity to demonstrate flexibility, a breadth of perspective, and interests that are increasingly attractive to prospective employers.

As a complement to any major, the International Studies Certificate facilitates entry into such careers as the U.S. government (both domestic and foreign service), private interest groups, national and international service agencies, journalism, and international business.

The program is also excellent preparation for admission to such highly marketable specialized graduate programs as international management, international communications, foreign service, international business, and international studies. More information about placement and about the International Studies Certificate program or study abroad is available from the director of international studies.

Students focus their study by selecting one of the following certificate programs:

## International Studies - Media Communication

Total Credits Required: 36

Tools: (6-14 credits)

Foreign Language - Any foreign language (second year competency required)

- FR 0212 - INTERMEDIATE FRENCH 2 or
- SPAN 0212 - INTERMEDIATE SPANISH 2 (or equivalency)

Research Methods

- SOC 0300 - SOCIAL RESEARCH METHODS
- COMMRC 0700 - COMMUNICATION RESEARCH METHODS
- COMMRC 1124 - RHETORICAL CRITICISM

Core Courses: (15 credits)

Communication Courses (9 credits)

- COMMRC 0083 - INTERCULTURAL COMMUNICATION
- COMMRC 0320 - MASS COMMUNICATION PROCESS
- COMMRC 1139 - MEDIA CRITICISM

Media Courses (6 credits)

- ENGLIT 0530 - FILM ANALYSIS
- JOURNL 0053 - INTRODUCTION TO JOURNALISM
- JOURNL 1147 - THE MEDIA AND THE LAW
- JOURNL 1140 - PHOTOGRAPHY IN COMMUNICATIONS
- JOURNL 1137 - NEWSPAPER LAYOUT/DESIGN
- JOURNL 1132 - REPORTING 1

- JOURNL 1134 - FEATURE WRITING
- PS 1209 - MEDIA, POLITICS, AND THE LAW

### Area Specialization (9-12 credits)

#### Africa - Social Sciences

- GEOG 0320 - GEOGRAPHY OF AFRICA
- PS 1356 - THE GOVERNMENT AND POLITICS OF AFRICA

#### Africa - Humanities

- ENGWR 0500 - CREATIVE NONFICTION WRITING

#### Asia - Social Sciences

- HIST 0424 - CLASSICAL EAST ASIA
- HIST 0425 - MODERN EAST ASIA
- HIST 1600 - POSTWAR JAPAN
- HIST 1613 - PEOPLE'S REPUBLIC OF CHINA
- HIST 1620 - THE VIETNAM WAR

#### Europe - Humanities

- ENGLIT 0055 - SURVEY OF ENGLISH LITERATURE
- ENGLIT 0056 - SURVEY OF ENGLISH LITERATURE 2

#### Europe - Social Sciences

- HIST 1381 - EUROPE 1914-1945
- GEOG 1300 - RUSSIA AND EURASIAN STATES
- GEOG 0325 - GEOGRAPHY OF EUROPE
- Or appropriate other courses upon advisement

#### Latin America - Social Sciences

- PS 1320 - LATIN AMERICAN POLITICS

#### Latin America - Humanities

- SPAN 1844 - CONTEMP LATIN AMER LITERATURE
- Or appropriate other courses upon advisement

## International Studies Certificate - Spanish Focus

# International Studies Certificate

Director: Christopher Cook

The International Studies Certificate, is a multidisciplinary program that is flexibly structured to complement any major. It is designed to promote the interests of both the career-oriented student and the student whose expectations of a liberal arts education include enhancement of one's capacity to understand and enjoy the world.

For the student who already has made a career choice such as business or journalism, the International Studies Certificate provides the opportunity to demonstrate flexibility, a breadth of perspective, and interests that are increasingly attractive to prospective employers.

As a complement to any major, the International Studies Certificate facilitates entry into such careers as the U.S. government (both domestic and foreign service), private interest groups, national and international service agencies, journalism, and international business.

The program is also excellent preparation for admission to such highly marketable specialized graduate programs as international management, international communications, foreign service, international business, and international studies. More information about placement and about the International Studies Certificate program or study abroad is available from the director of international studies.

Students focus their study by selecting one of the following certificate programs:

## International Studies - Spanish

Total Credits Required: 36

Tools: (12 credits)

### Spanish Language

- SPAN 0211 - INTERMEDIATE SPANISH 1
- SPAN 0212 - INTERMEDIATE SPANISH 2
- SPAN 0320 - CONVERSATION
- SPAN 0325 - GRAMMAR AND COMPOSITION

Core Courses: (9 credits)

### Hispanic Culture & Literature

- SPAN 0350 - SPANISH & CIVILIZATION
- SPAN 0351 - LATIN AMERICAN CIVILIZATION
- SPAN 0355 - INTRODUCTION HISPANIC LITERATURE 1
- SPAN 0356 - INTRODUCTION TO HISPANIC LITERATURE 2
- SPAN 1193 - LITERARY AND NON-LITERARY TRANSLATION
- SPAN 1444 - LATIN AMERICAN TOPICS

Area Specialization & Context: (9-12 credits) Humanities or Social Sciences

Courses outside Spanish (students need to take a minimum of 9 credits outside Spanish)

- HIST 1679 - MEXICO
- COMMRC 0052 - PUBLIC SPEAKING
- COMMRC 0083 - INTERCULTURAL COMMUNICATION

Spanish Literature in Translation (taught in English)

- SPAN 1841 - DON QUIXOTE AND THE NOVEL
- SPAN 1843 - CONTEMPORARY HISPANIC LITERATURE (TAUGHT IN ENGLISH)
- SPAN 1844 - CONTEMP LATIN AMER LITERATURE

Study Abroad: (6-12 credits) Spend one semester abroad

- Study Abroad Program

## **International Studies Certificate - Thematic Focus**

### **International Studies Certificate**

Director: Christopher Cook

The International Studies Certificate, is a multidisciplinary program that is flexibly structured to complement any major. It is designed to promote the interests of both the career-oriented student and the student whose expectations of a liberal arts education include enhancement of one's capacity to understand and enjoy the world.

For the student who already has made a career choice such as business or journalism, the International Studies Certificate provides the opportunity to demonstrate flexibility, a breadth of perspective, and interests that are increasingly attractive to prospective employers.

As a complement to any major, the International Studies Certificate facilitates entry into such careers as the U.S. government (both domestic and foreign service), private interest groups, national and international service agencies, journalism, and international business.

The program is also excellent preparation for admission to such highly marketable specialized graduate programs as international management, international communications, foreign service, international business, and international studies. More information about placement and about the International Studies Certificate program or study abroad is available from the director of international studies.

Students focus their study by selecting one of the following certificate programs:

### **International Studies - General (Focus: Thematic)**

Total Credits Required: 36

Tools: (3-14 credits)

Foreign Language - second year competency required

- FR 0212 - INTERMEDIATE FRENCH 2 or
- SPAN 0212 - INTERMEDIATE SPANISH 2 (or equivalency)

## Research Methods

## Core Courses from Social Sciences (15 credits)

### Political and Historical Context (at least 3 credits)

- PS 0302 - COMPARATIVE POLITICS
- PS 0501 - WORLD POLITICS
- HIST 1385 - EUROPE SINCE 1945

### Geographic and Sociocultural Context (at least 3 credits)

- GEOG 0100 - ECONOMIC GEOGRAPHY
- GEOG 0210 - PHYSICAL GEOGRAPHY
- GEOG 0810 - EARTH AND PEOPLE
- HIST 1170 - RENAISSANCE AND REFORMATION
- SOC 0340 - POLITICAL SOCIOLOGY
- SOC 0520 - SOCIAL MOVEMENTS

Or appropriate other courses upon advisement

## Area Specialization (9 credits from Humanities or Social Sciences)

Specialization courses must be selected from at least two separate fields, and may be substituted partially or entirely by: study abroad and/or summer study in a specialized field at another university.

- Thematic Areas - These and other topics may be the focus of a thematic specialization such as:  
Environmental studies, globalization, global warming, comparative thought, comparative literature, human rights, race and ethnicity, labor conflicts, health care, women's issues, etc.

For details consult with the International Studies Advisor

## Study Abroad: (6-12 credits) Strongly encouraged

# Course Information

*Please note, when searching courses by Catalog Number, an asterisk (\*) can be used to return mass results. For instance a Catalog Number search of " 1\* " can be entered, returning all 1000-level courses.*

## Accounting

### ACCT 0115 - ACCOUNTING PRINCIPLES 1

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is required for all pre-business students and covers the essentials of financial accounting. Topics covered include an overview of accounting and accounting information, basic financial statements, a review of the elements of the accounting cycle, cash and other financial assets, capital stock of a corporation, forms of business organization, and the basics of financial analysis.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0002 or Math Placement Score (61 or greater)

### ACCT 0200 - ACCOUNTING PRINCIPLES 2

**Minimum Credits:** 3

**Maximum Credits:** 3

This course studies the accounting elements as they appear on the balance sheet and income statement. Topics covered include the activities of the accounting cycle, emphasizing adjusting entries and preparation of financial statements for service and merchandising corporations. An examination of the measurement and reporting of cash, receivables, inventories, plant and intangible assets, and other assets is also undertaken. The course also examines accounting and reporting for current and long term liabilities, revenue, expenses, stockholders equity, and the accounting worksheet. A practice set is completed.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ACCT 0115

### ACCT 0281 - MONEY AND BANKING

**Minimum Credits:** 3

**Maximum Credits:** 3

Covers the role of money and financial intermediaries in the U.S. Economy and examines what role government has played and should play as regulator of the financial sector and money supply.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ECON 0110 or ECON 0115

### ACCT 1100 - MANAGERIAL ACCOUNTING

**Minimum Credits:** 3

**Maximum Credits:** 3

A review of the accounting for manufacturing costs including terminology, cost-volume-profit analysis, costing systems, activity-based costing, budgets, and variance analysis.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ACCT 0115

## **ACCT 1110 - COST ACCOUNTING**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course focuses on the use of cost accounting information as a tool for management decision making. Cost behavior and estimation, pricing, and use of relevant information are combined with profit and strategy considerations to practice making decisions consistent with business objectives. Presentation of results and recommendations to management is emphasized.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ACCT 0115

## **ACCT 1120 - INTERMEDIATE ACCOUNTING 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

Application of financial accounting and reporting standards as well as emphasis on the conceptual framework of accounting. Course covers procedures of collecting, recording and summarizing accounting data for financial reports, and pursues in detail the recording and financial reporting of current assets and current liabilities according to approved financial accounting standards.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ACCT 0200

## **ACCT 1130 - INTERMEDIATE ACCOUNTING 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

A continuation of the application of financial accounting and reporting standards started in intermediate accounting 1. Additional topics covered include revenue recognition, leases, pension accounting, accounting for income taxes, accounting changes, disclosures, and the statement of cash flows. International financial reporting standards are introduced and discussed with each topic covered.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ACCT 1120

## **ACCT 1140 - AUDITING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Examines objectives, standards, and procedures of the professional auditor; types of examinations for rendering opinions on annual reports and for other attestation engagements; ethical and legal responsibilities of accountants;

considers the relationship of a professional accountant to management and the public.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ACCT 1130 and STAT 1040

## **ACCT 1146 - FORENSIC ACCOUNTING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Examination of the principles and methodology of fraud prevention, detection and investigation approaches. Topics include asset misappropriation and fraudulent financial statements. Application of accounting rules and accounting system's methodology versus the manipulation of each will be covered.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ACCT 1140

## **ACCT 1151 - ADVANCED ACCOUNTING THEORY**

**Minimum Credits:** 3

**Maximum Credits:** 3

A review and discussion of the accounting for specialized topics like partnerships, consolidation of financial statements, insolvency and bankruptcy, estates and trusts, foreign currency translation, and securities and exchange commission reporting.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ACCT 1130 and STAT 1040

## **ACCT 1156 - GOVERNMENT AND NONPROFIT ACCOUNTING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Application of the financial accounting and reporting standards applicable to (1) federal, state, and local governments; and (2) nonprofit organizations. Introduction and analysis of the accounting used in government accounting specifically for government funds, proprietary funds, and trust funds. Identifies the authoritative sources that accountants as well as auditors must adhere to in the preparation and examination of the financial statements of government and nonprofit entities.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ACCT 1130

## **ACCT 1160 - INDIVIDUAL TAX ACCOUNTING 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

Examination of the tax structure and requirements of individual taxation especially in the preparation of the federal form 1040 and appropriate schedules. The impact of economic decisions on the individual taxpayer is introduced.

**Academic Career:** Undergraduate

**Course Component:** Lecture



**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ACCT 0200

## **ACCT 1171 - BUSINESS TAX ACCOUNTING 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

Examination of the tax structure and preparation of tax forms of business entities such as sole proprietorship, partnership, and various types of corporations. Introduction and preparation of payroll tax accounting is also covered.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ACCT 0200

## **ACCT 1190 - ACCOUNTING INFORMATION SYSTEMS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Provides the techniques needed by a contemporary accounting systems analyst or auditor. The analytical skills needed to design and evaluate accounting systems are explained. The course covers the application of systems concepts to accounting situations. Also provides hands-on experience of computerized accounting systems and requires the student to process accounting information on microcomputers.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ACCT 1120 and CS 0015

## **ACCT 1270 - FINANCIAL REPORTING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Discussion of current issues in the financial reporting environment. Course reviews reporting for revenue and expenses, assets, liabilities and compensation in terms of current rules and practices, and examines aspects of the regulatory structure and applicable legislative-based reforms. Course coverage is applicable for accounting and non-accounting majors.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ACCT 0115 and FIN 0300

## **ACCT 1280 - ACCOUNTING AND DIRECTED READING**

**Minimum Credits:** 1

**Maximum Credits:** 6

The student undertakes a specified course of study, comparable in content to a special topics course, under the direct supervision of a faculty member.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ACCT 1120

## **ACCT 1283 - ACCOUNTING INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 6

The student undertakes, under specific conditions, an independent program of study, research, or creative activity usually off-campus and with less immediate and frequent guidance from the sponsoring faculty member than is typically provided in directed reading and directed research courses.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** H/S/U Basis

**Course Requirements:** PREQ: ACCT 1120

## **ACCT 1286 - ACCOUNTING INTERNSHIP 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

A beginning-level internship experience in which students provide technical expertise in accounting to business, industry, government, or nonprofit organizations. Academic credits are proportioned on the basis of approximately 10 hours per week per term equal to 3 credits. Placements are arranged by the coordinator and supervised by a faculty member in accounting. Students must write and present an extensive analysis of the experience. It is recommended that students have junior or senior status before consideration of an internship.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** H/S/U Basis

**Course Requirements:** PREQ: ACCT 1120

## **ACCT 1300 - INVESTMENTS**

**Minimum Credits:** 3

**Maximum Credits:** 3

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: FIN 0300

## **ACCT 1315 - PERSONAL FINANCIAL PLANNING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduction and overview of personal financial planning. Topics include financial planning, managing assets, credit, insurance, investments and retirement and estate planning.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: FIN 0300

## **ACCT 1325 - FINANCIAL STATEMENT ANALYSIS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The course views financial statement analysis as an integral part of economic and financial decision theories with

emphasis on the use of analytical techniques to predict corporate earnings, growth, and failure. Topics include credit and risk evaluation, profitability analysis, financial statement component analysis, and financial statement forecasting.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: FIN 0300

## **ACCT 1356 - INTERMEDIATE FINANCIAL MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

Analyzes long term decision making for the firm. The course will investigate various techniques in capital budgeting. An emphasis on the impact on shareholder wealth will be stressed. Additional topics include the analysis of cost of capital and capital structure issues. Dividend policy will be presented as it impacts share value and financing. The course will use spreadsheet analysis models for case work.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: FIN 0300 and FIN 1355 and STAT 1040

## **ACCT 1360 - ACCOUNTING CAPSTONE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will take current technologies and apply them to accounting related problems such as ethical, analytical, and statistical analysis. Course will be project driven and team taught and focus on developing accounting systems that properly address the financial, managerial, and statistical needs of business.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ACCT 1140

## **ACCT 1365 - CPA REVIEW 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

Intense coverage of Financial and Business related topics that are covered on the CPA exam. Students will learn a multi-faceted array of topics to prepare them for a more intense study of these topics in order to pass the CPA exam.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** H/S/U Basis

**Course Requirements:** PREQ: ACCT 1140

## **ACCT 1366 - CPA REVIEW 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

Intense coverage of Auditing and Regulation related topics that are covered on the CPA exam. Students will learn a multi-faceted array of topics to prepare them for a more intense study of these topics in order to pass the CPA exam.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** H/S/U Basis  
**Course Requirements:** PREQ: ACCT 1140

## **ACCT 1570 - BUSINESS LAW 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

Deals with the law of contracts and examines agencies for the enforcement of legal rights. Surveys aspects of legal systems of importance to business. Includes the laws of incorporation, negotiable instruments, real property, and creditor rights.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ACCT 0200

## **Anthropology**

### **ANTH 0800 - INTRODUCTION TO CULTURAL ANTHROPOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

By examining the behavior and customs of peoples throughout the world, the course considers what it means to be human. We will describe the patterns of marriage, family organization, warfare and political behavior, economic systems, rituals, etc., Of other peoples, especially those of tribal societies, and compare these with American social patterns. Anthropological films and slide presentations will supplement lectures.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **Biology**

### **BIOL 0080 - LIFE SCIENCES**

**Minimum Credits:** 3

**Maximum Credits:** 3

Provides a broad base of learning related to the total discipline, in that selected biological relationships are used to demonstrate the scope of a rapidly changing science. After receiving credit with a grade of c or higher for general biology 1 (BIOL 0110) or any higher numbered biology course, a student may not enroll in or receive credit (or equivalent transfer credits) for this course.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** RESTRICTED TO STUDENTS WHO HAVE NOT TAKEN BIOL 0110, BIOSC 0150 or BIOSC 0170

### **BIOL 0085 - HUMAN HEALTH AND DISEASE**

**Minimum Credits:** 3

**Maximum Credits:** 3

A course for non-majors in basic human physiology and disease mechanisms. After receiving credit with a grade of c or

higher for general biology 1 (BIOL 0110) or any higher numbered biology course, a student may not enroll in or receive credit (or equivalent transfer credits) for this course.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **BIOL 0110 - GENERAL BIOLOGY 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

A study of structure function and energetics on a cellular level, integrating biological systems and their control mechanisms. Required for all biology majors. A general chemistry or preparation for chemistry course is recommended.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **BIOL 0111 - GENERAL BIOLOGY LABORATORY 1**

**Minimum Credits:** 1

**Maximum Credits:** 1

Laboratory associated with general biology 1.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: BIOL 0110

## **BIOL 0120 - GENERAL BIOLOGY 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is a continuation of general biology 1. Topics include genetics, growth and development, evolution and ecology.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: BIOL 0110 or BIOSC 0150

## **BIOL 0121 - GENERAL BIOLOGY LABORATORY 2**

**Minimum Credits:** 1

**Maximum Credits:** 1

Laboratory associated with general biology 2.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: BIOL 0120

## **BIOL 0130 - FRESHMAN SEMINAR**

**Minimum Credits:** 1

**Maximum Credits:** 1

Freshman Seminar, is a 1-credit seminar course that is required for the Biology major at Pitt-Johnstown. It serves as an introduction to the Biology major, the Biology department, experiential learning opportunities outside of academic courses, and career possibilities with a biology degree. Higher education in a science field, and specifically in biology, is a challenging experience. This course will be your introduction to the Biology major at Pitt-Johnstown. As you begin your university career as a biology student, you may have many questions, including "Who is my advisor?" "How do I decide what classes to take?" "Can I (and should I) do research, or an internship, or some other experience out of the classroom?" "What can I do with a biology degree?" "What if I change my career plans in a year or two?" etc. In fact, you probably have questions and don't know it yet. This is a course in which these and other questions will be addressed. Every student has unique experiences, interests, and goals, but as biology students you all share some of them. Each week, you will either be learning about an important aspect of pursuing a Biology degree at Pitt-Johnstown or about a career that follows such a degree. Some topics will be more interesting to you personally than others, but all will be valuable for you to know. You can then discuss your specific interests and goals with your academic advisor and other faculty beginning this semester and continuing during your time at Pitt-Johnstown. The specific objectives of this course include: Learning about the Biology major, and the Biology Department and its faculty and policies; Understanding how to appropriately interact with others in the profession; Exploring various career options and beginning to prepare for your specific career goals; Investigating learning opportunities outside of the traditional academic classroom and laboratory; Interacting with your peers in the Biology program.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **BIOL 0340 - GENERAL ECOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Energy relationships, nutrient cycling, population dynamics, environmental factors, and human ecology are stressed. Course is required for terrestrial ecology majors.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: BIOL 0120

## **BIOL 0341 - ECOLOGY LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Laboratory associated with general ecology lecture.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: BIOL 0340

## **BIOL 0352 - GENETICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to the field of genetics discussing various patterns of inheritance in prokaryotes and eukaryotes, molecular genetics, laboratory genetic techniques, and genomics.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: BIOL 0120 or BIOSC 0160

## **BIOL 0360 - CELL BIOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

A detailed consideration of the structure and function of Eukaryotic and Prokaryotic Cells and Viruses. Lecture emphasizes chemical composition of cells, cell metabolism, and the molecular structure and function of major cell organelles.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (BIOL 0120 or BIOSC 0160) and (CHEM 0112 or 0120);CREQ: BIOL 0361

## **BIOL 0361 - CELL BIOLOGY LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Laboratory associated with cell biology lecture.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: BIOL 0360

## **BIOL 0950 - ANATOMY AND PHYSIOLOGY 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introductory lecture/lab course in structure and function of the human body designed as a foundation course for nursing and allied health students. Emphasis is given to the chemical and cellular organization of the body as well as the principal systems. Concepts of homeostasis, stress response, metabolic activities, and pathological diseases are continually stressed. The first term covers cell Chemistry, Cell Ultrastructure and Physiology, Histology, Integument, Musculo-Skeletal Physiology, Nervous System, Endocrine System, and Sense Organs.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **BIOL 0951 - ANATOMY AND PHYSIOLOGY LAB 1**

**Minimum Credits:** 1

**Maximum Credits:** 1

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: BIOL 0950

## **BIOL 0970 - ANATOMY AND PHYSIOLOGY 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

The second term of the introductory course in structure and function of the human body for nursing and allied health students. The body systems discussed are the digestive, circulatory, respiratory, excretory, and reproductive.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: BIOL 0950

## **BIOL 0971 - ANATOMY AND PHYSIOLOGY LAB 2**

**Minimum Credits:** 1

**Maximum Credits:** 1

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: BIOL 0970 and PREQ: BIOL 0951

## **BIOL 0980 - MEDICAL MICROBIOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to basic microbiology with emphasis on pathogenic microorganisms. Designed for students in the allied health and the CMMC nursing program.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: BIOL 0981

## **BIOL 0981 - MEDICAL MICROBIOLOGY LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Required laboratory in association with medical microbiology.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: BIOL 0980

## **BIOL 1110 - BIODIVERSITY CONSERVATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will examine the role of humanity in utilizing and protecting the vast variety of species and ecosystems that make up the natural world. In particular, the roles of science, management, policy and advocacy in conserving the diversity of life will be considered.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: BIOL 0120 or BIOSC 0160

## **BIOL 1111 - BIODIVERSITY CONSERVATION LAB**



**Minimum Credits:** 1

**Maximum Credits:** 1

Laboratory associated with biodiversity conservation lecture

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: BIOL 1110

## **BIOL 1122 - VERTEBRATE ANATOMY**

**Minimum Credits:** 3

**Maximum Credits:** 3

A lecture course with heavy emphasis on the anatomy of all mammalian organ systems. The lecture emphasizes human anatomy.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: (BIOL 0120 or BIOSC 0160) and CREQ: BIOL 1123

## **BIOL 1123 - VERTEBRATE ANATOMY LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

A lab course with heavy emphasis on the anatomy of all mammalian organ systems. The lab uses extensive dissection of the cat and other mammalian organs.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: (BIOL 0121 or BIOSC 0060) and CREQ: BIOL 1122

## **BIOL 1130 - BIOLOGY OF PLANTS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Anatomy, physiology, development, and energy relationships of vascular plants. Structure, function, and development of the entire plant body will be investigated through lecture discussion and laboratory investigation.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: BIOL 0120 or BIOSC 0160 CREQ: BIOL 1230

## **BIOL 1131 - BIOLOGY OF PLANTS LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Laboratory associated with biology of plants lecture.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: BIOL 1130

## **BIOL 1137 - MOLECULAR GENETICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

A general overview of molecular biology in a genetic context focusing on structure and function of biological molecules, particularly DNA, and details and applications of modern genetic techniques.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: BIOL 0352

## **BIOL 1140 - CANCER BIOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will provide a comprehensive overview of the biology of cancer. The course will focus on understanding the cellular and molecular origins and changes involved in cancer development. We will study the role of genetic mutations and cell signaling involved in cancer progression and metastasis. We will discover the biology of tumor progression through oncogenes and tumor suppressor genes, invasion and metastasis. Classical treatment methods, as well as the current therapies and drug discoveries of cancer therapeutics, will be investigated.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: BIOL 0360

## **BIOL 1144 - INVERTEBRATE BIOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to structure, function, and classification of invertebrate organisms, with a special emphasis on insects.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: BIOL 0340 and CREQ: BIOL 1145

## **BIOL 1145 - INVERTEBRATE BIOLOGY LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Laboratory associated with Invertebrate Biology lecture. The lab involves work with invertebrate specimen collections and field trips to the Nature Area.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: BIOL 0340 and CREQ: BIOL 1144

## **BIOL 1155 - STATISTICAL METHODS IN BIOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Statistical Methods in Biology is an upper division course in the Biology Department that covers experimental design

and the statistical analysis of data. This course provides experience in designing and analyzing experiments using a variety of statistical tests.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **BIOL 1161 - INTERNSHIP**

**Minimum Credits:** 1

**Maximum Credits:** 15

Applied experience involving an agency outside UPJ.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: BIOL 0120 or BIOSC 0160

## **BIOL 1162 - LOCAL FLORA**

**Minimum Credits:** 3

**Maximum Credits:** 3

A lecture-field course encouraging the morphological, life history, taxonomic, and phylogenetic investigation of the plant kingdom. Collecting and preserving samples, identifying features, and taxonomic/systematic methods serve as a core for instruction.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: (BIOL 0120 or BIOSC 0160) and CREQ: BIOL 1163

## **BIOL 1163 - LOCAL FLORA LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

A laboratory-oriented course encouraging the morphological, life history, taxonomic, and phylogenetic investigation of the plant kingdom. Collecting and preserving samples, identifying features, and taxonomic/systematic methods serve as a core for instruction.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: (BIOL 0121 or BIOSC 0060) and CREQ: BIOL 1162

## **BIOL 1165 - EVOLUTION**

**Minimum Credits:** 3

**Maximum Credits:** 3

A general survey of organic evolution from the molecular to the macro evolutionary level. Historical and current controversies will be reviewed and discussed.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: BIOL 0352

## **BIOL 1186 - IMMUNOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course serves as an introduction to the molecular and cellular basis of immune responses in vertebrates.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: BIOL 0360

## **BIOL 1190 - CLINICAL MICROBIOLOGY**

**Minimum Credits:** 6

**Maximum Credits:** 6

This course is taught at Conemaugh Memorial Medical Center. Required for and restricted to medical technology students enrolled in the CMMC program.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** LG/SU3 Elective Basis

## **BIOL 1191 - HEMATOLOGY**

**Minimum Credits:** 6

**Maximum Credits:** 6

This course is taught at Conemaugh Memorial Medical Center. Required for and restricted to medical technology students enrolled in the CMMC program.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** LG/SU3 Elective Basis

## **BIOL 1194 - BLOOD BANKING AND COMPATIBILITY TESTING**

**Minimum Credits:** 6

**Maximum Credits:** 6

This course is taught at Conemaugh Memorial Medical Center. Required for and restricted to medical technology students enrolled in the CMMC program.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** LG/SU3 Elective Basis

## **BIOL 1195 - MYCOLOGY**

**Minimum Credits:** 1

**Maximum Credits:** 1

This course is taught at Conemaugh Memorial Medical Center by members of the UPJ clinical faculty. Required for medical technology students enrolled in the CMMC program.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** LG/SU3 Elective Basis

## **BIOL 1197 - ECOLOGY OF INFECTIOUS DISEASE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces the methodological and conceptual foundations of epidemiological science. Emphasis will be placed upon the links between ecological processes and the prevalence, incidence, and dissemination of emerging infectious diseases.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: BIOL 0340 or BIOL 0360.

## **BIOL 1200 - INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 6

Independent or faculty directed study designed to give the student an opportunity to investigate a particular topic in some depth.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: BIOL 0120 or BIOSC 0160

## **BIOL 1220 - WILDLIFE MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

Emphasis on practices and techniques of wildlife management.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: BIOL 0120

## **BIOL 1221 - WILDLIFE MANAGEMENT LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Laboratory associated with wildlife management lecture.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: BIOL 1220

## **BIOL 1224 - ANIMAL PHYSIOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

The course emphasizes homeostatic mechanisms of all mammalian organ systems with emphasis on humans.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: BIOL 0360 or CREQ: CHEM 1322

## **BIOL 1225 - ANIMAL PHYSIOLOGY LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Laboratory associated with animal physiology lecture.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: BIOL 1224

## **BIOL 1232 - ANIMAL BEHAVIOR**

**Minimum Credits:** 3

**Maximum Credits:** 3

The goal of this course is to learn why animals do the things they do, as well as which questions to ask when investigating animal behavior. Humans are animals too, and the concepts we cover in this class can also serve as tools for understanding human behavior. In this course we will examine how natural selection, learning and cultural transmission shape the natural behaviors of animals. We will seek to understand both the proximate mechanisms underlying behavior and ultimate evolutionary reasons for the existence of a behavior. Course material will be covered in both lectures and in discussions of research papers.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: BIOL 0340

## **BIOL 1233 - ANIMAL BEHAVIOR LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

The study of animal behavior is the study of everything animals do, regardless of whether one is studying single celled organisms, invertebrates, fish, birds or mammals. Animal behavior can be rich and fascinating, with as much capacity for intrigue, deception, and strategizing as any soap opera. The goal of this class is to explore and become familiar with some of the methods used to study and understand development, adaptive function, evolution and physiological control of behavior of vertebrates and invertebrates. In addition, students will design their own animal behavior experiment that can be tested observationally. Intellectual skills to be emphasized include the interpretation of graphs and other data, the critical evaluation of the primary literature (i.e. Research papers), the formulation of testable hypotheses, simple statistical analyses and writing of scientific reports.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: BIOL 1232

## **BIOL 1236 - DEVELOPMENTAL BIOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will provide an overview of the fundamental principles of animal development, as well as highlight the recent advancements in this field. The material presented will include classical embryology of both invertebrate and vertebrate embryo, as well as more contemporary studies on the cellular mechanisms of axis determination, segmentation, germ layer specification, gastrulation and cell differentiation. In addition, topics in organ development, limb development, and stem cell biology will be discussed.

**Academic Career:** Undergraduate

**Course Component:** Lecture  
**Grade Component:** Letter Grade  
**Course Requirements:** PREQ: BIOL 0360 and CREQ: BIOL 1237

## **BIOL 1237 - DEVELOPMENTAL BIOLOGY LAB**

**Minimum Credits:** 1

**Maximum Credits:** 1

Laboratory associated with Developmental Biology lecture. The lab uses a variety of model organisms to evaluate embryonic development

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: BIOL 0361 and CREQ: BIOL 1236

## **BIOL 1240 - MICROBIOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

A survey of microorganisms with emphasis on bacteria and fungi. Cell and organism structure and function are discussed. Industrial and medical microbiology, and taxonomy of microorganisms are included.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: BIOL 0360 and CREQ: BIOL 1241

## **BIOL 1241 - MICROBIOLOGY LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Laboratory activities include observation and characterization of representative microorganisms.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: BIOL 0361 and CREQ: BIOL 1240

## **BIOL 1269 - VERTEBRATE BIOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

A survey of the biology of vertebrate animals.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: BIOL 0120

## **BIOL 1270 - VERTEBRATE BIOLOGY LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Laboratory associated with vertebrate biology lecture.

**Academic Career:** Undergraduate  
**Course Component:** Credit Laboratory  
**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** CREQ: BIOL 1269

## **BIOL 1274 - ORNITHOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

The classification and natural history of birds. Those species occurring in Pennsylvania will be emphasized.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: BIOL 0120

## **BIOL 1275 - ORNITHOLOGY LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Laboratory associated with ornithology lecture.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: BIOL 1274

## **BIOL 1280 - SPECIAL TOPICS IN BIOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This upper level elective explores topics not typically covered in depth in other courses offered in the biology department. Topics change depending on departmental interest. Students may use this course only once to fulfill biology major elective requirements. Prerequisites: BIOL 0120 and permission of instructor.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

## **BIOL 1281 - SPECIAL TOPICS IN BIOLOGY LAB**

**Minimum Credits:** 1

**Maximum Credits:** 1

This upper level lab complements the special topics in biology class, which explores topics not covered in depth by other courses. Topics will change depending on departmental interest. This lab must be taken in combination with the special topics in biology course. Co-requisites: special topics in biology.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

## **BIOL 1520 - AQUATIC ECOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3



An introduction to the animals and plants living in aquatic systems and the processes that control their distribution and abundance. Freshwater, estuarine and marine systems will be explored. Permission of instructor required if prerequisites are not met.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: BIOL 0340 and CHEM 0112

## **Business**

### **BUS 0100 - INTRODUCTION TO BUSINESS**

**Minimum Credits:** 1

**Maximum Credits:** 1

This 1-credit course introduces students to various fields of business, such as accounting, finance, information systems, management, and marketing. It will also introduce students to basic concepts in financial literacy, including budgets, taxes, cash and savings, credit, insurance, investments and retirement.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** H/S/U Basis

### **BUS 0350 - MICROCOMPUTER APPLICATIONS FOR BUSINESS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to provide students with hands-on knowledge and skills in the use and integration of the Microsoft Office applications for increased business and personal productivity. This course is intended for students of all skill levels. 3 credits. Prerequisites: BUS 0115 and BUS 0300. Letter grade.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ACCT 0115 and FIN 0300

### **BUS 1110 - COST ACCOUNTING CONCEPTS**

**Minimum Credits:** 3

**Maximum Credits:** 3

A review of the accounting for manufacturing costs including terminology, cost-volume-profit analysis, costing systems, activity-based costing, budgets, and variance analysis.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: BUS 0115 and 0200

### **BUS 1115 - MANAGERIAL COST ACCOUNTING APPLICATIONS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course focuses on the use of cost accounting information as a tool for management decision making. Cost behavior and estimation, pricing, and use of relevant information are combined with profit and strategy considerations to practice making decisions consistent with business objectives. Presentation of results and recommendations to

management is emphasized.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: BUS 0200

## **BUS 1540 - ETHICS AND LEADERSHIP**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines the interactions between business and the larger social system in which it operates. The course takes a systems approach in examining the interface between business and society; the management of human resources as they relate to the quality of work life; managerial ethics; consumerism and ecology issues; the role of public policy in the managerial environment. In addition, some of the key issues affecting the contemporary manager will be explored.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MGMT 0500; CREQ: ENGWRT 1192

## **BUS 1700 - BUSINESS STRATEGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This capstone course for the business program focuses on corporate strategy formulation and implementation for running a profitable company. Knowledge and techniques learned in earlier courses will be applied in an integrated fashion to the process of strategic decision making and organizational change through the use of a business strategy simulation and case study analysis. Among the topics considered in the course will be the assessment of the internal and external environments of the firm and the creation, implementation and evaluation of the strategy of the firm. In addition the course will examine global issues in business, as well as ethical issues and the social responsibilities of the firm and management.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: FIN 0300 and IS 0400 and MGMT 0500 and MRKT 0600 and Senior Status

## **Chemical Engineering**

### **CHE 0103 - CHEMICAL ENGINEERING FOUNDATIONS 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is the first of two courses that combines elements of mass and energy balances, thermodynamics, separations, and product design in order to set the foundation for the remainder of the chemical engineering curriculum. The courses introduce chemical engineering problem solving techniques from both a (traditional) process-centric viewpoint as well as a product centric viewpoint. The courses will span from theoretical (basic thermodynamics) to applied (separations) allowing a simple route to problem-based learning of difficult theoretical concepts.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CHEM 0120 or 0420 or 0770 or 0970 or 0102 or 0112 or 0115 or 0151 and MATH 0230 or 0235 or 0150 or 0231 and PHYS 0174 or 0475 or 0150 or 0201; CREQ: CHE 0104

## **CHE 0104 - CHEMICAL ENGINEERING FOUNDATIONS LAB**

**Minimum Credits:** 1

**Maximum Credits:** 1

The lab course associated with CHE 0103. Experiments and lectures will reinforce the content of CHE 0103.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: CHE 0103

## **CHE 0105 - CHEMICAL ENGINEERING FOUNDATIONS 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is the second of two courses that combines elements of mass and energy balances, thermodynamics, separations, and product design in order to set the foundation for the remainder of the chemical engineering curriculum. The courses introduce chemical engineering problem solving techniques from both a (traditional) process-centric viewpoint as well as a product centric viewpoint. The courses will span from theoretical (basic thermodynamics) to applied (separations) allowing a simple route to problem-based learning of difficult theoretical concepts.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CHE 0103

## **CHE 0214 - INTRODUCTION TO CHEMICAL PRODUCT DESIGN**

**Minimum Credits:** 3

**Maximum Credits:** 3

Traditionally, chemical product design has focused on a set procedure for product development from conception to development and testing and finally the launching of the product. Unfortunately, this model which does not keep in mind the values or needs of the customer has resulted in a high number of failures for new product launches. What skills are thus needed in order to be entrepreneurial and succeed in the development of new chemical products within industry today? This course examines the initial stages on how to approach chemical product design from an innovation perspective complete with the provision of the necessary technical skills to get the job done while placing an emphasis on the business and entrepreneurial skills required to be successful in the chemical product design business.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: (CHEM 0112 or CHEM 0970 or CHEM 0115 or CHEM 0151) and (MATH 0230 or MATH 0231) and (PHYS 0150 or PHYS 0174)

## **CHE 0220 - CHEMICAL ENGINEERING THERMODYNAMICS 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is the first of two courses that combine the ideas from both pure and multicomponent thermodynamics. They introduce molecular insight and the tools (including commercial software) for solving both simple and complex problems in phase and chemical equilibria. The courses will have a strong focus on multiscale analysis, for example, covering intermolecular potentials (molecular-scale) to aid students in choosing equations of state for novel materials (macro-scale). Advanced topics covered include interfacial behavior, adsorption, and osmotic equilibrium.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CHEM 0120 or 0420 or 0770 or 0970 or 0102 or 0112 or 0115 or 0151 and MATH 0230 or 0235 or 0150 or 0231 and PHYS 0174 or 0475 or 0150 or 0201; CREQ: CHE 0104

## **CHE 0221 - CHEMICAL ENGINEERING THERMODYNAMICS 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is the second of two courses that combine the ideas from both pure and multicomponent thermodynamics. They introduce molecular insight and the tools (including commercial software) for solving both simple and complex problems in phase and chemical equilibria. The courses will have a strong focus on multiscale analysis, for example, covering intermolecular potentials (molecular-scale) to aid students in choosing equations of state for novel materials (macro-scale). Advanced topics covered include interfacial behavior, adsorption, and osmotic equilibrium.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CHE 0220; CREQ: CHE 0222

## **CHE 0222 - CHEMICAL ENGINEERING THERMODYNAMICS LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

The lab course associated with CHE 0221. Experiments and lectures will reinforce the content of CHE 0221.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: CHE 0221

## **CHE 0302 - TRANSPORT PHENOMENA 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is the first course in transport phenomena and stresses analogies between the three modes of transport phenomena; momentum, mass, and heat transport. Covers from the molecular origins of transport up through continuum descriptions, as well as macroscopic balances. Reynolds and Colburn analogies in boundary-layer flow as well as direct comparison of linear transport relations, such as fluid drag and mass/heat convection will be a primary focus. Problems ranging from (traditional) packed bed reactors to micro-fluidics or micro-electromechanical systems will also be discussed.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CHE 0105 and (PHYS 0175 or PHYS 0152) and (MATH 0290 or MATH 0250 or MATH 1271 or MATH 1035); CREQ: CHE 0304

## **CHE 0303 - TRANSPORT PHENOMENA 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is the second course in transport phenomena and stresses analogies between the three modes of transport phenomena; momentum, mass, and heat transport. Covers from the molecular origins of transport up through continuum descriptions, as well as macroscopic balances. Reynolds and Colburn analogies in boundary-layer flow as well as direct comparison of linear transport relations, such as fluid drag and mass/heat convection will be a primary

focus. Problems ranging from (traditional) packed bed reactors to micro-fluidics or micro-electromechanical systems will also be discussed.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CHE 0302

## **CHE 0304 - TRANSPORT PHENOMENA LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

This laboratory facilitates the understanding of the course work.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: CHE 0303

## **CHE 0315 - PRODUCT DESIGN 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

Traditionally, chemical product design has focused on a set procedure for product development from conception to development and testing and finally the launching of the product. Unfortunately, this model which does not keep in mind the values or needs of the customer has resulted in a high number of failures for new product launches. What skills are thus needed in order to be entrepreneurial and succeed in the development of new chemical products within industry today? This course is the next step in the chemical product design sequence and focuses on chemical product design and the development of business plans.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CHE 0105 and CHE 0214 and (PHYS 0175 or PHYS 0152) and (MATH 0290 or MATH 0250 or MATH 1271 or MATH 1035); CREQ: CHE 0302

## **CHE 0402 - REACTIVE PROCESSES 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is the first course that integrates reactor design, reaction kinetics, and advanced separation processes to allow the comprehensive study of systems ranging from polymerization reactors to enzyme-catalyzed metabolism to (bio-) artificial organs. Coverage includes integrating multiple topics, such as chemistry, physics, biochemistry/medicine and reactor engineering. Furthermore, it addresses all length scales from the molecular level to the reactor level to the full systems level. Both theory and experiment will be highlighted and detailed simulations will be included.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ((CHE 0100 or CHE 0105) and (CHE 0200 or CHE 0221)) and (PHYS 0175 or PHYS 0152) and (CHEM 0310 or CHEM 0206 or CHEM 0231) and (MATH 0290 or MATH 1271 or MATH 1035)

## **CHE 0404 - REACTIVE PROCESSES LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

This laboratory reinforces the concepts in reactive processes.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: CHE 0403 or CHE 0402

## **CHE 0405 - REACTIVE PROCESSES II**

**Minimum Credits:** 2

**Maximum Credits:** 2

This is the second course that integrates reactor design, reaction kinetics, and advanced separation processes to allow the comprehensive study of systems ranging from polymerization reactors to enzyme-catalyzed metabolism to (bio-) artificial organs. Coverage includes integrating multiple topics, such as chemistry, physics, biochemistry/medicine and reactor engineering. Furthermore, it addresses all length scales from the molecular level to the reactor level to the full systems level. Both theory and experiment will be highlighted and detailed simulations will be included.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **CHE 0503 - SYSTEM DYNAMICS AND MODELING**

**Minimum Credits:** 5

**Maximum Credits:** 5

The dynamics and modeling class is the first of a two-part systems engineering sequence. This course covers dynamical analysis of process systems, process control fundamentals, feedback, basic process modeling, and optimization. The course covers industrial-style examples from a multi-scale perspective by incorporating molecular insight into process variable calculations and large-scale information through process simulation (computer-aided design) software.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CHE 0303 and (CHE 0403 or CHE 0405); CREQ: CHE 0504

## **CHE 0504 - SYSTEM DYNAMICS AND MODELING LAB**

**Minimum Credits:** 1

**Maximum Credits:** 1

Laboratory experience accompanying CHE 0503. Both physical and computational experiments will be performed.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: CHE 0503

## **CHE 0510 - INTRODUCTION TO COMPUTATIONAL FLUID DYNAMICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Cfd is a very important tool in both industry and academia, and this course will help students begin an industrial or research career in the rapidly growing field of cfd. It is applicable in a wide variety of disciplines. Students will learn the scientific principles and practical engineering applications of cfd. They are not required to have prior background in computational techniques. The topics which will be covered in this course are introduction to computational fluid dynamics (cfd), a research, modeling and design tool, historical perspective, commercial cfd packages, mathematical description of physical phenomena, a brief discussion of discretization methods, finite difference, finite element,

control volume methods.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **CHE 0515 - CATALYSIS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces historical development of catalysis and will focus on the contents such as dividing of catalysis to homogeneous and heterogeneous, phase-transfer catalysis. Other topics including preparation and characterization of catalysts activity & selectivity of catalysts, and mechanisms of catalyzed reactions are also discussed in this course.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CHE 0405 or CHE 0403

## **CHE 0603 - CHEMICAL ENGINEERING SAFETY AND ETHICS**

**Minimum Credits:** 2

**Maximum Credits:** 2

This class will provide the student with a thorough understanding of the fundamentals in workplace health and safety with emphasis on chemical industry applications. This will be accomplished through presentation a discussion of critical issues as well as the application of these principles to the senior design project. This course will also cover ethical situations likely to arise in the chemical plant environment.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **CHE 0615 - SYSTEM PROCESS DESIGN**

**Minimum Credits:** 4

**Maximum Credits:** 4

This course integrates aspects of previous chemical engineering courses into the design of a complete chemical plant including the use of computer process simulation, pinch technology, and discounted cash flow economic analysis. The detailed design of chemical engineering units/processes is carried out for all aspects of the plant.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CHE 0403 or CHE 0405

## **CHE 1085 - DEPARTMENTAL SEMINAR**

**Minimum Credits:** 0

**Maximum Credits:** 0

The departmental seminars are designed to acquaint the student with aspects of engineering which are normally not encountered in classes.

**Academic Career:** Undergraduate

**Course Component:** Colloquium

**Grade Component:** H/S/U Basis

## **CHE 1096 - SPECIAL PROJECTS**

**Minimum Credits:** 1

**Maximum Credits:** 6

Students will perform research or projects under the supervision of a faculty member.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** Letter Grade

## **Chemistry**

### **CHEM 0085 - DRUGS AND THE HUMAN BODY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Course is designed primarily for students with no prior chemistry background, but who still want to learn about the interactions of drugs with the human body. The course deals with the sources and regulation of drugs, what happens to drugs after they enter the body, and the characteristic effects of high use/high abuse drugs. By the end of the course, students should have a better appreciation of the concept of risk/benefit ratio, which applies to all medications.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **CHEM 0105 - PREPARATION GENERAL CHEMISTRY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed for those students who intend to take general chemistry 1 and general chemistry 2, but whose mathematical or chemistry backgrounds are judged by their advisors and the placement exam to be relatively weak. The course emphasizes stoichiometry (chemical calculations), chemical equations, gas laws, elementary atomic structure and periodic properties of elements.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **CHEM 0111 - GENERAL CHEMISTRY 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

General chemistry 1 and 2 comprise a two-term introduction to the fundamental properties of matter. General chemistry 1 covers stoichiometry, the properties of solids, liquids and gases. Thermochemistry and the electronic structure of atoms and molecules.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CHEM 0105 or Math Placement Score (56 or greater); CREQ: CHEM 0113 or JENGR Program

### **CHEM 0112 - GENERAL CHEMISTRY 2**



**Minimum Credits:** 3

**Maximum Credits:** 3

General chemistry 1 and 2 comprise a two-term introduction to the fundamental properties of matter. General chemistry 2 covers kinetics, coordination chemistry, redox reactions, chemical equilibrium and thermodynamics.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CHEM 0111 or 0110, and MATH 0002 or Math Placement Score (61 or greater); CREQ: CHEM 0114

## **CHEM 0113 - GENERAL CHEMISTRY LABORATORY 1**

**Minimum Credits:** 1

**Maximum Credits:** 1

A laboratory course designed to augment and clarify the concepts presented in general chemistry 1.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: CHEM 0111

## **CHEM 0114 - GENERAL CHEMISTRY LABORATORY 2**

**Minimum Credits:** 1

**Maximum Credits:** 1

A laboratory course designed to augment and clarify the concepts presented in general chemistry 2.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CHEM 0111 and 0113; CREQ: CHEM 0112

## **CHEM 0115 - GENERAL CHEMISTRY 2 FOR ENGINEERS**

**Minimum Credits:** 3

**Maximum Credits:** 3

THIS IS THE SECOND COURSE IN A TWO-TERM INTRODUCTION TO THE FUNDAMENTAL PROPERTIES OF MATTER COVERING PROPERTIES OF SOLUTIONS, THERMODYNAMICS, KINETICS, CHEMICAL EQUILIBRIUM, COORDINATION CHEMISTRY, REDOX REACTIONS AND NUCLEAR CHEMISTRY. THE LABORATORY COURSE WILL AUGMENT AND CLARIFY THE CONCEPTS PRESENTED IN BOTH GENERAL CHEMISTRY 1 AND 2 WITH A FOCUS ON APPLICATIONS RELATED TO ENGINEERING.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CHEM 0111; CREQ: JENGR Program

## **CHEM 0150 - GENERAL CHEMISTRY 1 ENGINEERS**

**Minimum Credits:** 3

**Maximum Credits:** 3

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CHEM 0105 or Math Placement Score (56 or greater); CREQ: JENGR Program

## **CHEM 0151 - GENERAL CHEMISTRY 2 FOR ENGINEERS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is the second course in a two-term introduction to the fundamental properties of matter covering properties of solutions, thermodynamics, kinetics, chemical equilibrium, coordination chemistry, redox reactions and nuclear chemistry. The laboratory course will augment and clarify the concepts presented in both general Chemistry 1 and 2 with a focus on applications related to engineering.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CHEM 0150; CREQ: JENGR Program

## **CHEM 0190 - CHEMISTRY FOR THE HEALTH PROFESSIONS**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introductory course designed primarily for students in the health professions. Stresses general concepts of inorganic chemistry, organic chemistry, and biochemistry.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: CHEM 0192

## **CHEM 0192 - CHEMISTRY FOR HEALTH PROFESSIONS LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

This lab is designed to augment and clarify the concepts presented in chemistry for the health professions lecture.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: CHEM 0190

## **CHEM 0230 - FUNDAMENTALS OF ORGANIC CHEMISTRY**

**Minimum Credits:** 4

**Maximum Credits:** 4

This course is for those biology students who select the terrestrial ecology option and secondary education biology. Using biological examples, basic concepts of organic chemistry are introduced.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (CHEM 0112 and 0114) or 0120; CREQ: CHEM 0235

## **CHEM 0231 - ORGANIC CHEMISTRY 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is the first part of a two-term sequence. It introduces the nomenclature, structure and chemistry of saturated and unsaturated hydrocarbons, alkyl halides and alcohols. Emphasis is placed on stereochemistry, reaction mechanisms

and multi-step organic synthesis including carbon-carbon bond formation to broaden and strengthen the understanding of the overall framework of organic chemistry.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (CHEM 0112 and 0114) or 0120 or 0115 or 0151; CREQ: CHEM 0233

## **CHEM 0232 - ORGANIC CHEMISTRY 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is the second part of a two-term organic chemistry sequence. It deals with the synthesis and reactions of ethers and epoxides, benzene and its derivatives, aldehydes and ketones, amines, carboxylic acids and their derivatives and enolate chemistry. Advanced reaction mechanisms and multi-step organic synthesis are emphasized. A significant portion of this course also covers the structural elucidation of organic compounds using modern spectrometry and proton and carbon NMR Spectroscopy.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CHEM 0231 or 0310; CREQ: CHEM 0234 or JCHE-BSE Plan

## **CHEM 0233 - ORGANIC CHEMISTRY LABORATORY 1**

**Minimum Credits:** 1

**Maximum Credits:** 1

This laboratory course is designed to augment and clarify the concepts presented in organic chemistry 1 (CHEM 0231). Experiments introduce simple synthetic procedures with particular emphasis on the practice and theory of separations (chromatography, distillation, extraction and recrystallization).

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: CHEM 0231 or 0310

## **CHEM 0234 - ORGANIC CHEMISTRY LABORATORY 2**

**Minimum Credits:** 1

**Maximum Credits:** 1

This laboratory course is designed to augment and clarify the concepts presented in organic chemistry 2 (CHEM 0232). It stresses structure elucidation, synthesis, separations and unknown determinations.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: CHEM 0232

## **CHEM 0235 - FUNDAMENTALS OF ORGANIC CHEMISTRY LAB**

**Minimum Credits:** 1

**Maximum Credits:** 1

A laboratory course designed to augment and clarify the concepts presented in fundamentals of organic chemistry. Experiments stress mainly, but not exclusively, techniques and simple synthetic procedures.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CHEM 0112 or 0120 or 0115; CREQ: CHEM 0230

## **CHEM 0236 - ORGANIC CHEMISTRY I ENGINEERS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is the first part of a two-term organic chemistry sequence for engineers. It introduces the nomenclature, structure and chemistry of saturated and unsaturated hydrocarbons, alkyl halides and alcohols. Emphasis is placed on stereochemistry, reaction mechanisms and multi-step organic synthesis including carbon-carbon bond formation to broaden and strengthen the understanding of the overall framework of organic chemistry. Prerequisites: (CHEM 0112 and CHEM 0114) or CHEM 0151

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (CHEM 0112 and CHEM 0114) or CHEM 0151

## **CHEM 0237 - ORGANIC CHEMISTRY 2 ENGINEERS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is the second part of a two-term organic chemistry sequence for engineers. It deals with the synthesis and reactions of ethers and epoxides, benzene and its derivatives, aldehydes and ketones, amines, carboxylic acids and their derivatives and enolate chemistry. Advanced reaction mechanisms and multi-step organic synthesis are emphasized. A significant portion of this course also covers the structural elucidation of organic compounds using modern spectrometry and proton and carbon nmr spectroscopy. Prerequisites: CHEM 0231 or CHEM 236

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CHEM 0231 or CHEM 0236

## **CHEM 0238 - ORGANIC CHEM LAB ENGINEERS**

**Minimum Credits:** 1

**Maximum Credits:** 1

This one-credit one-semester laboratory course in organic chemistry for students in the engineering program is designed to augment and clarify the concepts presented in the organic chemistry lectures. Experiments stress techniques, synthetic procedures, functional group transformations, qualitative organic analysis, and separation and spectral techniques. Prerequisites: (CHEM 0231 or CHEM 236) and (CHEM 0232 or 237 as Corequisites)

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (CHEM 0231 or CHEM 0236) and COREQ: (CHEM 0232 or CHEM 0237)

## **CHEM 0325 - ANALYTICAL CHEMISTRY**

**Minimum Credits:** 4

**Maximum Credits:** 4

This course and its lab are concerned with the treatment of equilibria that are of analytical importance and with introduction to basic methods of chemical analysis.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (CHEM 0112 and 0114) or CHEM 0120 or CHEM 0115 or CHEM 0151 and MATH 0004 or MATH 0221

## **CHEM 1131 - INORGANIC CHEMISTRY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Modern bonding theories are developed to the level that permits some understanding of the effects of structure and bonding on chemical properties. Periodic relationships are discussed and applied to selected families of elements. Emphasis is placed on those aspects of structure, bonding and periodic relationships that are helpful in unifying a large body of chemical knowledge. Selected topics of current interest in inorganic chemistry are discussed.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CHEM 0232 or 320; CREQ: CHEM 1132 or 1133

## **CHEM 1133 - SYNTHESIS & CHARACTERIZATION LAB**

**Minimum Credits:** 1

**Maximum Credits:** 1

Laboratory focuses on various methods used to prepare and characterize organic and inorganic species. Representative examples of transition metal coordination complexes, organo metallic and main group compounds and organic compounds with medicinal applications are prepared & characterized. Spectroscopic, electrochemical and physical methods are employed to examine reaction kinetics, study molecular dynamics and for structural characterization. Equal emphasis on theory and application. Selected preparations from the current organic, medicinal and inorganic literature are included.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (CHEM 0232 and 0234) or (CHEM 0320 and 0340); CREQ: CHEM 1131

## **CHEM 1291 - CLINICAL CHEMISTRY**

**Minimum Credits:** 6

**Maximum Credits:** 6

This course is taught at Conemaugh Memorial Medical Center. Required for and restricted to medical technology students enrolled in the CMMC program.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

## **CHEM 1321 - BIOCHEMISTRY 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is the first course of a two-semester sequence covering the chemistry of life. It covers protein structure, protein function and central metabolism.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CHEM 0232 or CHEM 0320; CREQ: CHEM 1323 or JCHE-BSE Plan

## **CHEM 1322 - BIOCHEMISTRY 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is a continuation of biochemistry 1. This course covers metabolism and the flow of genetic information.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CHEM 1321

## **CHEM 1323 - BIOCHEMISTRY LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

A laboratory course to accompany the biochemistry 1 lecture. The course covers basic biochemical techniques with different sorts of macromolecules.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CHEM 0232 and 0234; CREQ: 1321

## **CHEM 1327 - INSTRUMENTAL ANALYSIS**

**Minimum Credits:** 4

**Maximum Credits:** 4

The lecture emphasizes the theory of operation of various instrument based techniques of chemical analysis. The accompanying laboratory covers the operation of specific instruments. Offered in alternate years.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CHEM 0232 and 0234 (or CHEM 0230 and 0235 and CHEM 0325)

## **CHEM 1341 - PHYSICAL CHEMISTRY 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is the first of a two-term sequence; a mathematically based introduction to quantum mechanics. Topics include atomic and molecular structure, molecular spectroscopy, group theory of symmetry, and statistical mechanics.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PHYS 0152 and MATH 0231

## **CHEM 1342 - PHYSICAL CHEMISTRY 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is the second of a two-term sequence; it rigorously deals with the theory and application of chemical thermodynamics and reaction kinetics.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PHYS 0152 and MATH 0231; CREQ: CHEM 1343 or JBIOCHM-BS Plan

## **CHEM 1343 - PHYSICAL CHEMISTRY LABORATORY**

**Minimum Credits:** 2

**Maximum Credits:** 2

Experiments are designed to illustrate physiochemical principles and techniques and to supplement the lecture course by covering material not covered there in detail. This course involves significant laboratory report writing, and use of existing software packages, including: spreadsheets, molecular modeling, mathematical analysis and statistical analysis.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: CHEM 1342 or CHEM 1341

## **CHEM 1351 - GREEN CHEMISTRY AND SUSTAINABILITY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course follows the rapidly growing field of green chemistry, also termed sustainable chemistry. The factors that make green chemistry possible today and essential for the future are presented. The effects of chemistry on the environment are investigated. The principles of green chemistry are studied by looking at important historical cases and current research. Topics include evaluation methods for environmental and human health impact, alternative reagents, green chemical synthesis, green chemical products, and economic advantages to green chemistry. Critical analysis of the primary literature is emphasized.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Grad LG/SU3 Basis

## **CHEM 1360 - INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 6

Designed to give the student an opportunity to investigate a topic in some depth.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

## **CHEM 1371 - UNDERGRADUATE RESEARCH**

**Minimum Credits:** 1

**Maximum Credits:** 4

Research directed by a member of the chemistry faculty. Approximately four hours per week per credit.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

## **Civil Engineering**

### **CE 0110 - COMPUTER METHODS IN CIVIL ENGINEERING**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course emphasizes the mathematics and problem-solving skills necessary to be an intelligent user of a variety of computational tools for engineering analysis. The first portion of the course focuses on linear algebra within the context of engineering problems. Concepts of numerical linear algebra are then introduced, followed by a brief introduction to additional discrete analysis tools such as numerical approximation and signal processing. Lastly, through the introduction of cad software and an individual term project, students are taught how to independently gain familiarity and confidence with engineering software.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: ENGR 0018 or ET 0030 and MATH 0241

## **CE 1085 - DEPARTMENTAL SEMINAR**

**Minimum Credits:** 0

**Maximum Credits:** 0

The departmental seminars are designed to acquaint the student with aspects of the engineering profession which are not normally encountered in classes and school activities.

**Academic Career:** Undergraduate

**Course Component:** Colloquium

**Grade Component:** H/S/U Basis

## **CE 1105 - MATERIALS OF CONSTRUCTION**

**Minimum Credits:** 3

**Maximum Credits:** 3

The nature, physical properties, including environmental aspects of civil engineering construction materials are discussed. This course has a laboratory component.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: ENGR 0142

## **CE 1195 - CIVIL ENGINEERING PROFESSIONAL PRACTICE**

**Minimum Credits:** 3

**Maximum Credits:** 3

Course introduces basic concepts in project management, business principles, public policy and leadership in relation to the civil engineering profession. Includes issues in professional ethics, and the importance of professional licensure. In addition, student teams prepare a written proposal for the CE 1199, Senior Project course, detailing the functional specifications for a project and the time schedule for completion. To be completed in the next to last term.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **CE 1197 - SPECIAL PROJECT: DIRECTED**

**Minimum Credits:** 1

**Maximum Credits:** 4

Investigation and research embodying testing, original design, or research on an approved subject; or, a special problem or reading course of individual study guided by an approved departmental faculty member.



**Academic Career:** Undergraduate  
**Course Component:** Directed Studies  
**Grade Component:** Letter Grade

## **CE 1198 - SPECIAL PROJECTS: INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 4

Independent study designed to give the student an opportunity to study a particular aspect of the discipline in some depth.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** Letter Grade

## **CE 1199 - CIVIL ENGINEERING SENIOR PROJECT**

**Minimum Credits:** 3

**Maximum Credits:** 3

Employs previously learned material in Civil Engineering. The project involves design and analysis of a new or modified civil engineering project or system with demonstrated feasibility. To be completed in the last term.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CE 1195

## **CE 1200 - CONSTRUCTION MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces undergraduates to the construction management processes including planning, financing, contract administration, and project scheduling and controlling. It is a practical course that provides a broad knowledge of managerial decision-making for young engineers.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CE 1105

## **CE 1220 - SURVEYING & LAND DEVELOPMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduction to the use of modern surveying instruments, equipment and measurement methods. Emphasis is on field work; measuring a given traverse and locating the control data for making a topographic map. Other topics include construction, route, and boundary control surveys. Introduction to site development and mapping using a cad system.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ENGR 0017 or (ET 0023 and ET 0011) and CE 0110

## **CE 1330 - INTRODUCTION TO STRUCTURAL ANALYSIS**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to linear analysis of statically determinate, and indeterminate structural systems.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: MATH 1271 and ENGR 0142 and CE 0110

## **CE 1340 - CONCRETE STRUCTURES**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introductory concrete design course covering the behavior, strength and design of reinforced concrete beams, one-way slabs, short columns, footings and simple structures using the ACI design code.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CE 1105 and CE 1330

## **CE 1341 - STEEL STRUCTURES**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introductory steel design course based on the load and resistance factor design philosophy. Fundamental topics related to tension members, columns, beams, beam-column and simple connections are treated in the context of the AISC design specifications.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ENGR 0142 and CE 1105 and CE 1330

## **CE 1402 - FLUID MECHANICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

A first course in fluid mechanics discussing basic principles and methods for studying static and dynamic behavior of fluids. In the laboratory students conduct experiments on fluid flow in pipes and open channels.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ENGR 0142; CREQ: MATH 1271

## **CE 1412 - HYDROLOGY AND WATER RESOURCES**

**Minimum Credits:** 3

**Maximum Credits:** 3

Hydrologic cycle, precipitation, infiltration, evaporation, runoff, flood routing, groundwater hydrology, well hydraulics, statistical analysis of hydrologic data, reservoirs, dams, and hydraulic structures. This course has a laboratory component.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CE 1105 and CE 1402 and ENGR 0020

## **CE 1420 - HYDRAULIC DESIGN**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is intended to provide practical application to the basic theories and principles of hydraulics. Topics include pipe flow, open-channel flow, groundwater flow, floodplain modeling, and design of storm sewers, culverts, and water distribution systems.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

## **CE 1503 - INTRO TO ENVIRONMENTAL ENGRNG**

**Minimum Credits:** 3

**Maximum Credits:** 3

Fundamentals of environmental science and engineering as applied to water and wastewater treatment, air quality control, and solid and hazardous waste management.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CHEM 0112 or CHEM 0115 or CHEM 0151

## **CE 1510 - WATER SUPPLY & WASTEWATER**

**Minimum Credits:** 3

**Maximum Credits:** 3

A problem-oriented course in which the water supply and wastewater system needs for a community are determined. A water supply system and a distribution system are designed. The various unit operations of water treatment and wastewater treatment plants are also designed. A water chemistry laboratory and problem solving recitation period are included in the course.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CE 1503 and ENGR 0017

## **CE 1610 - ENGINEERING & SUSTAINABLE DEVELOPMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is intended as an introductory interdisciplinary engineering course. Topics include principles of sustainable design in engineering, manufacturing, infrastructure, communications, and community development; overview of environmental issues for engineers; design for the environment; models of environmental processes; introduction to the use of life cycle assessment; and case studies examining the relationship of green design and the field of engineering.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **CE 1703 - TRANSPORTATION ENGINEERING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Study of transportation systems including planning, analysis, design and management. Emphasis is placed on traffic volumes, speed-flow-density relationships, highway safety, capacity analysis and level of service, intersection control, forecasting travel demand, evaluating alternatives, environmental and social considerations, and transportation systems management. The laboratory component focuses on spot speed, traffic volume, travel delay, parking, and accident studies. The highway capacity software is utilized in the design of signals and in the traffic analysis of highway segments and intersections.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ENGR 0020 and CE 0110

## **CE 1714 - PAVEMENT DESIGN AND MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

Study of properties and tests of asphaltic materials, pavement design and management. Emphasis is placed on superpave mix design, pavement stresses, design of flexible and rigid pavements using methods by Asphalt Institute (AI), American Association of State Highways and Transportation Officials (AASHTO), and Portland Cement Association (PCA). Other topics include classification and treatment of soil, subsurface drainage, condition surveys, pavement distress and maintenance, and roadway management systems. Current policies from AASHTO and PennDot are incorporated. Course includes a laboratory component.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: (CE 1703 or CET 1123) and (CE 1811 or CET 1131)

## **CE 1730 - HIGHWAY SURVEYING AND DESIGN**

**Minimum Credits:** 3

**Maximum Credits:** 3

Highway location surveys, geometric design, and construction stakeout. Emphasis is placed upon the design of horizontal and vertical alignments from field surveys and topographic maps. Elements of design include horizontal circular and spiral curves, superelevation, vertical profiles, vertical parabolic curves, cross-sections, earthwork quantities, and drainage. The Land Development Desktop (LDD) is utilized in the planning and design process including preparation of design plans for a semester long highway project. Course includes a laboratory component.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CE 1220 and CE 1703 and CE 1412

## **CE 1811 - PRINCIPLES OF SOIL MECHANICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Basic soil properties, permeability, capillarity and frost action, compaction, stresses in soil masses, two-dimensional seepage, compressibility, stress-strain-time behavior, and shear strength. Course includes a laboratory component.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ENGR 0142

## **CE 1814 - SLOPES, SEEPAGE & EARTH STRUCTURES**

**Minimum Credits:** 3

**Maximum Credits:** 3

Analysis and design principles related to slope stability, seepage analysis and remedial measures. Application of seepage and slope stability principles to cut and fill slopes and earth dams.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CE 1811 or CET 1131

## **CE 1821 - FOUNDATION ENGINEERING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Geotechnical aspects of foundation design including determination of ultimate and allowable bearing capacities for shallow foundations on soil and rock, design and construction of pile foundations and drilled caissons, earth pressure theories, retaining wall stability and design details, anchored bulkheads, sheet pile walls and excavation bracing.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CE 1811 or CET 1131

## **Civil Engineering Technology**

### **CET 0020 - ELEMENTARY SURVEYING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduction to the use of modern surveying instruments, equipment and measurement methods. Emphasis is on the field work in measuring a given traverse and locating the control data for making a topographic map. Other topics include construction, route, and boundary control surveys.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ET 0023

### **CET 0021 - CIVIL COMPUTATIONS AND DESIGN**

**Minimum Credits:** 3

**Maximum Credits:** 3

Continuation of surveying principles and calculations experienced in elementary surveying. Introduction into site development and mapping using a cad system. Other computer aided analysis and design methods will be presented.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ET 0011 and 0030 and CET 0020

### **CET 1111 - STRUCTURAL STEEL DESIGN**

**Minimum Credits:** 4

**Maximum Credits:** 4

Application of principles of mechanics in the design of steel beams, tension and compression members, beam columns, bolted and welded connections. The latest AISC-IRFD specification is used.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ET 0011 and 0053 and 0054

## **CET 1112 - REINFORCED CONCRETE DESIGN**

**Minimum Credits:** 4

**Maximum Credits:** 4

Concrete strength design and behavior of beams, columns, slabs, footings, and retaining structures using current ACI code requirements.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ET 0011 and 0053 and 0054

## **CET 1113 - ADVANCED STRUCTURES**

**Minimum Credits:** 3

**Maximum Credits:** 3

Structural analysis of determinate and indeterminate trusses, beams, and frames. Design using the AISC-IRFD specifications for continuous and composite beams, frames, and plate girders. Classical methods of analysis such as slope-deflection and virtual work are emphasized. Other topics include influence lines, deflections and approximate methods of analysis.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ET 0030 and 0053 and 0054 and CET 1111

## **CET 1121 - HIGHWAY SURVEYING AND DESIGN**

**Minimum Credits:** 3

**Maximum Credits:** 3

Highway location surveys, geometric design and construction stakeout. Emphasis is placed upon the design of horizontal and vertical alignments from field surveys and topographic maps. Elements of design include horizontal circular and spiral curves, super elevation, vertical profiles, vertical parabolic curves, cross-sections, earthwork quantities, and drainage. The Land Development Desktop (LDD) is utilized in the planning and design process including preparation of design plans for a semester long highway project.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CET 0020 and 0021 and 1123 and 1140

## **CET 1123 - TRANSPORTATION**

**Minimum Credits:** 4

**Maximum Credits:** 4

Study of transportation systems including planning, analysis, design and management. Emphasis is placed on traffic

volumes, speed-flow-density relationships, highway safety, capacity analysis and level of service, intersection control, forecasting travel demand, evaluating alternatives, environmental and social considerations, and transportation systems management. The lab focuses on spot speed, traffic volume, travel delay, parking and accident studies. The highway capacity software is utilized in the design of signals and in the traffic analysis of highway segments and intersections.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CET 0021 and ET 0023 and 0054

## **CET 1124 - PAVEMENT DESIGN AND MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

Study of properties and tests of asphaltic materials, pavement design and management. Emphasis is placed on superpave mix design; pavement stresses; design of flexible and rigid pavements using methods by Asphalt Institute (AI), American Association of State Highways and Transportation Officials (AASHTO), and Portland Cement Association (PCA). Other topics include classification and treatment of soil, subsurface drainage, condition surveys, pavement distress and maintenance, and roadway management systems. Current policies from AASHTO and PennDot are incorporated.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CET 1123 and 1131

## **CET 1131 - SOIL ENGINEERING**

**Minimum Credits:** 4

**Maximum Credits:** 4

Topics include the identification and classification of soils, the hydraulic properties, consolidation characteristics and shear strength properties of soils, techniques of subsurface investigation, and the geology of natural deposits. The effects of soil conditions on the construction process are discussed.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ET 0053 and 0054

## **CET 1132 - FOUNDATION DESIGN**

**Minimum Credits:** 3

**Maximum Credits:** 3

Geotechnical aspects of foundation design including determination of ultimate and allowable bearing capacities for shallow foundations on soil and rock, design and construction of pile foundations and drilled caissons, earth pressure theories, retaining wall stability and design details, anchored bulkheads, sheet pile walls and excavation bracing.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CET 1131

## **CET 1140 - HYDROLOGY & HYDRAULICS ENGNRNG**

**Minimum Credits:** 3

**Maximum Credits:** 3

A study of the basic principles of hydrology and hydraulics and their application to the solution of water resources problems. Topics include the hydrologic cycle; rainfall runoff relationships, analysis and design of detention facilities, open channels, reservoir routing and channel routing.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: CET 1144

## **CET 1141 - ENVIRONMENTAL ENGINEERING**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to causes of pollution in the environment and related engineering solutions. Areas of investigation include water supply, wastewater, solid wastes, and air pollution. Methods of abating present pollution and planning to avoid future pollution are investigated.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CHEM 0111 and ET 0023 and Math 0221 or 0220

## **CET 1142 - WATER SUPPLY AND WASTEWATER**

**Minimum Credits:** 4

**Maximum Credits:** 4

A problem-oriented course in which the water supply and wastewater system needs for a community are determined. A water supply system and a distribution system are designed. The various unit operations of water treatment and wastewater treatment plants are also designed. A water chemistry laboratory and problem solving recitation period are included in the course.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: Chem 0111 and ET 0023 and CET 1140

## **CET 1144 - HYDRAULICS LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Laboratory and field activities in conjunction and association with CET 1140.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: CET 1140

## **CET 1151 - MATERIALS OF CONSTRUCTION**

**Minimum Credits:** 3

**Maximum Credits:** 3

Acquaints the student with the practical difficulties in the selection, testing, and use of construction materials in relation to function, environment, and cost. Major emphasis on aggregate, Portland Cement, concrete additives, and bituminous materials in civil engineering works. Problems associated with concrete and bituminous mixtures and methods of mix design are included. Current materials-testing techniques are utilized in the laboratory. Material applications of masonry are introduced.



**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** PREQ: ET 0053

## **CET 1152 - CONSTRUCTION MANAGEMENT PRACTICE**

**Minimum Credits:** 4

**Maximum Credits:** 4

Fundamental management principles for construction contracting, project organization and planning, scheduling and control with CPM techniques, estimating, bonding, material, labor, insurance and equipment utilization.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CET 1151

## **CET 1183 - SOPHOMORE SEMINAR FALL**

**Minimum Credits:** 0

**Maximum Credits:** 0

Speakers discuss a variety of subjects related to the civil engineering profession.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **CET 1184 - SOPHOMORE SEMINAR SPRING**

**Minimum Credits:** 0

**Maximum Credits:** 0

Speakers discuss a variety of subjects related to the civil engineering profession.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **CET 1185 - JUNIOR SEMINAR FALL**

**Minimum Credits:** 0

**Maximum Credits:** 0

Speakers discuss a variety of subjects related to the civil engineering profession.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **CET 1186 - JUNIOR SEMINAR SPRING**

**Minimum Credits:** 0

**Maximum Credits:** 0

Speakers discuss a variety of subjects related to the civil engineering profession.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **CET 1187 - SENIOR SEMINAR FALL**

**Minimum Credits:** 0

**Maximum Credits:** 0

Speakers discuss a variety of subjects related to the civil engineering profession.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **CET 1188 - SENIOR SEMINAR SPRING**

**Minimum Credits:** 0

**Maximum Credits:** 0

Speakers discuss a variety of subjects related to the civil engineering profession.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **CET 1195 - SENIOR PROJECT PROPOSAL**

**Minimum Credits:** 1

**Maximum Credits:** 1

A written proposal detailing the functional specifications for a project and the time schedule for completion will be submitted. After approval of the proposal by the faculty, a faculty advisor will be assigned and the senior project is begun. To be completed in the next to last term.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** LG/SU3 Elective Basis

## **CET 1196 - SPECIAL PROJECT INTERNSHIP**

**Minimum Credits:** 1

**Maximum Credits:** 4

Internship designed to give the student an opportunity to study a particular aspect of the discipline in some depth.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** LG/SU3 Elective Basis

## **CET 1197 - SPECIAL PROJECT-DIRECTED STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 4

Directed study designed to give the student an opportunity to study a particular aspect of the discipline in some depth.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

## **CET 1198 - SPECIAL PROJECT-INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 4

Independent study designed to give the student an opportunity to study a particular aspect of the discipline in some depth.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

## **CET 1199 - SENIOR PROJECT**

**Minimum Credits:** 3

**Maximum Credits:** 3

Employs previously learned material in civil engineering technology. The project involves design and analysis of a new or modified civil engineering project or system with demonstrated feasibility.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CET 1195

## **Civil & Environmental Engineer**

### **CEE 1085 - DEPARTMENTAL SEMINAR**

**Minimum Credits:** 0

**Maximum Credits:** 0

The departmental seminars are designed to acquaint the student with aspects of the civil engineering profession which are not normally encountered in classes and school activities.

**Academic Career:** Undergraduate

**Course Component:** Colloquium

**Grade Component:** H/S/U Basis

## **College of Arts and Sciences**

### **CAS 0001 - UNIVERSITY SCHOLARSHIP**

**Minimum Credits:** 1

**Maximum Credits:** 1

This course is designed to help students maximize their potential for academic success in college by presenting various methods and procedures for successful management of their college learning experience. The course is intended to provide participants an opportunity to learn, adopt, and adapt techniques, strategies, and skills to enhance their college success. The course will center on academic content and readings assigned by the instructor. Registration in this course is restricted to students who have successfully completed fewer than 15 credits. A student who fails this course is required to repeat it prior to progressing beyond 30 credits.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

**Course Attributes:** Hourly Final

### **CAS 0906 - MASTERING COLLEGE**

**Minimum Credits:** 1

**Maximum Credits:** 1

This course is designed to help students maximize their potential for academic success in college by presenting various methods and procedures for successful management of their college learning experience. The course is intended to provide participants an opportunity to learn, adopt, and adapt techniques, strategies, and skills to enhance their college success.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **CAS 1917 - DIRECTED STUDY FOCUS GROUP**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines the academic and psychological components of effective college learning. Students will explore their identities as learners and build skills to maximize academic potential.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: Freshman level student.

## **Communication: Rhetoric & Communication**

### **COMMRC 0025 - ESL SPEAKING AND LISTENING**

**Minimum Credits:** 1

**Maximum Credits:** 1

**Academic Career:** Undergraduate

**Course Component:** Workshop

**Grade Component:** Letter Grade

### **COMMRC 0030 - INTRODUCTION TO COMMUNICATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to communication theory with consideration given to how theoretical stances relate to areas of communication study including: interpersonal communication, small group communication, mass communication, organizational communication, and gender issues in communication.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **COMMRC 0052 - PUBLIC SPEAKING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduction to the composition, delivery and critical analysis of informative and persuasive speeches.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **COMMRC 0083 - INTERCULTURAL COMMUNICATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

An analysis of various foreign cultures and U.S. Subcultures focusing on communication behavior. Attitudes held by each group and problems which may arise in exchange of ideas between groups are studied.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **COMMRC 0320 - MASS COMMUNICATION PROCESS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to introduce students to the basic concepts of mass communication research and to the history and development of various media (TV., Radio, newspapers, magazines, etc.).

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

**Course Attributes:** DSAS Historical Analysis General Ed. Requirement, DSAS The Arts General Ed. Requirement, SCI Polymathic Contexts: Humanistic GE. Req., SCI Polymathic Contexts: Soc/Behav. GE. Req.

## **COMMRC 0600 - THEORIES OF INTERPERSONAL COMMUNICATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces students to the conceptualization, theories, and models of interpersonal (between two people) relationships involving face-to-face and mediated interactions.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **COMMRC 0650 - THEORIES OF PERSUASION**

**Minimum Credits:** 3

**Maximum Credits:** 3

Survey of 21st century theories of persuasion, with analysis of research about how the spoken word and the visual image influence public belief and action.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **COMMRC 0700 - COMMUNICATION RESEARCH METHODS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The research methods course will provide an overview of different research methodologies, which are utilized within the communication discipline. The course will present a foundational base of theory through lecture, and encourage students to apply their knowledge through in-class exercises. A large portion of the in-class exercises will ask students to analyze and interpret data through the use of statistical software. Students will also be expected to read and present critiques of communication research articles. As a final project students will be able to present their cumulative understanding of the research process through a group project. In groups, students will design a study that employs one of the major methodologies discussed in this class (i.e. Experiments, survey, content analyses etc.). The groups will formulate a research question/hypothesis, develop an instrument for data collection, collect data, analyze data, and

present the results in a poster presentation at the end of the semester.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: COMMRC 0030 and MATH 0001 or Math Placement Score (46 or greater)

## **COMMRC 1107 - GENDER AND COMMUNICATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

In-depth exploration of the communication of women and men in society in such settings as families, friendships, schools, organizations, and media.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: COMMRC 0030

## **COMMRC 1124 - RHETORICAL CRITICISM**

**Minimum Credits:** 3

**Maximum Credits:** 3

Designed to help students become acquainted with contemporary methods of rhetorical criticism through a combination of lecture, discussion and practical applications.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ENGCMP 0004 or 0006

## **COMMRC 1130 - BUSINESS AND PROFESSIONAL SPEAKING**

**Minimum Credits:** 3

**Maximum Credits:** 3

A speaking course focusing on researching, developing, and delivering presentations appropriate for business contexts.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **COMMRC 1131 - ORGANIZATIONAL COMMUNICATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

An overview of the relationship between communication and organizing processes, with an emphasis on theories, principles and practices of organizational communication as well as organizational research methodology.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **COMMRC 1132 - POLITICAL COMMUNICATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

Analysis of methods of symbol use in the political arena and in public policy debates.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **COMMRC 1133 - INTEGRATED MARKETING COMMUNICATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

LMC is a marketing approach that emphasizes coordination and synchronization of all communication that has the potential to influence the consumer about a brand. Students will expand their knowledge of marketing models and tactics applicable to advertising and public relations.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **COMMRC 1134 - SMALL GROUP COMMUNICATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

Examination of communication principles, theories and behaviors relevant to small group formation, dynamics and decision making.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **COMMRC 1135 - MEDICAL COMMUNICATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines how communication within the medical relationship determines the effectiveness of health-related decision-making, information exchange, and treatments

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **COMMRC 1136 - NONVERBAL COMMUNICATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

Examination of nonverbal communication channels including physical characteristics and movements of communicators, as well as spatial and environmental influences on the communication process.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **COMMRC 1139 - MEDIA CRITICISM**

**Minimum Credits:** 3

**Maximum Credits:** 3

Advanced analysis of the messages, formats and implications of media texts, applying various theories of contemporary

media criticism.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (ENGCOMP 0004 or 0006) and COMMRC 0320

## **COMMRC 1144 - VISUAL COMMUNICATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is a survey of several theoretical perspectives on visual communication. Students can expect to learn broad and diverse approaches to visual perception, reception and persuasion. Learning will come from readings, comics, graphic design, film, photography and other viewings and applications of visual rhetoric.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

## **COMMRC 1733 - SPECIAL TOPICS IN COMMUNICATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

Examines a specific communications topic which varies each time this course is offered.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: COMMRC 0030

## **COMMRC 1902 - INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 6

Provides an opportunity for qualified undergraduate students, under the guidance of a classroom teacher, to have a first-hand experience with peer mentoring and classroom instruction as a uta. Participation is by instructor invitation only.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

## **COMMRC 1903 - COMMUNICATION INTERNSHIP**

**Minimum Credits:** 1

**Maximum Credits:** 12

Internships provide practical work experience related to the student's course of study. Placement of students in community agencies, offices, etc., For training and experience in communication applications.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** H/S/U Basis

## **COMMRC 1950 - COMMUNICATION CAPSTONE**

**Minimum Credits:** 3

**Maximum Credits:** 3



This course focuses on research in communication. After a brief introduction of basic concepts, selected methodologies will be examined. Students will engage in individual research projects, utilizing one of these methodologies. Students will submit a written report as well as give a public oral presentation of their original research.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SNC Elective Basis

**Course Requirements:** PREQ: COMMRC 0030 and COMMRC 0052 and COMMRC 0700 and COMMRC 1124

## **Computer Engineering**

### **COE 1151 - COMPUTER NETWORKS**

**Minimum Credits:** 4

**Maximum Credits:** 4

Introduction and overview computer network, data transmission techniques, ISO open system interconnection model, switching techniques and protocols such as CSMA, Token Ring, etc., Application layer and network applications, transport layer, network layer and routing, link layer and IAN wireless and mobile networks, computer networking in practice, network analysis techniques, queuing systems, throughput delay analysis, and network management. This includes a 1 credit laboratory component.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: EE 1541 and EE 1552

### **COE 1195 - ENGINEERING PRACTICE AND PROFESSIONAL DEVELOPMENT**

**Minimum Credits:** 2

**Maximum Credits:** 2

The course requires students to work in small design teams to solve a significant engineering problem. Students propose, develop, and design a solution to a select engineering problem. The course reinforces principles of the engineering design process and serves as 1st part of a capstone project for the program. The consideration of the ethical and social implications of technology and the basic concepts of business are also aspects of the course. Each team presents information, in both written and oral formats, to peers and faculty at various developmental milestones of their project. This paper design is followed by conceptual or full implementation in COE 1199 follow-up course. Projects may be on an individual or group basis, either interdepartmental or intradepartmental in organization.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: Senior Status

### **COE 1197 - SPECIAL PROJECT: DIRECTED**

**Minimum Credits:** 1

**Maximum Credits:** 4

Investigation and research embodying testing, original design, or research on an approved subject; or, a special problem or reading course of individual study guided by an approved departmental faculty member.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** Letter Grade

### **COE 1198 - SPECIAL PROJECTS: INDEPENDENT**

**Minimum Credits:** 1

**Maximum Credits:** 4

Independent study designed to give the student an opportunity to study a particular aspect of the discipline in some depth.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** Letter Grade

## **COE 1199 - SENIOR DESIGN ELECTIVE**

**Minimum Credits:** 2

**Maximum Credits:** 2

This is the follow-up practicum course serving as the 2nd part of the capstone project of the undergraduate program in order to implement the select student project developed in COE 1195 with the help of a faculty advisor. It is expected that a complete or partially working system will be presented in writing and orally followed by a demonstration at the end of the course. Projects may be on an individual or group basis, either interdepartmental or intradepartmental in organization.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: COE 1195

## **COE 1504 - ADVANCED DIGITAL SYSTEMS**

**Minimum Credits:** 4

**Maximum Credits:** 4

This course builds on the student's knowledge of digital design, computer architecture principles, and programming languages. It covers both theoretical and practical considerations in the design of modern computing systems using computer aided design tools and programmable logic devices. It also briefly introduces memory architectures, self-testing, testable design, and boundary scan concepts. This includes a 1 credit laboratory component.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: EE 1541 and EE 0445

## **COE 1750 - INTRODUCTION TO SYSTEMS SOFTWARE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces topics related to the interface of hardware and software. The concepts introduced device interface and hardware synchronization at lower level of the operating system, the linkage of operating system services to application software, and the fundamental mechanisms for computer communications.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: EE 1541 and CS 0458

## **COE 1885 - DEPARTMENTAL SEMINAR**

**Minimum Credits:** 0

**Maximum Credits:** 0

Seminars are designed to acquaint the student with aspects of engineering that are not normally encountered in classes

and school activities and include a wide range of topics such as the significance of engineering as a profession, ethical problems in engineering, and skills required for a successful engineering career.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **Computer Engineering Technology**

### **CPET 1078 - COMPUTER NETWORKS LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Lab will accompany computer networks.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

### **CPET 1178 - COMPUTER NETWORKS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduction and overview computer network, data transmission techniques, ISO open system interconnection model, switching techniques and protocols such as CSMA, Token Ring, etc., Application layer and network applications, transport layer, network layer and routing, link layer and lan, wireless and mobile networks, computer networking in practice, network analysis techniques, queuing systems, throughput delay analysis, and network management.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ET 0031 and EET 1161

### **CPET 1195 - SENIOR PROJECT PROPOSAL**

**Minimum Credits:** 2

**Maximum Credits:** 2

A written proposal, functional specification, time schedule, and block diagram will be submitted. After approval of the proposal by the faculty, a faculty advisor is assigned and the senior project is begun.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

### **CPET 1199 - SENIOR PROJECT**

**Minimum Credits:** 2

**Maximum Credits:** 2

Employs previously learned material in electrical engineering technology. The project involves design and analysis of a new or modified electrical circuit or system with verifiable feasibility. Projects may be on an individual or group basis, either interdepartmental or intradepartmental in organization.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

# Computer Science

## CS 0015 - INTRODUCTION TO COMPUTER PROGRAM

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is intended for non-Computer Science majors (particularly business majors) who wish to become familiar with a modern programming language. The focus is on programming as a vehicle for the development of computer-based problem-solving skills. Prerequisite: MATH 0001; CREQ: CS 0016.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: MATH 0001 or Math Placement Score (46 or greater); CREQ: CS 0016

## CS 0016 - INTRODUCTION TO COMPUTER PROGRAMMING APPLICATIONS

**Minimum Credits:** 1

**Maximum Credits:** 1

An application course to accompany introduction to computer programming lecture.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: CS 0015

## CS 0045 - ALGORITHMS AND INFORMATION STRUCTURES APPLICATIONS

**Minimum Credits:** 1

**Maximum Credits:** 1

An application course to accompany introduction to information structures.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: CS 0455

## CS 0046 - COMPUTER SYSTEMS ARCHITECTURE APPLICATIONS

**Minimum Credits:** 1

**Maximum Credits:** 1

An application course to accompany computer systems architecture.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: CS 0456

## CS 0047 - ADVANCED PROGRAMMING CONCEPTS APPLICATIONS

**Minimum Credits:** 1

**Maximum Credits:** 1

An application course to accompany advanced programming concepts.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: CS 0457

## **CS 0048 - DATA STRUCTS & FILES APPLICATNS**

**Minimum Credits:** 1

**Maximum Credits:** 1

An application course to accompany data structures and files.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: CS 0458

## **CS 0081 - COMPUTER LITERACY**

**Minimum Credits:** 3

**Maximum Credits:** 3

A survey course designed for students not majoring in computer science. Provides an overview of the components of a computer system, including hardware, operating systems, and application software. Includes coverage of processing fundamentals; storage, input/output, and networking technologies; and internet fundamentals. Lab sessions provide a hands-on introduction to office productivity software including word processing, spreadsheets, micro databases, and presentation graphics, as well as an introduction to web page creation using HTML and FrontPage. After receiving credit with a grade of C or higher for introduction to computer science programming (CS 0100) or any higher numbered computer science course, students may not enroll in or receive credit (or equivalent transfer credits) for this course.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** RESTRICTED TO STUDENTS WHO HAVE NOT TAKEN CS 0100

## **CS 0082 - CS ASSISTANTSHIP NONMAJORS**

**Minimum Credits:** 1

**Maximum Credits:** 3

This course is designed to accommodate students that are not computer science majors who wish to participate in laboratory consulting, teaching projects and other meaningful CS activities on campus.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** H/S/U Basis

## **CS 0100 - PERSPECTIVES IN COMPUTER SCIENCE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is an entry level course for computer science majors. It presents an overview of the field for the benefit of those who will be pursuing in-depth studies related to many of the topics presented. These topics will include, among others, considerations of computer hardware and software, problem-solving techniques, elementary data structures, binary data representation, data communications, as well as the history and social implications of computerization.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **CS 0406 - DISCRETE MATH 2 & STATS FOR CS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is the sequel to discrete math 1. One-half of the course will be devoted to probability and statistics and include topics in probability, combinatorics, elementary laws of means, variances and standard deviations, expected values and descriptive statistics. The remainder of the course will be devoted to advanced topics in discrete math and will include proof techniques, induction, quantifiers, recurrence relations, algebraic structures, finite state machines, turning machines, and formal languages.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0401

## **CS 0410 - INTRO TO COMPTR SCI PRGM APPLC**

**Minimum Credits:** 1

**Maximum Credits:** 1

An application course to accompany introduction to computer science programming lecture.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CS 0100 and MATH 0401; CREQ: CS 0411

## **CS 0411 - INTRO COMPUTER SCI PROGRAMMING**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is an introduction to the concepts, techniques and tools of computer science. It is designed for those students who are intending to major in that discipline. The course is to emphasize fundamental approaches to problem analysis, algorithm development and top-down program design. In so doing, the student is to gain a thorough working knowledge of an exemplary programming language and to become thoroughly familiar with the Pitt computing environment.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CS 0100 and MATH 0401; CREQ: CS 0410

## **CS 0417 - INTERMEDIATE PROGRAMMING USING JAVA**

**Minimum Credits:** 3

**Maximum Credits:** 3

This intermediate programming course for non-CS majors will emphasize object-oriented design and programming. Object-oriented concepts such as data encapsulation, inheritance and polymorphism will be explored and implemented by students using predefined classes and by creating their own classes. Graphical user interfaces and event handling will also be covered. The programming language that will serve as the basis for this course will be java.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (CS 0410 and 0411) or (CS 0015 and 0016) or ET 0031

## **CS 0455 - ALGORITHMS AND INFORMATION STRUCTURES**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will emphasize the study of the most commonly used algorithms and their complexities along with basic data structures with emphasis on stacks, queues, trees, lists, and graphs and their implementation. Algorithms will incorporate discrete mathematical structures for solving software problems.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: (CS 0410 and 0411 and CS 0406) or (CS 0410 and 0411 and MATH 1012) or (CS 0417 and EE 0445); CREQ: CS 0045

## **CS 0456 - COMPUTER SYSTEMS ARCHITECTURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

Emphasis is on providing the student with a basic exposure to the Unix operating system and computer architecture with assembly language programming. Also, the non-object oriented features of the c++ programming language are presented.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CS 0410 and 0411 and (CS 0406 or MATH 1012); CREQ: CS 0046

## **CS 0457 - ADVANCED PROGRAMMING CONCEPTS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Emphasis will be placed on the advanced features of c++ including stream I/O, object-orientation with classes, generic programming units and exception handling. The underlying principles of object-oriented design, namely inheritance and polymorphism, will be explored in depth.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CS 0455 and 0456 and 0045 and 0046; CREQ: CS 0047

## **CS 0458 - DATA STRUCTURES AND FILES**

**Minimum Credits:** 3

**Maximum Credits:** 3

A study of computer representations of structured data both in main memory and on secondary storage devices, and operations on such data. Topics include: list structures, various advanced data structures, hashing, file structures, and access methods, interaction between main and secondary storage, sorting and searching.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CS 0455 and 0456 and 0045 and 0046; CREQ: 0048

## **CS 1132 - CLASSICAL NUMERICAL ANALYSIS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Numerical methods for solving mathematical problems on computers. Topics include computer arithmetic, error

propagation, solutions to linear equation, interpolation and approximation, numerical differentiation, solutions to nonlinear equations, and solutions to ordinary and partial differential equations.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (MATH 0241 or 0240) and 0401 and CS 0458 and 0048 and 0457 and 0047

## **CS 1163 - ADVANCED TOPICS IN CS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Topics which are extensions of upper level CS electives are discussed. The content of this course is in general more advanced and the topics are more rigorous than for topics in computer applications.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CS 0047 and 0048 and 0457 and 0458

## **CS 1164 - ADVANCED CS TOPICS & APPLICATIONS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Topics which are extensions of upper level CS electives are discussed. The content of this course is in general more advanced and the topics are more rigorous than for topics in computer applications.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CS 0047 and 0048 and 0457 and 0458

## **CS 1165 - DIRECTED PROJECT**

**Minimum Credits:** 3

**Maximum Credits:** 3

Participants in a group will implement a useful software system based upon the design conceived in software engineering. Participants will produce a deliverable product including all written associated documentation describing the product and its results.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CS 1735; CREQ: CS 1736

## **CS 1171 - COMPUTER SCIENCE ASSISTANTSHIP**

**Minimum Credits:** 1

**Maximum Credits:** 3

This course is designed to accommodate students who wish to participate in laboratory consulting, teaching projects, and software systems implementations not associated with any other meaningful computer science-related activities on campus.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** H/S/U Basis



## **CS 1550 - INTRODUCTION TO OPERATING SYSTEMS**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to basic concepts of operating systems, common to most computer systems, which interfaces the machine with upper-level programs. This course will introduce processes as processing unit, process management, concurrency, communication, memory management and protection, and file systems.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

## **CS 1713 - ALGORITHM DESIGN AND ANALYSIS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will introduce topics related to the design and analysis of algorithms. Topics include  $\Theta$ -notation, recurrence relations, divide-and-conquer, dynamic programming, graph algorithms, advanced data structures and NP completeness.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: CS 0047 and 0048 and 0457 and 0458

## **CS 1720 - PROGRAMMING LANGUAGES**

**Minimum Credits:** 3

**Maximum Credits:** 3

Several programming languages will be studied from a programming (rather than an implementation) point of view. The study of diverse programming languages will exemplify differing approaches to concepts such as scope of decelerating, storage allocation, data structure variety, binding times, and control structures.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CS 0047 and 0048 and 0457 and 0458

## **CS 1735 - SOFTWARE DESIGN METHODOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Construction of large computerized systems proceeds through the stages of requirements analysis, specification, and implementation. This course deals with requirements analysis and specification. Emphasis is on methodologies for improving the reliability of specifications; i.e. On executable specifications and systems prototypes.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CS 0047 and 0048 and 0457 and 0458

## **CS 1736 - SOFTWARE ENGINEERING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Software engineering is a team discipline. The purpose of this course is to introduce the principles of software engineering, and to provide experience in teamwork. The course is structured around a major project, which is taken through the stages of cost estimation, requirements specification, design and implementation, and testing.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CS 1735; CREQ: CS 1165

## **CS 1760 - ADVANCED OBJECT-ORIENTED PROGRAMMING AND DESIGN**

**Minimum Credits:** 3

**Maximum Credits:** 3

This upper-level course consists of examining high-level aspects of the object-oriented programming paradigm. This examination includes both the theoretical and the practical aspects as well as current programming practices. The course will also involve studying a particular object-oriented language or languages.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CS 0047 and 0048 and 0457 and 0458

## **CS 1762 - WEB PROGRAMMING**

**Minimum Credits:** 3

**Maximum Credits:** 3

This upper-level course consists of web application programming. Emphasis will be given to modern web programming languages in order to develop dynamic web-database applications. Topics will include client-side scripting, server-side programming, introduction to databases, and web application security.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CS 0047 and 0048 and 0457 and 0458

## **CS 1765 - DATA BASE MANAGEMENT SYSTEMS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The objective of this course is to provide an in-depth knowledge of database systems designs. Thus, the emphasis is on how to model data and use available database management systems (DBMS) effectively. Towards this end, relational structure is discussed in great detail and hierarchical and network data structures are also presented. Object-oriented database technology is also discussed.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CS 0047 and 0048 and 0457 and 0458

## **CS 1766 - INTRODUCTION COMPUTER GRAPHICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The basic concepts, tools and techniques of computer graphics are described, and the fundamental transformations of scaling, translation, rotation, windowing and clipping are presented. Particular emphasis will be placed on new development in microcomputer graphics.

**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** PREQ: CS 0047 and 0048 and 0457 and 0458

## **CS 1783 - ARTIFICIAL INTELLIGENCE PROGRAMMING**

**Minimum Credits:** 3

**Maximum Credits:** 3

We discuss the data structures, control structures, and paradigms of artificial intelligence programming. Topics include abstract data types, knowledge structuring, recursive programming, discrimination nets, agenda control, deductive information retrieval, slotfiller databases, sophisticated data dependencies, closure-based programs, and expert systems. We discuss several application areas.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CS 0047 and 0048 and 0457 and 0458

## **CS 1792 - COMPUTER OPERATING SYSTEMS**

**Minimum Credits:** 3

**Maximum Credits:** 3

An examination of the basic principles of operating system design and implementation. Topics will include: architecture of computer systems; concurrency; resource management; file systems; security; performance measurement and evaluation.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CS 0047 and 0048 and 0457 and 0458

## **CS 1903 - INTERNSHIP**

**Minimum Credits:** 1

**Maximum Credits:** 3

This course places the student in an "on-the-job" setting in which he/she receives practical experience in a supervised training environment.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** H/S/U Basis

## **CS 1904 - DIRECTED STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 3

This course is designed to give students the opportunity to design a plan of study to be agreed upon by the student and a supervising faculty member.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

## **Early Childhood Education**

## **ECED 0010 - DIRECTED TUTORING**

**Minimum Credits:** 1

**Maximum Credits:** 3

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** H/S/U Basis

## **ECED 0012 - DIRECTED STUDY IN EARLY CHILDHOOD EDUCATION**

**Minimum Credits:** 1

**Maximum Credits:** 3

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** H/S/U Basis

## **ECED 1101 - FOUNDATIONS OF EARLY CHILDHOOD EDUCATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course has several distinct components, foundations of early childhood education, curriculum models and approaches, and assessment and instructional practices in early childhood education. Facilities management, development, and administration of early childhood programs will be introduced. In addition, professionalism in the field of early childhood education will be stressed

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: PSY 0230 and Admission to upper level.

## **ECED 1111 - EARLY CHILDHOOD EDUCATION FIELD PRACTICUM 1**

**Minimum Credits:** 1

**Maximum Credits:** 1

This course involves both classroom time and field experiences in a pre-kindergarten through 4th grade. The major emphasis in this course is devoted to creative expression in early childhood education. Candidates will be expected to spend four full weeks and additional Wednesday mornings in the classroom for seven to eight weeks. Candidates will also be given extensive experiences with students who have special needs.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: Admission to upper level

## **ECED 1112 - EARLY CHILDHOOD EDUCATION FIELD PRACTICUM 2**

**Minimum Credits:** 1

**Maximum Credits:** 1

It is the second of three field experiences prior to student teaching. This course involves both classroom time and field experiences in a pre-kindergarten through 4th grade classroom. The focus of this course is classroom management strategies. Students are expected to be able to develop an effective learning environment. Specific requirements related to this course will be distributed at the beginning of the term. Candidates are expected to spend four full weeks and additional Wednesday mornings in the classroom. Students will also be given extensive experiences with students who

have special needs.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ECED 1111 and admission to upper level

### **ECED 1113 - EARLY CHILDHOOD EDUCATION FIELD PRACTICUM 3**

**Minimum Credits:** 1

**Maximum Credits:** 1

This course involves both classroom time and field experiences in a pre-kindergarten through 4th grade classroom. It is the third of three field experiences prior to student teaching. The foci of this course are curriculum, assessment, and professional collaboration. Specific requirements related to this course will be distributed at the beginning of the term. Candidates will be expected to spend four full weeks and additional Wednesday mornings in the classroom. Candidates will also be given extensive experiences with students who have special needs.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ECED 1112 and admission to upper level

### **ECED 1123 - WRITING DEVELOPMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course deals with the writing process in young children and how these processes evolve in conjunction with language acquisition and development. In addition, approaches for facilitating writing process development and scaffolding on reading and speaking functions of young children's language use will be emphasized.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ECED 1151 and admission to upper level

### **ECED 1151 - EARLY LANGUAGE AND LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course deals with literacy development in the early years. Early childhood literacy education will be focused upon. Promotion of print-rich environments and interactive literacy experiences will be explored. Language and literacy acquisition will be introduced. In addition, selection and utilization of quality children's literature in the early childhood classroom will be addressed..

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: PSY 0230 and admission to upper level

### **ECED 1153 - LITERACY IN THE PRIMARY GRADES**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course emphasizes reading and writing as developmental cognitive processes. Based on that understanding, students will explore the types of instruction, materials, and resources that can support children in learning about language and print. Students will be introduced to learning theories, research, philosophies, and instructional practices

related to literacy in the primary grades, from kindergarten through grade three.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: Admission to upper level

## **ECED 1154 - DIFFERENTIATED LITERACY INSTRUCTION ACROSS THE CONTENT AREAS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course emphasizes differentiation in literacy instruction. Students will be introduced to learning theories, research, philosophies, and instructional practices related to a developmental approach to teaching reading and writing in early childhood education. Specifically, students will learn how to assess their students, analyze assessments, and teach to learners' strengths and needs.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: Admission to upper level

## **ECED 1162 - INTEGRATING THE CREATIVE ARTS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to help students learn to effectively integrate art, drama, and other forms of creative expression into the early childhood classroom.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: Admission to upper level

## **ECED 1164 - EARLY CHILDHOOD STUDENT TEACHING**

**Minimum Credits:** 14

**Maximum Credits:** 14

This is a full-time experience for teacher certification candidates in a student teaching center at an elementary school in grades PreK-4. It provides opportunities to observe, plan, conduct, and assess instruction.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** Letter Grade

## **ECED 1171 - SCIENCE TECHNOLOGY AND HEALTH**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed help students develop the content, processes, and methodology necessary to teach pre-K - 4 science, technology, and health concepts. Students will demonstrate specific competencies related to planning, implementation, and evaluation of effective classroom instruction.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: NATSC 0080 and admission to upper level

## **ECED 1172 - MATHEMATICS FOUNDATIONS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to provide the theoretical background, the pedagogical and psychological concepts, and the field-based experience necessary for planning, implementing, and assessing a numbers and mathematics program in a contemporary early childhood setting. Students will be introduced to a variety of instructional approaches and materials with particular emphasis on teaching about numbers and mathematics through problem solving and active learning.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: MATH 0071 and 0080 and admission to upper level

## **ECED 1173 - SOCIAL STUDIES IN EARLY CHILDHOOD EDUCATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to provide the theoretical background, the pedagogical and psychological concepts, and the field-based experience necessary for planning, implementing, and assessing a social studies program in a contemporary early childhood setting. Students will be introduced to a variety of instructional approaches for facilitating the learning of content and skills drawn from the social sciences and for integrating this learning with other areas of the curriculum.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: GEOG 0810 and HIST 0610 or 0620, and admission to upper level

## **ECED 1174 - PRE-PRIMARY STUDENT TEACHING**

**Minimum Credits:** 7

**Maximum Credits:** 7

This is a full-time experience for teacher-certification candidates in a student-teaching center at a pre-school. It provides opportunities to observe, plan, conduct, and assess instruction in a pre-school setting with professional backup from University supervisors and experienced master teachers. Pre-school sites are within 15 to 20 miles from the college; students are placed in established sites only

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ECED 1113 and admission to upper level

## **ECED 1183 - ENGAGING YOUNG CHILDREN IN LEARNING (C&I)**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is taken during the term prior to student teaching. Candidates are expected to use information learned in earlier courses and apply it to the creation of developmentally appropriate early childhood curriculum and instruction. Emphasis will be placed on instructional planning and assessment in relation to holistic development.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ECED 1101 and admission to upper level

## **ECED 1184 - PRIMARY STUDENT TEACHING**

**Minimum Credits:** 7

**Maximum Credits:** 7

This is a full-time experience for teacher-certification candidates in a student-teaching center at an elementary school, grades k - 4. It provides opportunities to observe, plan, conduct, and assess instruction in an elementary school setting with professional backup from University supervisors and experienced master teachers. School sites are within 15 to 20 miles from the college; students are placed in established sites only. This course is speaking enhanced.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ECED 1113 and admission to upper level

## **ECED 1190 - FAMILY AND SCHOOL COLLABORATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course pertains to family, school, and community collaboration partnerships. Establishing and maintaining partnerships with families will be addressed. Supporting the development of problem-solving strategies and fostering participation of children in the academic and social context of the classroom will be explored. Involving families and maintaining instructional goals and objectives with Pennsylvania's learning standards will be introduced.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: Admission to upper level

## **ECED 1194 - ECED STUDENT TEACHING SEMINAR**

**Minimum Credits:** 2

**Maximum Credits:** 2

This course is designed to provide the student teacher with basic elements of professional development and career opportunities. Emphasis is on professionalism, interviewing, rsums, portfolios, professional meetings, and other appropriate topics.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: ECED 1174 or ECED 1184 or SPLED 1174

## **ECED 1196 - EARLY CHILDHOOD STUDENT TEACHING SEMINAR - US**

**Minimum Credits:** 1

**Maximum Credits:** 1

Designed to provide the student teacher with the basic elements of professional development and career opportunities. Emphasis is on professionalism and ethical leadership, interviewing, resume, portfolios, reflective practice, and other appropriate topics. Must be taken during student teaching.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

## **ECED 1197 - EARLY CHILDHOOD STUDENT TEACHING SEMINAR ABROAD**

**Minimum Credits:** 1

**Maximum Credits:** 1

**Academic Career:** Undergraduate



**Course Component:** Seminar  
**Grade Component:** Letter Grade

## **Economics**

### **ECON 0105 - INTRO MICROECONOMIC THEORY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Uses basic economic principles to explain how markets work, how firms and consumers make decisions, how they interact in product and factor markets, and how these markets determine prices, output, wages, and profits. These principles are also used to analyze issues of current concern in public policy and to decide whether, when, and how government should intervene in the operation of the market.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **ECON 0115 - INTRO TO MACROECONOMIC THEORY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Applies the basic principles of economics to the problems of instability associated with business cycles, unemployment, and inflation and the problem of economic growth, and examines the role of government in promoting stability and economic growth.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **ECON 0281 - INTRODUCTION TO MONEY & BANKING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Covers the role of money and financial intermediaries in the U.S. Economy and examines what role government has played and should play as regulator of the financial sector and money supply.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ECON 0115 or 0110

### **ECON 0401 - LABOR AND THE ECONOMY**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introductory survey of contemporary labor market developments and issues. Readings and lectures emphasize an analytical approach supplemented by historical and institutional applications.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ECON 0105 or 0100

### **ECON 0501 - INTRODUCTION TO INTERNATIONAL ECONOMICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to the basic issues of international economics and to the historical evolution and institutional structure of the international economy. Topics include mercantilism, comparative advantage as a basis for trade, the impact of trade on income distribution, the evolution of the international financial system, and the working of the international gold standard.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ECON 0105 or 0100

## **ECON 1011 - AMERICAN ECONOMIC HISTORY**

**Minimum Credits:** 3

**Maximum Credits:** 3

A survey of American economic growth from colonial times to the new deal and beyond. Particular attention is paid to economic policy. Topics include mercantilism and the origins of the revolution, the economic dimension of the constitution, Jacksonian Democracy and the bank war, the economics of slavery, the Civil War and reconstruction, tariff policy and industrialization, populism and progressivism, and the business cycle in historical perspective.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ECON (0105 or 0100) or (0115 or 0110)

## **ECON 1101 - INTERMEDIATE MICROECONOMICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

An in-depth examination of price theory. Topics include theories of consumer behavior, production theory, the theory of the firm and market behavior, income distribution theory, and general equilibrium theory.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0121 or 0221 and Econ 0105 or 0100

## **ECON 1111 - INTERMEDIATE MACROECONOMICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

A rigorous treatment of macroeconomic problems such as the business cycle, inflation, and unemployment. Topics include the microeconomic foundations of aggregate consumption and savings behavior, equilibrium and disequilibrium models of the macroeconomy, rational expectations and real business cycles, cycle models, and growth theory.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ECON (0115 or 0110) and MATH (0121 or 0120) or (0221 or 0220) or (0231 or 0230)

## **ECON 1141 - ECONOMIC FORECASTING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Regression and time series techniques applied to forecasting financial and macroeconomic variables such as interest rates, exchange rates, stock prices, GDP, inflation and unemployment rates.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: STAT 1040

## **ECON 1151 - FINANCIAL ECONOMICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Studies in valuation of corporate stocks using fundamental and psychological methods, measurement of risk, and technical analysis.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ECON (0115 or 0110) and STAT (1040 or 1100)

## **ECON 1370 - ECONOMICS AND THE ENVIRONMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

Examines the relationship between the economy and the environment, broadly defined. The theory of externalities and the role of property rights are emphasized in developing a framework for evaluating public policy proposals affecting the environment.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ECON 0105 or 0100

## **ECON 1471 - LAW AND ECONOMICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines the law and legal rules from an economic perspective and applies economic reasoning to a number of legal topics such as property rights, contracts, torts, the efficiency of the common law, and crime.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ECON 0105 or 0100

## **ECON 1810 - SPECIAL TOPICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Current topics of particular interest to economics majors are discussed and analyzed in a seminar-style format.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **ECON 1830 - INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 6

Students must undertake a defined task of research under the direct supervision of a faculty member, the fruits of which are embodied in a thesis, extended paper, or other appropriate form.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

## **Educational Psychology**

### **EDPSY 0006 - INTRO TO EDUCATIONAL PSYCHOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Deals with the psychological aspects of the educational process. Theories and research from both psychology and educational psychology are examined in the areas of cognitive and social development, individual differences, culture, cognitive processes, learning, motivation, classroom management, and measurement.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: PSY 0200 or 0010

### **EDPSY 0011 - DIRECTED PRACTICUM IN EDPSY**

**Minimum Credits:** 1

**Maximum Credits:** 3

Provides education and other majors the opportunity to actively assist a faculty member on teaching or curriculum projects.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** H/S/U Basis

### **EDPSY 0013 - DIRECTED STUDY IN PSYCHOLOGY**

**Minimum Credits:** 1

**Maximum Credits:** 3

Provides education and other majors the opportunity to actively assist a faculty member on research projects.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** H/S/U Basis

### **EDPSY 1021 - STUDENTS WITH SPECIAL NEEDS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This provides an introduction to the field of special education for children and adolescents. It covers the history of special education and how the field has developed. Special needs that are covered include learning disabilities, intellectual disabilities, speech and language disorders, sensory impairments, severe emotional disorders, neurological disorders, autism, physical disabilities, health impairments, traumatic brain injury, multiple disabilities, and giftedness. Topics include the characteristics of students with special needs, identification and assessment, making appropriate adaptations and accommodations, and other educational practices.

**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** Letter Grade  
**Course Requirements:** PREQ: PSY 0200 or PSY 0010

## **EDPSY 1025 - INCLUSION STRATEGIES**

**Minimum Credits:** 3

**Maximum Credits:** 3

Designed primarily for pre-service teachers, this course familiarizes students with basic strategies for making age-appropriate accommodations and adaptations for students with special needs in the inclusion classroom. The course provides students with both general adaptation and accommodation strategies and more focused strategies most appropriate for specific special needs populations.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: PSY 0200 and EDPSY 1021

## **EDPSY 1026 - ENGLISH LANGUAGE LEARNERS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Designed primarily for pre-service teachers, this course familiarizes students with basic materials, resources, and strategies for making appropriate adaptations and accommodations in the classroom for students whose first language is not English. The course will also cover the characteristics of English language learners and methods for performing effective non-discriminatory assessment.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: LVL: Sophomore level or higher

## **EDPSY 1036 - FOUNDATIONS OF ESL INSTRUCTION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course offers students an introduction to theory, research and practice in teaching English language learners in the elementary, middle and secondary grades. The course begins with an overview of sociocultural characteristics of ELLs, legal responsibilities, and educational and language policies in the United States. Students will also learn the basic theories and principles associated with second language acquisition. Students will explore the philosophies of bilingual and ESL education as well as different program models that address the education of linguistically diverse students. Students will be introduced to an array of contemporary, research-based instructional approaches, including content-based instruction, task-based language teaching, and sheltered English instruction. As a result, they will gain an understanding of how to adapt standards-based lessons for English language learners. Through a practicum component, students will learn to design lessons and assessments for small-group instruction. Students will also develop cross-cultural competence through interactions with ELLs, teachers and school staff.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **EDPSY 1046 - CONTEXTS FOR TEACHING AND LEARNING ENGLISH**

**Minimum Credits:** 3

**Maximum Credits:** 3

In this course, the student will explore the sociocultural and political dimensions of language learning and teaching situations both in the U.S. and in international contexts. Students will learn that language acquisition is not politically neutral and it is rich with implications for the learner and the society. In many aspects of learning a language, language itself is a privilege and is closely related to issues of power. By focusing on sociocultural, political, racial, and economic perspectives, this course examines the interplay between the macro-level relations of power in society and the micro-level experiences of language learners; to take a critical look at why language learning is encouraged and valued in certain situations while it is discouraged and marginalized in other situations.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **EDPSY 1056 - LANGUAGE ACQUISITION & DEVELOPMENT OF ENGLISH LANGUAGE LEARNERS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The focus of this course is how academic language is implemented for ELLs to be successful in U.S. schools. Students will study linguistic foundations of language structures such as English phonology, morphology and syntax as well as a thorough review of key theories and principles in first and second language acquisition. The course examines particular issues faced by students at different points in their education: elementary, middle and high school and the role of literacy in the content areas. With this, students will understand the complexities of reading and writing development in more than one language.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **EDPSY 1066 - CURRICULUM AND ASSESSMENT FOR ESL PROGRAM SPECIALISTS**

**Minimum Credits:** 3

**Maximum Credits:** 3

In this course students will learn to apply principles of ELL curriculum design and teacher-based assessment. Course readings, assignments and class discussions are implemented to guide the student in the understanding of how to best teach English language learners by adapting the established curriculum, or by creating a curriculum from scratch. In this course, curriculum is conceived of as an instructional process which includes preparation, instruction, and assessment. A foundational idea in this course is that assessment can and should be integrated into instruction. As such, you will learn how to sequence instruction in response to students' performance on a variety of authentic assessments. You will also learn approaches to environment and needs analysis and will experience how these analyses can inform teaching and curriculum design.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **EDPSY 1121 - EDUCATIONAL ASSESSMENT FOR INCLUSION CLASSROOM**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed for pre-service and in-service teachers. Topics include basic descriptive statistics, including measures of central tendency, variation, and form; correlation; and graphing data. The course will also cover an introduction to both classical and recent measurement theory, including reliability and validity, testing, and evaluation.

The emphasis will be on developing and evaluating classroom testing methods.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: MATH 0001 or Math Placement Score (46 or greater) and EDPSY 0006

## **Electrical Engineering**

### **EE 0031 - LINEAR CIRCUITS AND SYSTEMS 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

The analysis of linear circuits. Electric variables and circuit elements; Kirchhoff's and Ohm's law; mesh and node equations; Thevenin and Norton equivalent circuits; first and second-order circuits; time domain analysis.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: PHYS 0152 or 0175 and MATH 0230 or 0235 or 0150 or 0231; CREQ: EE 0500 or JME-BSE Academic Plan

### **EE 0132 - DIGITAL LOGIC**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduction to digital systems, Boolean algebra, minimization of logic functions, combinational and sequential circuit design.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: PHYS 0152 or 0175 and MATH 0230 or 0235 or 0150 or 0231; CREQ: EE 0500

### **EE 0142 - COMPUTER ORGANIZATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course explores fundamental concepts and tools of digital system design, basic computer architecture, sequential circuit design techniques, simulation, modelling, hardware description languages; and introduction to programmable logic devices. It also introduces formats for processor instructions, data representations and error detection codes, memory and input & outputs.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: EE 0132; CREQ: EE 0501

### **EE 0257 - ANALYSIS AND DESIGN OF ELECTRONIC CIRCUITS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Analysis and design of diode circuits, bipolar junction transistor and field effect transistor circuits, power supply circuits, and power amplifiers. This also introduces bias stability analysis, operational amplifier circuits, CMOS inverters, and other linear circuits.

**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** Letter Grade  
**Course Requirements:** PREQ: EE 0031; CREQ: EE 0501

## **EE 0445 - PROGRAMMING AND INTRODUCTION TO DATA STRUCTURES**

**Minimum Credits:** 3

**Maximum Credits:** 3

The student is exposed to a variety of computer based problem solving and algorithm developments in engineering field. Typical problems include numerical methods, modeling, simulation, computer graphics, linear programming, and statistical analysis. The course also covers basic data structures, programming techniques including recursion, memory management, functional scopes, variable referencing, and basic search and sort methods.

**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** Letter Grade  
**Course Requirements:** PREQ: MATH 0221 and ENGR 0018

## **EE 0500 - DIGITAL AND CIRCUITS LAB**

**Minimum Credits:** 1

**Maximum Credits:** 1

Analysis and experiments on introductory digital and electrical circuits.

**Academic Career:** Undergraduate  
**Course Component:** Credit Laboratory  
**Grade Component:** Letter Grade  
**Course Requirements:** CREQ: EE 0132

## **EE 0501 - DIGITAL & ELECTRONICS LABORATORY**

**Minimum Credits:** 2

**Maximum Credits:** 2

This course introduces basic implementation of digital circuits, and techniques in simulation and verification. Systems composed of discrete devices, logic gates, combinatorial circuits, and sequential circuits and systems are designed, simulated, built and tested. This course also explores and experiments on characteristic of transistors and electronic devices and circuits such as amplifiers, diodes, rectifiers, and other solid state devices.

**Academic Career:** Undergraduate  
**Course Component:** Laboratory  
**Grade Component:** Letter Grade  
**Course Requirements:** PREQ: EE 0132 and EE 0031; CREQ: EE 0142 and 0257

## **EE 1059 - ELECTROMAGNETICS LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

This laboratory supports the concepts introduced in Electromagnets.

**Academic Career:** Undergraduate  
**Course Component:** Credit Laboratory  
**Grade Component:** Letter Grade  
**Course Requirements:** CREQ: EE 1259



## **EE 1071 - ELECTRICAL MACHINES LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

This lab is associated with the materials presented in Electric Machines

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: EE 1771

## **EE 1073 - CONTROL SYSTEMS LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

This lab is associated with the materials presented in Control Systems

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: EE 1673

## **EE 1177 - MEASUREMENT AND INDUSTRIAL CONTROL**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces Labview software as a graphical programming language to implement automated instrumentation and control systems. It explores the programmable logic controller (PLC) as an industrial implementation of sequential control techniques. Students will develop Labview and PLC programs to solve a variety of engineering problems. This course includes an integrated laboratory component.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **EE 1195 - ENGINEERING PRACTICE AND PROFESSIONAL DEVELOPMENT**

**Minimum Credits:** 2

**Maximum Credits:** 2

The course requires students to work in small design teams to solve a significant engineering problem. Students propose, develop, and design a solution to a select engineering problem. The course reinforces principles of the engineering design process and serves as 1st part of a capstone project for the program. The consideration of the ethical and social implications of technology and the basic concepts of business are also aspects of the course. Each team presents information, in both written and oral formats, to peers and faculty at various developmental milestones of their project. This paper design is followed by conceptual or full implementation in EE 1199 follow-up course. Projects may be on an individual or group basis, either interdepartmental or intradepartmental in organization.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: Senior Status

## **EE 1197 - SPECIAL PROJECT: DIRECTED**

**Minimum Credits:** 1

**Maximum Credits:** 4

Investigation and research embodying testing, original design, or research on an approved subject; or, a special problem or reading course of individual study guided by an approved departmental faculty member.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** Letter Grade

## **EE 1198 - SPECIAL PROJECTS: INDEPENDENT**

**Minimum Credits:** 1

**Maximum Credits:** 4

Independent study designed to give the student an opportunity to study a particular aspect of the discipline in some depth.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** Letter Grade

## **EE 1199 - SENIOR DESIGN: ELECTIVE**

**Minimum Credits:** 2

**Maximum Credits:** 2

This is the follow-up practicum course serving as the 2nd part of the capstone project of the undergraduate program in order to implement the select student project developed in EE 1195 with the help of a faculty advisor. It is expected that a complete or partially working system will be presented in writing and orally followed by a demonstration at the end of the course. Projects may be on an individual or group basis, either interdepartmental or intradepartmental in organization.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: EE 1195

## **EE 1201 - ELECTRONIC MEASUREMENTS AND CIRCUITS LABORATORY**

**Minimum Credits:** 2

**Maximum Credits:** 2

This laboratory course explores circuits and electronic measurements including experiments on the use of electronic test equipment. Students are exposed to a variety of linear and non-linear devices and their characteristics, and operational amplifier basics. Time and frequency domain methodologies are also introduced. This course has a theory class and a lab class.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: EE 0031

## **EE 1212 - ELECTRONIC CIRCUIT DESIGN LAB**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course emphasizes electronic circuit design and analysis. It explores frequency analysis of amplifiers, heat sinks, distortion analysis, circuit efficiencies, multi stage amplifiers, differential and operational amplifiers, feedback, active filters and oscillators. This course includes a theory class and a lab class.

**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** Letter Grade  
**Course Requirements:** PREQ: EE 0257 and EE 1247

## **EE 1247 - SEMICONDUCTOR DEVICES: THEORY AND APPLICATIONS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course covers electrical properties of semiconductor theory, energy levels, bipolar junction and field effect transistors, and diodes. The course introduces solid state devices such as rectifiers, sensors, small signal amplifiers, and low and high power solid state devices. Students are exposed to semiconductor manufacturing process, defect and failure mechanisms, and current state of technology.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: EE 0031; CREQ: EE 0257

## **EE 1259 - ELECTROMAGNETICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces the laws of physics and mathematical theorems relevant to Maxwells equations and waves. It explores uniform plane waves, reflection and transmission, wave guides and resonators, and transmission lines. The course covers electrostatic fields and magneto-static fields along with forces and energy.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: PHYS 0152 and MATH 1271 and MATH 0231 and EE 0031; CREQ: EE 1059

## **EE 1541 - COMPUTER ARCHITECTURE**

**Minimum Credits:** 4

**Maximum Credits:** 4

Introduction of processors and microcomputer systems through the study of the hardware architecture and software. Topics include processor architectures, memory types and organization, instruction sets and executions, interfacing, hardware interrupts, and assembly language programming.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: EE 0445 and EE 0142 and EE 0257

## **EE 1552 - SIGNALS AND SYSTEMS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course covers signal representation, continuous time systems, fourier series, fourier transform, laplace transform, and discrete time system analysis.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: EE 0031 and MATH 0231

## **EE 1563 - SIGNAL PROCESSING THEORY AND PRACTICE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course explores the analysis and representation of discrete-time signal systems, including impulse and step responses, convolution, Z-transform, and the discrete-time Fourier transform. The course covers basics in analysis, design, and implementation of digital filters. This course includes a theory class and a lab class.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: EE 0257

## **EE 1673 - CONTROL SYSTEMS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduction to feedback control systems, mathematical models, second order systems response and identification, system types, steady-state errors, root locus analysis and design, frequency domain techniques (bode diagrams), Nyquist theory and system reductions and stability.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: (EE 1552 or JME-BSE Plan) and MATH 0241; CREQ: MATH 1271 and (EE 1073 or JME-BSE Plan)

## **EE 1769 - POWER SYSTEM 1**

**Minimum Credits:** 4

**Maximum Credits:** 4

An introduction to modern power systems and methods of analysis of power generation and distribution systems. Topics include Transmission lines, network representations, network solutions, one-line diagram, system modeling, three-phase fault calculations, and system protective devices. This includes a 1 credit laboratory component.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: 0031

## **EE 1770 - POWER SYSTEMS II**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course explores power system design and analysis. Topics include power flow, optimal power flow, economic dispatch, unit commitment, unbalanced faults (using symmetrical components), advanced power system protection, short circuit and coordination studies, system control, area control error, introduction to systems stability, and power distribution engineering. Extensive use of application software supplements the design and analyses of electrical power systems. This course includes a theory class and a lab class.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **EE 1771 - ELECTRIC MACHINES**

**Minimum Credits:** 3

**Maximum Credits:** 3

Application of magneto-statics to the design of magnetic circuits, actuators, sensors and rotating electric machines.

Performance characteristics of transformers, induction machines, synchronous machines and dc machines.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: EE 0031; CREQ: EE 1071 or JME-BSE Plan

## **EE 1772 - COMMUNICATION SYSTEMS**

**Minimum Credits:** 4

**Maximum Credits:** 4

Analysis of modern analog communication systems, including the theory underlying their design and practical implementation issues. Various forms of amplitude and angle modulation. Amplifiers, mixers, detectors, phase-lock loops, and the design of transmitters and receivers. Probability, random signals, optimal receivers, noise and performance analysis. Case studies includes telephone and commercial radio/television. This includes a 1 credit laboratory component.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: EE 1552

## **EE 1773 - DIGITAL COMMUNICATION SYSTEMS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Analysis of modern digital communications systems, including the theory underlying their design and practical implementation issues. Baseband digital signaling: pam, PCM, quantization, ISI, multiplexing. Modulation formats: ask, FSK, BPSK, DPSK, GAM. Probability, information channel capacity random signals, optimal receivers and performance analysis. Case studies include modems, satellite systems, and cellular telephone. This course includes a theory class and a lab class.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: EE 1772

## **Electrical Engineering Technology**

### **EET 0010 - BASIC ELEC TECHNLOGY LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Lab will accompany circuits 1 - basic electrical technology.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: EET 0110

### **EET 0021 - ELECTRONICS 1 LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Lab will accompany electronics 1.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 0010 and 0110; CREQ: EET 0121

## **EET 0110 - CIRCUITS 1 BASIC ELEC TECHNLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduction to circuit elements; resistance, inductance, capacitance, Kirchhoff's voltage and current laws; basic techniques of DC and AC circuits analysis, loop and node equations; AC network problems, three-phase AC, magnetics, and transformers.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: (PHYS 0152 or 0175) and 0153 and MATH 0231 or 0230

## **EET 0111 - CIRCUITS 2**

**Minimum Credits:** 4

**Maximum Credits:** 4

Continuation of introductory circuit concepts with emphasis on transient analysis, Laplace transforms, Fourier analysis.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 0110 and 0010; CREQ: MATH 1035

## **EET 0121 - ELECTRONICS 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

Basic theoretical and practical principles of solid-state devices and their application to fundamental electronic circuits, such as power supplies, small-signal amplifiers, emphasis is placed on analysis and design of linear circuits.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 0110 and 0010; CREQ: EET 0021

## **EET 1022 - ELECTRONICS 2 LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Lab will accompany electronics 2.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 0021; CREQ: EET 1122

## **EET 1032 - EMBEDDED SYSTEMS LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Lab will accompany microprocessors.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 1061 and 1161; CREQ: EET 1132

## **EET 1042 - POWER AND MACHINERY LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Lab will accompany power and machinery.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 0010 and 0110; CREQ: EET 1142

## **EET 1051 - ELECTRICAL MACHINES LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Lab will accompany electrical machines.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 0010 and 0110; CREQ: EET 1151

## **EET 1052 - POWER SYSTEMS 1 LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Lab will accompany power systems 1.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 1151 and 1051; CREQ: EET 1152

## **EET 1061 - DIGITAL ELECTRONICS LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Lab will accompany digital electronics.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 0021; CREQ: EET 1161

## **EET 1065 - CONTROL METHODS LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Lab will accompany control methods.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 1151 and 1051; CREQ: EET 1165

## **EET 1071 - COMMUNICATIONS SYSTEMS LAB**

**Minimum Credits:** 1

**Maximum Credits:** 1

Lab will accompany communications systems lecture.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 1122 and 1022; CREQ: EET 1171

## **EET 1072 - ELECTROMAGNETIC FIELDS LAB**

**Minimum Credits:** 1

**Maximum Credits:** 1

To learn and apply the basic theory of electromagnetism by modeling and simulations.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 1171; CREQ: EET 1172

## **EET 1073 - COMMUNICATION SYSTEMS 2**

**Minimum Credits:** 1

**Maximum Credits:** 1

A project based telecommunications course for those who have already taken or currently taking a basic telecommunications class. Course assignments are mostly small projects preferably implemented using MatLAB with Simulink and related toolboxes. The class typically meets once a week to discuss the projects and the underlying theory.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

## **EET 1075 - ADVANCED DIGITAL SYSTEMS DESIGN LAB**

**Minimum Credits:** 1

**Maximum Credits:** 1

A laboratory to accompany advanced digital systems design. A variety of CPLD and FPGA design experiments will be conducted.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: EET 1132 1032 and 1161 and 1061; CREQ: EET 1175



## **EET 1122 - ELECTRONICS 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

Frequency analysis of cascaded amplifiers. Large-signal amplifiers, heat sinking, distortion analysis, circuit efficiencies, differential and operational amplifiers, feedback, active filters and oscillators. Circuit design and analysis emphasized.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 0111 and 0010 and 0121; CREQ: EET 1022

## **EET 1132 - EMBEDDED SYSTEMS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduction of microprocessors and microcomputer systems through the study of their hardware and software. Topics include processor architectures, instruction sets, interfacing, interrupts, and assembly language programming.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 1161; CREQ: EET 1032

## **EET 1142 - POWER AND MACHINERY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Electro-mechanical energy conversion, torque and power, AC and DC rotating machines, power distribution; basic electronics and introduction to solid state power control.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 0110 and 0010; CREQ: EET 1042

## **EET 1151 - ELECTRICAL MACHINES**

**Minimum Credits:** 3

**Maximum Credits:** 3

Electro-mechanical energy conversion, torque and power, AC and DC rotating machines, and transformers.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 0110 and 0111 and 0010; CREQ: EET 1051

## **EET 1152 - POWER SYSTEMS 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduction to the analysis of power generation and distribution systems. Topics include the one-line diagram, per unit calculations, system modeling, three-phase fault calculations, and system protective devices.

**Academic Career:** Undergraduate

**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** PREQ: EET 1151 and 1051; CREQ: EET 1052

## **EET 1153 - POWER SYSTEMS 2**

**Minimum Credits:** 4

**Maximum Credits:** 4

Power system design and analysis. Topics include load flow, unbalanced faults (utilizing symmetrical components), economic dispatch, and systems stability. Extensive use is made of the digital computer in these analyses.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 1152 and 1052

## **EET 1161 - DIGITAL ELECTRONICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Fundamental concepts and tools of combinational and sequential logic design. Areas of study include truth tables, Karnaugh maps, and other methods of formulating and minimizing boolean switching functions; introduction to the characteristics of commercially available logic using medium-scale integrator (MSI) and large-scale integrator (LSI) devices; study of sequential logic circuits including state tables, state diagrams, and timing diagrams; design of sequential circuits using flip-flops, counters and registers; hardware description languages; and introduction to programmable logic devices.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ET 0031 and EET 0121 and 0021; CREQ: EET 1061

## **EET 1165 - CONTROL METHODS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Fundamentals of feedback control systems and devices as applied to electrical machinery and process controls. Areas of study include analysis of systems using frequency domain techniques (bode diagrams), study of transducers, analog, and digital techniques used in motor-driven speed and position controls.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 0111 and 0121 and 0021 and 1151 and 1051; CREQ: EET 1065

## **EET 1171 - COMMUNICATIONS SYSTEMS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduction to the theoretical and applied fundamentals of audio, video, and data electronic communication techniques. Topics include propagation, antennae, transmission lines, transmitters and receivers, modems, and other devices using various forms of modulation such as CW, AM, FM, SSB, etc.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 1122 and 1022; CREQ: EET 1071

## **EET 1172 - ELECTROMAGNETIC FIELDS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Starting with Maxwell's equations, deductively develop the mathematical models necessary to understand electrodynamic phenomena including reflection and transmission of electromagnetic waves, waveguides and resonators, transmission lines, antennas, and quasi-static fields.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 1171 and 1071; CREQ: EET 1072

## **EET 1175 - ADVANCED DIGITAL SYSTEMS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines different ways a digital system can be implemented such as (a) software and hardware system, (b) CPID based; (c) FPGA based; and (d) ASIC. The course would expose the students to a variety of other concepts used in electronics industry beyond the design of digital circuits. It briefly introduces architecture of memories, concepts of self-testing and testable designs. At the end of the class, students will be able to describe a hardware design solution in HDL and implement it in CPLD or FPGA completely.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: EET 1132 and 1032 and 1161 and 1061; CREQ: EET 1075

## **EET 1177 - INSTRUMENTATION AND INDUSTRIAL CONTROL**

**Minimum Credits:** 4

**Maximum Credits:** 4

Introduces labview as a graphical programming language used to implement automated instrumentation and control systems. Introduces the programmable logic controller (PLC) as a modern implementation of sequential control techniques. Students will create labview and PLC programs to solve a variety of engineering problems.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ET 0030 or 0031 and EET 0010 or 0110

## **EET 1183 - SOPHOMORE SEMINAR FALL**

**Minimum Credits:** 0

**Maximum Credits:** 0

Practicing professional engineers speak on a variety of subjects of interest to the electrical engineering professions.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **EET 1184 - SOPHOMORE SEMINAR SPRING**

**Minimum Credits:** 0

**Maximum Credits:** 0

Practicing professional engineers speak on a variety of subjects of interest to the electrical engineering profession.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

### **EET 1185 - JUNIOR SEMINAR FALL**

**Minimum Credits:** 0

**Maximum Credits:** 0

Practicing professional engineers speak on a variety of subjects of interest to the electrical engineering profession.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

### **EET 1186 - JUNIOR SEMINAR SPRING**

**Minimum Credits:** 0

**Maximum Credits:** 0

Practicing professional engineers speak on a variety of subjects of interest to the electrical engineering profession.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

### **EET 1187 - SENIOR SEMINAR FALL**

**Minimum Credits:** 0

**Maximum Credits:** 0

Practicing professional engineers speak on a variety of subjects of interest to the electrical engineering profession.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

### **EET 1188 - SENIOR SEMINAR SPRING**

**Minimum Credits:** 0

**Maximum Credits:** 0

Practicing professional engineers speak on a variety of subjects of interest to the electrical engineering profession.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

### **EET 1195 - SENIOR PROJECT PROPOSAL**

**Minimum Credits:** 2

**Maximum Credits:** 2

A written proposal, functional specification, time schedule, and block diagram will be submitted. After approval of the proposal by the faculty, a faculty advisor is assigned and the senior project is begun.

**Academic Career:** Undergraduate

**Course Component:** Practicum  
**Grade Component:** LG/SU3 Elective Basis

### **EET 1197 - SPECIAL PROJECT - DIRECTED STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 6

Directed study or independent study designed to give the student an opportunity to study a particular aspect of the discipline in some depth.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

### **EET 1198 - SPECIAL PROJECT - INDEP STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 6

Independent study designed to give the student an opportunity to study a particular aspect of the discipline in some depth.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

### **EET 1199 - SENIOR PROJECT**

**Minimum Credits:** 2

**Maximum Credits:** 2

Employs previously learned material in electrical engineering technology. The project involves design and analysis of a new or modified electrical circuit or system with verifiable feasibility. Projects may be on an individual or group basis, either interdepartmental or intradepartmental in organization.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 1195 and ENGWRT 1192

## **Electrical and Computer Engr**

### **ECE 1885 - DEPARTMENTAL SEMINAR**

**Minimum Credits:** 0

**Maximum Credits:** 0

Seminars are designed to acquaint the student with aspects of engineering that are not normally encountered in classes and school activities and include a wide range of topics such as the significance of engineering as a profession, and ethical problems in engineering and skills required for a successful engineering career.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **Engineering**

## **ENGR 0017 - INTRODUCTION TO ENGINEERING ANALYSIS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The course introduces students to basic topics in engineering, problem-solving methods, and the role of the computer in engineering. The course includes the use of spreadsheets for engineering and statistical analysis, as well as the interpretation and presentation of data; an introduction to computer aided drawing (CAD); and an introduction to how teamwork, diversity, and professional and ethical responsibilities impact the engineering profession.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: ENGR 0081 and MATH 0004 or 0221 or 0220

## **ENGR 0018 - INTRODUCTION TO ENGINEERING COMPUTING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduces engineering problem solving with emphasis on computers as an engineering tool; social topics related to the engineering profession; technical report writing. The course explores computer based mathematical computations; integrated development environments; design, development, and debugging software programs. Software systems such as Matlab, Mathcad, AMD "C" language are used to practice computer based engineering problem solving with emphasis on data types and structures, functions, iterations and loops, file manipulations, graphs and plots, tables, and basic computer animations. The writing component included laboratory style reports and technical paper formatted research reports.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ENGR 0017; CREQ: MATH 0221 or MATH 0220

## **ENGR 0020 - PROBABILITY AND STATISTICS FOR ENGINEERS 1**

**Minimum Credits:** 4

**Maximum Credits:** 4

An introductory course in statistics. Topics covered include: data analysis, probability, random variables, selected discrete and continuous probability distributions, one sample and two sample estimation, hypothesis testing, experiments with two factors and introduction to regression analysis.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: MATH 0150 or 0230 or 0231 or 0235

**Course Attributes:** SCI Quantitative: Statistics GE. Req.

## **ENGR 0022 - MATERIALS STRUCTURE AND PROPERTIES**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to the basic concepts of materials science and engineering. The concepts of atomic, crystal, micro- and macro-structure, their control and effects on chemical, electrical, magnetic, optical, and mechanical properties. Modification of properties by heat treatment and control of processing. Fundamental considerations in materials selection.

**Academic Career:** Undergraduate

**Course Component:** Lecture  
**Grade Component:** Letter Grade

## **ENGR 0081 - FRESHMAN ENGINEERING SEMINAR 1**

**Minimum Credits:** 0

**Maximum Credits:** 0

An in-depth orientation in the various areas of engineering and the related fields of employment. Includes small group meetings with departmental representatives and special freshman academic advisors. A formal departmental choice is made at the conclusion of these courses.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **ENGR 0082 - FRESHMAN ENGINEERING SEMINAR 2**

**Minimum Credits:** 0

**Maximum Credits:** 0

An in-depth orientation in the various areas of engineering and the related fields of employment. Includes small group meetings with departmental representatives and special freshman academic advisors. A formal departmental choice is made at the conclusion of these courses.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **ENGR 0132 - STATICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The principal objective of this course is to develop the ability to analyze any problem in a logical manner and to document that analysis in a clear and orderly fashion. Concepts to be studied include equilibrium of two- and three-dimensional force systems acting on rigid bodies as well as particles, plane trusses and frames, centroids and centers of gravity, elementary principles of dry friction, and moments of inertia of both areas and masses. The use of free-body diagrams is stressed.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: PHYS 0174 or 0475 or 0150 or 0201; CREQ: MATH 0230 or 0235 or 0150 or 0231

## **ENGR 0142 - MECHANICS OF MATERIALS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The study of stress and strain relationships of bodies subjected to loads. Topics studied are axially loaded members; beam analysis including shear and moment diagrams, flexural and shearing stresses and beam deflections; torsion; principal stresses including Mohr's circle; combined stresses; temperature effects; statically indeterminate members. In the laboratory component, physical tests are conducted illustrating selected concepts discussed in the course.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ENGR 0132 and MATH 0231 or MATH 0230

## **ENGR 0152 - DYNAMICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Dynamics of particles, systems of particles, and rigid bodies including energy and momentum methods, problems of varying forces and constraints, and relationship of motion to different reference frames.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ENGR 0132 and MATH 0231 or MATH 0230

## **ENGR 1103 - ENGINEERING ECONOMICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course involves the integration of engineering and business decision making. It emphasizes analytical investment decision methodologies as they relate to engineering management decisions. It focuses on basic capital project evaluation techniques to include: interest calculations, present and annual worth comparisons, rate of returns, depreciation, income taxes, benefit/cost ratio analysis, replacement analysis, bonds, breakeven analysis and cash flows before and after taxes.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: LVL: Sophomore level or higher

## **ENGR 1115 - ENGINEERING LEADERSHIP**

**Minimum Credits:** 3

**Maximum Credits:** 3

A course designed for the individual who wants to learn and develop their leadership and team building skills. Topics include influence, integrity, attitude, vision, change, priorities, self discipline, personal and interpersonal effectiveness, development of teams and principles of leadership. PREREQ: Level - Sophomore or above

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **Engineering Technology**

### **ET 0011 - ENGINEERING DRAWING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Covers the basics of engineering drawing utilizing freehand sketching, mechanical drawing, computer aided drafting, and solid modeling. The fundamental principles of orthographic projection, as well as the topics of dimensioning, sectional views, auxiliary views, descriptive geometry and assembly drawings are covered.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **ET 0023 - INTRO TO COMPUTER-AIDED ENGNRNG**



**Minimum Credits:** 2

**Maximum Credits:** 2

The purpose of this course is to introduce students to a variety of computational methods and software tools for engineering problem solving and documentation.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **ET 0030 - COMPUTR SYMS PRGMG & APPLCTNS**

**Minimum Credits:** 2

**Maximum Credits:** 2

Introduces the student to the basic structure of a digital computer and a higher level programming language. Use of a programming language as a problem-solving tool is emphasized. The student is exposed to a wide variety of computer applications within the engineering field. Typical application areas include numerical methods, modeling, simulation, computer graphics, linear programming, statistical analysis, and engineering economics.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ET 0023 and (Math 0221 or 0220)

## **ET 0031 - COMPUTR SYMS PRGMG APPLC IN C**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduces the student to the basic structure of a digital computer and a higher level programming language. Use of the c language as a problem-solving tool is emphasized. The student is exposed to a wide variety of computer applications within the engineering field. Typical application areas include numerical methods, modeling, simulation, computer graphics, linear programming, statistical analysis, and engineering economics.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ET 0023 and (MATH 0221 OR 220)

## **ET 0035 - ENGINEERING DESIGN**

**Minimum Credits:** 2

**Maximum Credits:** 2

Introduction to the basic concepts involved in good engineering design. Design methodology, analysis and synthesis techniques are studied. Fundamental engineering concepts and laws studied in prior courses, such as statics and electrical circuits along with concurrent courses like dynamics and strength of materials are used in completing required design projects.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 0110 and 0010; CREQ: ET 0052 and (ET 0053 or EET 0111)

## **ET 0051 - MECHANICS-STATICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The principle objective of this course is to develop the ability to analyze any problem in a logical manner and to

document that analysis in a clear and orderly fashion. Concepts to be studied include equilibrium of two and three-dimensional force systems acting on rigid bodies as well as particles, plane trusses and frames, centroids and centers of gravity, elementary principles of dry friction, and moments of inertia of both areas and masses. The use of free-body diagrams will be stressed.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (MATH 0221 or 0220) and (PHYS 0150 or 174); CREQ: (Math 0231 or 0230)

## **ET 0052 - MECHANICS DYNAMICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This second course in mechanics adds the concept of motion to the principles developed in the first course. Kinematics of rigid bodies as well as particles, including relative motion as well as both simple rectilinear and curvilinear motion are studied. In addition, kinetic analysis using Newton's second law, work-energy methods, and impulse momentum techniques will be applied to those same systems. The free-body, diagram rational analysis of rigid bodies will be emphasized.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0231 or 0230 and PHYS 0150 or 0174

## **ET 0053 - STRENGTH OF MATERIALS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The study of stress and strain relationships of bodies subjected to loads. Topics studied are axially loaded members; beam analysis including shear and moment diagrams, flexural and shearing stresses and beam deflections; torsion; principal stresses including Mohr's circle; combined stresses; temperature effects; statically indeterminate members.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ET 0051 and (MATH 0231 or 0230); CREQ: ET 0054

## **ET 0054 - STRENGTH OF MATERIALS LAB/REC**

**Minimum Credits:** 1

**Maximum Credits:** 1

Physical tests are conducted and lab reports written on many of the basics learned in the lecture course.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ET 0023; CREQ: ET 0053

## **ET 0079 - FRESHMAN SEMINAR**

**Minimum Credits:** 1

**Maximum Credits:** 1

This course is designed to help students maximize their potential for academic success in engineering technology and engineering in general. The course serves as a bridge with ET 0023 and the ENGR 0011 that will be required in the future and will replace a necessary credit for the current engineering technology program. Topics pertaining to

engineering careers, ethics, and problem solving and working through the first years in college and an engineering program will be covered.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **ET 0082 - FRSHMN ENGNRNG TECHN LGY SEMNR**

**Minimum Credits:** 0

**Maximum Credits:** 0

Presents a detailed description of both the engineering technology program and the engineering profession.

Professional engineers currently in practice with industrial, governmental and/or consulting organizations are invited as guest lecturers.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **ET 1103 - ENGINEERING ECONOMICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course involves the integration of engineering and business decision making. It emphasizes analytical investment decision methodologies as they relate to engineering management decisions. It focuses on basic capital project evaluation techniques to include: interest calculations, present and annual worth comparisons, rate of returns, depreciation, income taxes, benefit/cost ratio analysis, replacement analysis, bonds, breakeven analysis and cash flows before and after taxes.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: LVL: Sophomore level or higher

## **ET 1115 - ENGINEERING LEADERSHIP**

**Minimum Credits:** 3

**Maximum Credits:** 3

A course designed for the individual who wants to learn and develop their leadership and team building skills. Topics include influence, integrity, attitude, vision, change, priorities, self-discipline, personal and interpersonal effectiveness, development of teams and principles of leadership.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: LVL: Junior or Senior only

## **English Composition**

### **ENGCOMP 0001 - FRESHMAN COMPOSITION 1 TUTORIAL**

**Minimum Credits:** 1

**Maximum Credits:** 1

Students meet weekly with their Composition 1 instructor to work on understanding and addressing writing assignments and how to strengthen their writing at the sentence and paragraph levels. Students use the papers they

produce in ENGCOMP 0005 as materials for discussion and revision.

**Academic Career:** Undergraduate

**Course Component:** Workshop

**Grade Component:** Letter Grade

## **ENGCOMP 0003 - COMMUNICATION 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed for students in engineering technology, but it may be elected by any student who wants to enhance skills in reading, writing, listening, and speaking.

**Academic Career:** Undergraduate

**Course Component:** Workshop

**Grade Component:** LG/SU3 Elective Basis

## **ENGCOMP 0004 - COMMUNICATION 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

A continuation of communications 1 with additional emphasis on research writing.

**Academic Career:** Undergraduate

**Course Component:** Workshop

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCOMP 0002 or 0003 or 0005 or 0010 or 0101 or 0150 or 0200 or ENG 0101 or (English Composition Placement Test with Score of 17 or Greater and Program: Engineering Technology at UPJ)

## **ENGCOMP 0005 - COMPOSITION 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

In this semester long course, students refine their ability to express themselves with clarity and coherence in various genres of writing; they learn the value of using the writing processes to generate, develop, share, revise, proofread, and edit major writing projects and demonstrate that they can produce essays that show structure, integrate evidence and organize significant content, demonstrate purpose, and reveal an awareness of audience. Required of all freshmen.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **ENGCOMP 0006 - COMPOSITION 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

In this semester long course, students further refine their ability to express themselves with clarity and coherence in writing, demonstrate an understanding of the qualities inherent in various genres of writing, refine their ability to understand, employ, and effectively integrate various types of evidence in their written work, and learn how to conduct research on that topic using a variety of scholarly and popular sources and produce college level research papers. Required of all freshmen. Prerequisite: ENGCOMP 0003 or ENGCOMP 0005.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCOMP 0005 or 0010 or 0200 or (SAT High Verbal Score of 650 or Greater)

## **ENGCOMP 0008 - ESL WRITING WORKSHOP**

**Minimum Credits:** 3

**Maximum Credits:** 3

**Academic Career:** Undergraduate

**Course Component:** Workshop

**Grade Component:** Letter Grade

## **English Literature**

### **ENGLIT 0040 - ESL READING SKILLS**

**Minimum Credits:** 2

**Maximum Credits:** 2

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

### **ENGLIT 0055 - SURVEY OF ENGLISH LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

Especially designed for prospective English majors to acquaint them with the major works in English literature from its beginning through the 18th century.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **ENGLIT 0056 - SURVEY OF ENGLISH LITERATURE 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

Traces the development of English literature from the beginning of the romantic period to the present.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **ENGLIT 0080 - NARRATIVE LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

Traces the course of narrative literature from the epic through the novel, with an emphasis on the search for the form.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **ENGLIT 0088 - INTRODUCTION TO LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces literature and literary analysis. Through close reading and critical analysis of a series of text selections, which vary by instructor and semester, the course explores the literary devices writers use to produce texts and the approaches and methods that readers use to understand and interpret them.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **ENGLIT 0311 - THE DRAMATIC IMAGINATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces students to the major dramatic forms and compares the ways playwrights from several centuries use ideas, characters and theatrical contexts. We will consider how social, historical, and dramatic contexts influence our interpretations and evaluation, or may lead to alternative understandings of a play.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **ENGLIT 0316 - READING POETRY**

**Minimum Credits:** 3

**Maximum Credits:** 3

By studying various kinds of poetry from a number of sources, this course introduces students to particular forms of poetry and kinds of poetic language. Since poetry invites very close reading, students will explore various techniques for making sense of poems.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

## **ENGLIT 0318 - WRITING IN PARIS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students will study the American writers who lived in Paris during the 1920s "the lost generation" and the ways they were influenced by Paris and its culture.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **ENGLIT 0326 - SHORT STORY IN CONTEXT**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course studies short stories that explore a variety of themes. It seeks to define the short story as a specific literary genre and to distinguish it from earlier forms of short narrative literature. It then examines the effects of literary, cultural and historical traditions on these stories and their reception.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **ENGLIT 0333 - PARIS THROUGH THE AGES**

**Minimum Credits:** 3

**Maximum Credits:** 3

The readings will introduce students to French writers who were influenced by Paris and who influenced the city and its intellectuals, from the Middle Ages through the twentieth century. This study abroad course includes excursions through the streets and museums of Paris. Taught in English.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **ENGLIT 0345 - LITERATURE AND THE ENVIRONMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

In this course, students will read and write about the environment and its issues as expressed through literature. Readings in fiction, poetry, and non-fiction will explore how the geography of a location influences the character of its inhabitants, and how the forces of nature affect their lives and fortunes. Writing will consist of personal and critical short essays as well as a longer essay/project involving independent readings and research.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **ENGLIT 0351 - GENDER STUDIES**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to offer interested students an opportunity to broaden their awareness and understanding of gender in contemporary American and global cultures in relation to the historical trajectories that shape and provoke current issues and events. The course provides a solid grounding in the critical understanding of both the representations of gender in texts of various media and the relationship of such representations to the culture that produces and receives them. A series of text selections, including primary and secondary essays of theory and criticism that explore particular ways of looking and primary texts of literature that contain representations to be analyzed, will be examined in their historical, intellectual, and literary contexts, considering a variety of critical approaches.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **ENGLIT 0354 - WORDS AND IMAGES**

**Minimum Credits:** 3

**Maximum Credits:** 3

This interdisciplinary course explores the relationships between language and the diverse kinds of images that often accompany it (film, video, photography, book illustration, painting, etc.). The goal is to study the parallels and differences between images and words (as systems of communication) and to understand how they can productively interrelate within creative works such as literature, films, videos, and photographic studies.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SNC Elective Basis

**Course Attributes:** DSAS Literature General Ed. Requirement, SCI Polymathic Contexts: Humanistic GE. Req., Writing Requirement Course

## **ENGLIT 0355 - DIGITAL HUMANITIES**

**Minimum Credits:** 3

**Maximum Credits:** 3

A broad overview of the many intersections of computational technologies and traditional Humanities disciplines, this course focuses on the following: Electronic Art and Literature, New Media, Digital Subcultures, Game Studies, Computational Cultural Studies, Digital Archives, and Technological Convergence. Much of the coursework is inspired by the ethos of collaboration, collective intelligence, and participatory culture, and it assumes that the human is at the center of technological advancement, that emerging technologies can help us create new works of art that resist description and genre classification, and that computers can help us better understand and appreciate human culture and creative expression.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **ENGLIT 0361 - WOMEN AND LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

An exploration of writings by and about women. Through reading of various literary forms--poetry, fiction, and autobiography--students will explore the aspirations and realities of women's lives. Students will consider how social issues--class, race, etc.--Affect women writers.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **ENGLIT 0365 - IMAGINING SOCIAL JUSTICE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course questions the relationship between present and/or "contemporary" literature and past literary traditions. It is not a course solely in contemporary literature but a course that compares contemporary texts with texts from other periods. It investigates the contemporary as both a complex reworking of past narratives and traditions and as the production of the experimental and the new.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

## **ENGLIT 0367 - THE LAW IN LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will examine literary representations of the law, legal issues, punishment, and legal ethics, using works that range from, "Twelve Angry Men" to "Soul on Ice" to "The Indian Lawyer."

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **ENGLIT 0368 - THE LITERATURE OF SCIENCE**

**Minimum Credits:** 3

**Maximum Credits:** 3

The course will allow students to read and appreciate texts in which scientists explain and meditate upon what they do along with literary texts that depict the impact of science on human, albeit fictional, endeavors.



**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** Letter Grade

## **ENGLIT 0400 - GLOBAL LITERARY TRADITIONS**

**Minimum Credits:** 3

**Maximum Credits:** 3

A survey course that explores world literature from the ancient world to the present time. This course examines the development of various literary genres, motifs, and themes, and explores how political, social, and spiritual changes around the globe influenced these elements through time.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **ENGLIT 0401 - GLOBAL LITERATURE 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introductory course that draws on diverse literary texts (oral, written, visual, digital) from around the world, with a focus on recurring issues and themes such as migration, trans-nationality, and globalization.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **ENGLIT 0410 - GLOBAL LITERATURE 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

A course that draws on literary texts from around the world, with a focus on their universal value that transcends time, geography, social systems, and spiritual backgrounds.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **ENGLIT 0522 - INTERACTIVE FICTION AS LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines digital, text-based and turn-driven narratives as immersive and interactive cultural products. Students study the history of "traditional" interactive narratives - such as riddles and puzzle games - and their impact on electronic literature, and they further this study by reading several works of digital interactive narratives from 1975 to the present. In addition to studying interactive fiction in an historical context, students create original interactive pieces.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **ENGLIT 0523 - MARS IN LITERARY IMAGINATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

**Academic Career:** Undergraduate  
**Course Component:** Seminar  
**Grade Component:** Letter Grade

## **ENGLIT 0530 - FILM ANALYSIS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces students to the art of the cinema, and to the techniques for its formal and iconographic analysis. It examines the nature of shot composition and visual framing, the use of color, the role of lighting as a pictorial element, the potentials of camera movement, the modes of editing and the nature of image/sound montage. It also introduces students to dominant cinema forms--narrative, experimental, documentary, etc.--And connects the cinema to visual arts (like painting and sculpture).

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

**Course Attributes:** Childrens Literature, DSAS The Arts General Ed. Requirement, Film Studies, SCI Polymathic Contexts: Humanistic GE. Req.

## **ENGLIT 0557 - INTRO TO LITERATURE FOR ADOLESCENTS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will focus on American literature written specifically for an adolescent audience. The course will allow an examination of the historical changes in the perception of adolescence in the U.S. and explore both canonical and modern texts that use literary devices and techniques as well as portraying psychological awareness while exploring the complex ethical concepts that face teenagers today.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **ENGLIT 0574 - AMERICAN LITERARY TRADITIONS 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introductory course that draws on fiction, non-fiction, and poetry to trace characteristic features and consistent concerns that shaped the development of a distinctly American literature. Begins with the religious/economic argument of the first-generation European migration, moves through the literature of the politically-charged colonial era, and closes in the mid-nineteenth century and the initial expressions of a national literature.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **ENGLIT 0575 - AMERICAN LITERARY TRADITIONS 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introductory course that draws on fiction, non-fiction, and poetry to explore the characteristic features and shared concerns that shaped the emergence of American literature into international prominence. Begins with the emergence of realism in post-Civil War industrial America, moves through the literature of two World Wars and the economic and social revolutions of the twentieth century, and closes with the defining concerns of the contemporary era.

**Academic Career:** Undergraduate

**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis

## **ENGLIT 0581 - INTRODUCTION TO SHAKESPEARE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will focus on a number of Shakespeare's major plays from all phases of his career. Class discussion will consider the historical context of the plays, their characterization, theatrical technique, imagery, language and themes. Every attempt will be made to see the plays both as poems and as dramatic events.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **ENGLIT 0598 - BIBLE AS LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This introductory course acquaints students with what is in the bible and provides background information drawn from various disciplines about the elements and issues that give it its distinctive character. Attention is necessarily given to its religious perspectives, since they govern the nature and point of view of the biblical narratives, but no specific religious view is urged.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **ENGLIT 0615 - LITERATURE AND RACE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines the relations between literature and race. It views race as an idea 'an 'invention' that works as a mechanism for organizing the world 'which, though it emerged during the enlightenment, continues to have far-reaching implications for the literature produced in the us. It will consider the ways in which categories such as race and nation affect literary representations of different groups of people in us society. It will also look at a variety of narratives of race and racialized experiences, and how these are explored in different literary contexts, asking to what extent such discourses of race are both critical and formative elements in us American literature and culture.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SNC Elective Basis

## **ENGLIT 0616 - EXILES, NOMADS, AND MIGRANTS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The course reads various reflections on the immigrant's experience of separation or exile, the problems of encountering a new society, and the processes of acculturation.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SNC Elective Basis

**Course Attributes:** DSAS Literature General Ed. Requirement, Global Studies, SCI Polymathic Contexts: Humanistic GE. Req., Urban Studies

## **ENGLIT 0619 - THE LITERATURE OF THE GREAT WAR**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course focuses solely upon the literature that most poignantly depicts the experiences and perspectives of the soldiers who fought on the battlefields of World War I and the civilians who suffered its destruction. It will allow students to explore the most significant memoirs, poetry, and works of fiction that emerged from the ravaged battlefields of the western front and the ravaged homes destroyed by what some called "war to end all wars".

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

## **ENGLIT 0621 - AFRICAN-AMERICAN LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

**Course Attributes:** DSAS Literature General Ed. Requirement, SCI Polymathic Contexts: Humanistic GE. Req.

## **ENGLIT 0625 - DETECTIVE FICTION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines detective fiction in terms of its history, its social meaning and as a form of philosophizing. It also seeks to reveal the place and values of popular fiction in our lives.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SNC Elective Basis

**Course Attributes:** DSAS Literature General Ed. Requirement, SCI Polymathic Contexts: Humanistic GE. Req.

## **ENGLIT 0626 - SCIENCE FICTION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces students to the major ideas, themes, and writers in the development of science fiction as a genre. Discussions will help students to understand and use critical methods for the analysis of science fiction. The topics covered include problems describing and defining the genre, contrasting ideologies in soviet and American science fiction, the roles of women as characters, readers and writers of science fiction, etc.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SNC Elective Basis

**Course Attributes:** DSAS Literature General Ed. Requirement, SCI Polymathic Contexts: Humanistic GE. Req.

## **ENGLIT 0634 - LIVING ON THE EDGE: LITERATURE ON THE EXTREME**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course explores the radical literature that pushes cultural and social boundaries and compels readers to contemplate the impact of transgressive fictional characters who reject the conventional perspectives of their

contemporaries and establish new possibilities for social discourse. It asks students to investigate the revolutionary power of literature fiction and consider whether it inspires social and cultural change or whether it reinforces cultural mores.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

## **ENGLIT 0690 - LITERATURE OF TERRORISM**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students in this course will explore the literature that examines, interrogates, and chronicles the emergence of terrorism as contemporary cultural phenomena that dominates revolutionary twenty-first century rhetoric. It will offer students the opportunity to gain an understanding of the conditions that compel individuals to embrace extreme acts of arbitrary violence and take advantage of the attention that those acts inspire to bring about social and cultural changes in hostile political environments.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

## **ENGLIT 0695 - WAR LITERATURE AND ITS DISCONTENTS**

**Minimum Credits:** 3

**Maximum Credits:** 3

War and its discontents is a course focused solely upon the literature that poignantly expresses the perspectives of soldier-authors whose experience in 20th and 21st century wars inspired them to craft novels that loudly protested war. It is a course that will interrogate the way in which war affects individuals, shapes them, radicalizes them, and makes them agents for social, cultural, and political change.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

## **ENGLIT 1021 - HISTORY OF LITERARY CRITICISM**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course concentrates on the major developments in the history of literary thought and criticism from Plato to the modern and post-modern developments. The major documents of literary criticism are studied in relation to the contexts- historical, cultural and philosophical--that gave rise to these responses.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCOMP 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1033 - DANTE'S DIVINE COMEDY**

**Minimum Credits:** 3

**Maximum Credits:** 3

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **ENGLIT 1106 - MIDDLE ENGLISH LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

The major works of English literature of the 14th and 15th centuries, exclusive of Chaucer, will be read in the original middle English.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCOMP 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1116 - CHAUCER**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course closely examines major works by Chaucer - the Canterbury tales and Troilus and Criseyde. Students will view Chaucer's work in its historical, social, artistic and intellectual contexts.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCOMP 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1120 - RESTORATION AND 18TH CENTURY LIT**

**Minimum Credits:** 3

**Maximum Credits:** 3

Deals with the main literary developments of the period, excluding the novel. Emphasis is on the major figures from Dryden to Goldsmith.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **ENGLIT 1129 - ADVANCED SHAKESPEARE**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students will read several plays in different genres, to be analyzed in class discussion and to serve as the focus of students' research writing, applying to the plays critical theory, performance theory and practice, and textual analysis. This course assumes a basic familiarity with Shakespeare's dramatic genres and poetic techniques.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **ENGLIT 1151 - ROMANTIC POETRY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Deals almost exclusively with the poetry of the six major romantic poets Blake, Wordsworth, Coleridge, Byron, Shelley and Keats. Some minor poets of the romantic period may also be studied.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCMP 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1171 - THE ROMANTIC PERIOD**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course studies the work of those major writers- from Blake through Keats--which constitutes British romanticism. It explores the social, intellectual and aesthetic concerns of this movement and its relationships with its British and European cultural contexts.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCMP 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1175 - 19TH CENTURY BRITISH LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

A study of the major writers and cultural issues of 19th century Britain situated in relation to the social and intellectual developments of the time.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SNC Elective Basis

**Course Attributes:** DSAS Historical Analysis General Ed. Requirement, DSAS Literature General Ed. Requirement, SCI Polymathic Contexts: Humanistic GE. Req., SCI Polymathic Contexts: Soc/Behav. GE. Req., West European Studies

## **ENGLIT 1182 - VICTORIAN LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course studies the poetry of Tennyson, the Brownings, Clough, Arnold, the Rosettis, Meredith, Morris, Swinburne, Hopkins and Hardy. Attention will also be given to a sampling of prose of the period.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCMP 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1200 - AMERICAN LITERATURE TO 1860**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course surveys literature produced in America before the Civil War. In the process it explores the historical, political, social and cultural factors that affected the development of that literature. It examines the work of writers who saw themselves as powerful framers of the national experience yet fearful they would have little effects on a culture confronting problems of slavery, divisiveness, literacy, economic change, immigration, etc.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SNC Elective Basis

## **ENGLIT 1210 - THE AMERICAN RENAISSANCE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course surveys the flowering of American literature during the first half of the nineteenth-century. It analyzes the struggle of American writers to develop a new national literature.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **ENGLIT 1239 - SPECIAL TOPICS IN AMER LITRATUR**

**Minimum Credits:** 3

**Maximum Credits:** 3

Treats topics relevant to American literature. Topics vary, but will include the literature of a specific era or region; the achievement of a specific writer or school of writers; ethnic and/or gender studies; film and literature studies; specific thematic topics; genre studies; and/or close readings of influential texts.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCOMP 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1241 - JANE AUSTEN: BOOKS & FILM**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will cover four of the novels of Jane Austen (Northanger Abbey, Sense and Sensibility, Pride and Prejudice, and Emma), and their film and television series equivalents, plus one very recent derivative novel, Helen Fielding's, "Bridget Jones's Diary" (and its film version). The point of the course would be to refine students' sense of how to read both novels and films and simultaneously to sharpen their sense of a historical period in some cultural detail and examine the cultural and aesthetic values of their own post-modern era.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

## **ENGLIT 1248 - LITERATURE OF MINORITY WOMEN**

**Minimum Credits:** 3

**Maximum Credits:** 3

Through a close study of literary works by minority women writers of North America, particularly African/Asian American writers, the course intends to help students develop a clear understanding and a critical appreciation of these different 'strands' in North American culture.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

## **ENGLIT 1252 - 20THC AMERICAN LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

Examines significant American writings published from 1900 to World War II, specifically American literature's



response to two World Wars, the introduction of narrative experimentation, economic booms and busts, the scientific revolution, political radicalism, the women's movement, the emergence of ethnic literatures, and the beginning of the nuclear age.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCM 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1253 - CONTEMPORARY POETRY**

**Minimum Credits:** 3

**Maximum Credits:** 3

A study of works by poets who have been active since World War II to the present.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCM 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1260 - AMERICAN POETRY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Examines select poets and signature texts that represent the defining elements of American poetry from the Puritan era to the present. Emphasizes shared themes and concerns as well as those formal experiments that have come to distinguish American poetry.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCM 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1265 - SCIENCE FICTION AND VIRTUAL WORLDS**

**Minimum Credits:** 3

**Maximum Credits:** 3

A literature course centered on concepts and representations of virtual reality in literature, film, and digital media. Drawing from several bodies of critical theory including game studies and post-humanistic models of subjectivity, the course interrogates the shifting boundaries between the real and the virtual, and it requires students to read, view, and interact with several advanced works of science fiction.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

## **ENGLIT 1280 - CONTEMPORARY AMERICAN WOMEN WRITERS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines writings by American women from the 1950's to the present. It draws upon feminist literary criticism to explore issues such as the symbolic significance of gender, power relations between the sexes, and differences in representation across race, class and ethnicity.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **ENGLIT 1294 - FORM AND THEORY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This advanced seminar explores the interconnections between the disciplines of literature and creative writing. Students will study the history, criticism, and craft of modern and / or contemporary literary works. Through critical and creative writing assignments, students will engage these texts as both writers and readers.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCOMP 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1312 - 19TH CENTURY AMERICAN NOVEL**

**Minimum Credits:** 3

**Maximum Credits:** 3

Tracks the emergence of a defining American novel from the early years of the republic through the political and social upheavals of the Civil War and through the issues specific to a new industrial and economic power at the close of the century. Includes texts that represent the romance, psycho logical realism, experimental impressionism, naturalism, and the urban and regional realism.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCOMP 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1320 - THE 20TH CENTURY NOVEL**

**Minimum Credits:** 3

**Maximum Credits:** 3

A study of the various transformations of the traditional novel in modern British and American fiction. Conrad, Joyce, Lawrence, Woolf, Hemingway, and Faulkner are among the writers to be studied.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCOMP 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1360 - TOPICS IN 20TH CENTURY LIT**

**Minimum Credits:** 3

**Maximum Credits:** 3

Considers thematic, formal historical or cultural topics in late 19th and 20th century literature. It ties these issues to critical and social concerns in international modernism and post modernism.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SNC Elective Basis

**Course Requirements:** PREQ: ENGCOMP 0004 or 0006 or 0020 or ENG 0102

**Course Attributes:** DSAS Literature General Ed. Requirement, Global Studies, SCI Polymathic Contexts: Humanistic GE. Req., West European Studies

## **ENGLIT 1362 - WORLD WAR IN 20TH-CENTURY LITERATURE, FILM, AND DIGITAL ARCHIVES**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students will explore the cultural constructs of World War through the literature and film of the time, and they will use digital archives from England to investigate the unreliability of memory.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

## **ENGLIT 1363 - SPY FICTION IN 20TH-CENTURY LITERATURE, FILM, AND DIGITAL ARCHIVES**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students will use digital archives from England to explore British and Irish spy fiction and films produced in the 20th century.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

## **ENGLIT 1364 - LONDON IN CURRENT BRITISH FICTION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course explores writers' fascination with London in the literature that has been published in the last 15 years. It examines narratives that depict the city's geography, history, anthropology, representation, and both its "psycho geography" and the relative modern multi-media fracturing of its utopian and dystopian narratives.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

## **ENGLIT 1365 - CONTEM AMERICAN LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

Explores works that represent the defining literary movements of American literature from 1950 to the present, including post-Hiroshima realism, postmodernism, post humanism, cyber-realism, and post-postmodernism. Offers historical perspective on post-war American intellectual culture by examining the era's defining theoretical/literary models.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCMP 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1371 - MAKERS OF MODERN DRAMA**

**Minimum Credits:** 3

**Maximum Credits:** 3

This class will read intensively and comparatively plays written by late-19th and early-20th century continental, English, Irish and American dramatists. Plays selected will reflect major dramatic movements of the period (realism, naturalism, symbolism, expressionism) and will be analyzed not only by theatrical characteristics but also in relation to their dramatic, critical and cultural contexts.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCM 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1381 - WORLD LITERATURE IN ENGLISH**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines contemporary literature, primarily in English, written in eastern Europe, Africa, Latin America, etc. It pays particular attention to its depiction of social, political and moral concerns.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCM 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1500 - INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 6

To be arranged in consultation with instructor.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCM 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1553 - HISTORY OF THE ENGLISH LANGUAGE**

**Minimum Credits:** 3

**Maximum Credits:** 3

A survey of the linguistic development of English from Anglo-Saxon times to the present. Attention given to basic linguistic structures and discursive practices and to the social and historical conditions under which they change.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCM 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1630 - THE AMERICAN DREAM**

**Minimum Credits:** 3

**Maximum Credits:** 3

An interdisciplinary examination of the American dream of success and the myth of the self-made individual.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCM 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1647 - LITERATURE FOR ADOLESCENTS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will read classics as well as modern works written specifically for an adolescent audience. We will also

read and discuss sociological and psychological constructions of adolescents and books on pedagogy.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SNC Elective Basis

**Course Requirements:** PREQ: ENGCMPT 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1701 - TOPICS IN WOMEN'S STUDIES**

**Minimum Credits:** 3

**Maximum Credits:** 3

Investigates issues raised by the woman's movement in literature written by and about women. It ties these issues to critical and cultural concerns both at the time the text was written and to the present day.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SNC Elective Basis

## **ENGLIT 1704 - WOMEN NOVELISTS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course explores the important role women have played in the development of the novel and how they have used and transformed its generic traditions. We will place novels in the contexts of issues important to their own time and discuss questions raised by recent feminist criticism.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SNC Elective Basis

## **ENGLIT 1705 - WOMEN AND DRAMA**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will focus on the work of playwrights who came of age during the feminist movement in the 1970s and won critical and/or popular acclaim. Students will choose one of the playwrights to research for a class presentation and term paper.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **ENGLIT 1830 - FILM AS LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

An in-depth study of film as literature, primarily dealing with objectively observing and evaluating the film experience. In alternating offerings the course may deal with directorial studies, milieu, genres, and literature into-film studies.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCMPT 0004 or 0006 or 0020 or ENG 0102

## **ENGLIT 1912 - SENIOR SEMINAR**

**Minimum Credits:** 3

**Maximum Credits:** 3

Intensive study of a single topic or figure that assumes previous work in related literary, historical, and critical areas. Each seminar moves toward a final paper that integrates earlier literary study with the specific critical perspective developed in this course.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCOMP 0004 or 0006 or 0020 or ENG 0102

## English Writing

### ENGWRT 0050 - INTRO TO CREATIVE WRITING

**Minimum Credits:** 3

**Maximum Credits:** 3

This course offers students an introductory study of the written arts. Through the close reading of modern and contemporary texts and guided experimentation in a variety of genres (e.g. Poetry, fiction, drama, and creative nonfiction), students will examine, explore, and discuss the creative process.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCOMP 0006 or (ENGCOMP 0005 and ENGR Program) or (ENGCOMP 0005 and JNUR-UNK Plan)

### ENGWRT 0053 - INTRO TO PROFESSIONAL WRITING

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces students to several forms of professional writing, such as review and profile writing, public relations and marketing writing, and writing for the web. Students will compose, revise, and edit their own texts and also read and study "real world" examples of professional writing.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCOMP 0006 or (ENGCOMP 0005 and ENGR Program) or (ENGCOMP 0005 and JNUR-UNK Plan)

### ENGWRT 0500 - CREATIVE NONFICTION WRITING

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces students to the art and practice of creative nonfiction prose, including personal essay, memoir, and literary journalism. Students will explore the unique possibilities of the genre by reading and studying modern and contemporary authors, and composing and revising a variety of creative writing assignments.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCOMP 0004 or 0006

### ENGWRT 0511 - WRITING FOR DIGITAL MEDIA

**Minimum Credits:** 3

**Maximum Credits:** 3

This intermediate writing course will teach students writing strategies for online media across a range of professional fields such as business and technology, journalism, public relations and marketing, and creative writing. Students will analyze the particular needs of digital media, including blogs, hypertext websites, social media, and collaborative media (e.g. Wikis), and then apply that knowledge to shaping clear, concise prose for a digital audience.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ENGCMPT 0004 or ENGCMPT 0006

## **ENGWRT 0521 - FICTION WRITING**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces students to aspects of prose fiction - plot, point of view, characterization, conflict, etc. Students may write exercises on these aspects of fiction, or write one or more short stories and revise frequently. Students will also read representative stories and explore their use of particular fictional techniques.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCMPT 0006 or (ENGCMPT 0005 and ENGR Program) or (ENGCMPT 0005 and JNUR-UNK Plan)

**Course Attributes:** Writing Requirement Course

## **ENGWRT 0531 - POETRY WRITING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Through writing exercises, close and extensive reading of modern and contemporary poetry, and intense revision of their own poetry, students will be introduced to the forms, elements, and techniques of poetry writing.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCMPT 0006 or (ENGCMPT 0005 and ENGR Program) or (ENGCMPT 0005 and JNUR-UNK Plan)

## **ENGWRT 0541 - PLAYWRITING**

**Minimum Credits:** 3

**Maximum Credits:** 3

A beginning course in writing for the stage. Starting with short scenes, students will work towards understanding the craft and art of constructing theatre stories to be performed by actors. The final project will be a one-act play.

Throughout there will be emphasis on the stage effectiveness of the writing and opportunity for informal performance of student scripts.

**Academic Career:** Undergraduate

**Course Component:** Workshop

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCMPT 0006 or (ENGCMPT 0005 and ENGR Program) or (ENGCMPT 0005 and JNUR-UNK Plan)

## **ENGWRT 0551 - SCIENCE AND NATURE WRITING**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces students to writing about science and nature (including medicine, technology, the environment, and other scientific disciplines) for a lay audience. Students study contemporary science writing from a craft perspective to learn the tenets of literary nonfiction including narration, description, and reflection. In addition, students pursue their own scholarly and field research to produce original nonfiction writing on a scientific subject of their choosing.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

## **ENGWRT 0561 - WRITING FOR SOCIAL CHANGE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines writing from times of conflict and crisis to help students compose work in which they witness, report, advocate, question, and/or desire change. Students study creative writing by authors responding to significant cultural and political events for its use of writing strategies such as observation, reflection, advocacy, and argument. Students develop their own creative work on social change issues relevant to their interests and ultimately gain knowledge of the importance of civic engagement.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCOMP 0004 or ENGCOMP 0006

## **ENGWRT 0570 - DIGITAL POETRY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students will read, critique, and experience poems by published authors who employ innovative media and forms. Students will also craft their own digital poems.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

## **ENGWRT 1000 - ADV CREATV NONFICTION WRITING**

**Minimum Credits:** 3

**Maximum Credits:** 3

An advanced writing course designed to hone creative nonfiction writing skills through extensive writing, workshop style peer critiques, and in-depth reading. Several of the subgenres of creative nonfiction will be studied and practiced: memoir, personal essay, nature writing, travel writing, science writing, biographical profile, and historical incident. Accurate description, scenic representation, and narrative framing will be among the technical devices considered.

**Academic Career:** Undergraduate

**Course Component:** Workshop

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGWRT 0050 OR 0053 OR 0500

## **ENGWRT 1011 - DIGITAL STORYTELLING**

**Minimum Credits:** 3

**Maximum Credits:** 3



An advanced creative and professional writing course on the nature and value of storytelling and the ways in which storytelling is changing in the digital era. Students compose narratives in a variety of multimedia formats, including digital images, audio and video recording, and hypermedia.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ENGCMP 0004 or 0006 and ENGWRT 0050 or 0053

## **ENGWRT 1021 - ADVANCED FICTION WRITING**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course assumes students know the basics of fiction. Students work on writing short stories and read a wide range of stories. Students can expect to revise their work regularly. Class sessions will address problems in fiction writing - from plot to characterization, from point-of-view to style.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGWRT 0050 or 0053 or 0521

## **ENGWRT 1031 - ADVANCED POETRY WRITING**

**Minimum Credits:** 3

**Maximum Credits:** 3

This upper level poetry writing course offers students who have mastered fundamental skills and who are familiar with basic issues of craft and form a workshop environment in which to compose and revise a significant group of poems. The course will include the close reading and study of some important works of modern and contemporary poetry.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGWRT 0050 or 0531

## **ENGWRT 1130 - GRAMMAR, USAGE, AND STYLE**

**Minimum Credits:** 3

**Maximum Credits:** 3

Reviews essential grammatical principles traditionally and historically, including punctuation.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCMP 0004 or 0006

## **ENGWRT 1140 - DIGITAL MAGAZINE PRODUCTION**

**Minimum Credits:** 3

**Maximum Credits:** 3

After rigorous study of landmark print and online magazines, students will produce solo magazines and then work in an editorial team to build a single online magazine.

**Academic Career:** Undergraduate

**Course Component:** Workshop

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ENGWRT 0050 or 0053 or 0511

**Course Attributes:** Hybrid

## **ENGWRT 1192 - TECHNICAL WRITING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Prepares students to deal with problems of technological communication in various fields. Includes analysis, development, use and evaluation of various models employed in the process of technical writing.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCOMP 0006 or (ENGCOMP 0005 and JENGR Program) or (ENGCOMP 0005 and JNUR-UNK Plan)

## **ENGWRT 1294 - FORM AND THEORY**

**Minimum Credits:** 3

**Maximum Credits:** 3

An advanced writing seminar designed to focus on matters of interest unique to the written arts. Specific topics will change from year to year, but assigned texts, class discussion, and student writing will deal with modern and contemporary issues of form and theory from the writers' point of view.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGWRT 0050 or 0053

## **ENGWRT 1700 - ADVANCED SEMINAR IN WRITING**

**Minimum Credits:** 3

**Maximum Credits:** 3

This seminar provides a capstone experience for English writing majors and students intensely committed to writing. It is assumed that students come to the seminar having taken a fairly broad range of both English writing and literature courses. Students will complete an original manuscript in a genre of their choice (e.g. poetry, fiction, drama, creative nonfiction). Manuscripts will be evaluated by an approved outside reader as well as the instructor. Class hours will be devoted to workshop critiques and discussing contemporary issues of form and theory related to the written arts.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGWRT 0050 and 0053; PLAN: Writing major or minor; LVL: Junior or Senior

## **ENGWRT 1902 - INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 6

This option permits students to design their own course with the approval of a department faculty member. Students must submit a proposal to the faculty member.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGWRT 0050 or 0053

## **ENGWRT 1950 - PROFESSIONAL WRITING INTERNSHIP**

**Minimum Credits:** 3

**Maximum Credits:** 6

This course will allow qualified students majoring in English writing to work under an employer's supervision while developing and completing tasks relevant to their eventual professional employment. In an internship, students could write in any number of forms (memos, letters, reports, web pages, press releases, etc.) And would devote at least 50% of their time to drafting, revising, and finalizing various documents for an employer. In addition, students will write a final report for the coordinator of professional writing in which they describe and assess their internship experience. Students must have junior or senior standing and a 3.0 Grade point average to be eligible.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** H/S/U Basis

## **Entrepreneurship**

### **ENTR 1680 - ENTREPRENEURS IDEA LAB**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed as a pragmatic approach to converting a new idea into a new venture. Students are led through a step-by-step process of developing an idea in context with a beachhead market so that it will be commercially viable. Students will present new ideas, select the best and work on the strongest innovations for presentation to local entrepreneurs at the end of the course. Local business experts and business owners will mentor students during the course.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

### **ENTR 1685 - ENTREPRENEURS TOOLKIT**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will provide students with knowledge of important tools and skills required for entrepreneurial success, including finding investors or financing; developing a leadership team; managing risk and change; legal considerations and protecting proprietary information; cash flow tracking; ethics; and exit strategies.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

### **ENTR 1686 - ENTREPRENEURS FIELD CAMP**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students will complete 150 hours in a local start-up, small business, or established company learning and applying skills in business planning, market research, product development, website development or social media marketing, investor or finance solicitation and planning, or business accounting.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** LG/SNC Elective Basis

## **Environmental Studies**

### **ENVSTD 0100 - INTRO TO ENVIRONMENTAL STUDIES**

**Minimum Credits:** 3

**Maximum Credits:** 3

Survey of environmental concepts and principles. Students evaluate contemporary environmental issues as they relate to the quality of life. Environmental topics are used to develop analytical skills. The natural and social (environmental) consequences of population growth, food supply demands, pollution, and resource exploitation are discussed.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **ENVSTD 1200 - INTERNSHIP**

**Minimum Credits:** 3

**Maximum Credits:** 12

Practical experience in environmental studies in a professional setting. Students earning internships must write an extensive summarization and analysis of their field experiences. Work is directed by the employer and evaluated by the faculty advisor.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** H/S/U Basis

**Course Requirements:** PROG: SOCSCI; PLAN: ENVIRONMENTAL STUDIES

### **ENVSTD 1400 - SOIL IN THE ENVIRONMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to engage students to critically look at soil as the central link in the function and creation of the terrestrial environment by examining the physical, chemical, and biological aspects of soil. Soils are a natural body, engaged in dynamic interaction with the atmosphere above and the strata below that influences the planet's climate and hydrological cycle, and serves as the primary habitat for a versatile community of living organisms. This course will incorporate how soils influence climate change, pollution control, human expropriation of natural resources, and the prospects for harmonious and sustainable development. This course will also include field activities relevant to a career in Environmental Science.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ENVSTD 0100; PLAN: Environmental Studies

### **ENVSTD 1500 - ENVIRONMENTAL FIELD STUDIES**

**Minimum Credits:** 3

**Maximum Credits:** 3

Immerse a student in a regional experience as a two week field course. This course will enable students to see critically and to interpret a cultural landscape through the perspective of culture and history, sustainability, ecology and natural environment, geology, and geography. Using a combination of structured field studies, cultural specific readings, primary and secondary data, and standard geographic field techniques this course strives to develop a deeper affective and cognitive understanding of a specified geographic region. This course is designed to offer students the opportunity to participate in a travel experience that is directly linked to their coursework and academic concentration and to

broaden understanding of social and environmental processes through hands-on-site visits to several national and global parks, cities, towns, cultural centers, nature preserves, museums, etc. Course can be taken more than once as study sites will change.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** Letter Grade

## **ENVSTD 1700 - SENIOR SEMNR IN ENVIRON STUDIES**

**Minimum Credits:** 3

**Maximum Credits:** 3

The student undertakes a critical examination of the problems and issues associated with a particular dimension of environmental policy or environmental management, culminating in a final paper.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

## **Finance**

### **FIN 0300 - PRINCIPLES OF FINANCE**

**Minimum Credits:** 3

**Maximum Credits:** 3

Focuses on how companies make investment and financing decisions, including capital formation and resource allocation. The concepts of time-value of money, security valuation, capital budgeting, and the tradeoff between risk and expected return are also introduced. Cost of capital, financial leverage, and capital structure policies are also presented.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ACCT 0115

### **FIN 1310 - INVESTMENTS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Provides an understanding of the process of evaluating and selecting investments. Discusses investment techniques, vehicles, and strategies emphasizing the risk-return tradeoffs. The operations of securities markets are explained and investments in equities, fixed income securities, and other outlets are discussed. The course also familiarizes students with published financial data.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: FIN 0300

### **FIN 1315 - PERSONAL FINANCIAL PLANNING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduction and overview of personal financial planning. Topics include financial planning, managing assets, credit, insurance, investments and retirement and estate planning.

**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** PREQ: FIN 0300

## **FIN 1356 - INTERMEDIATE FINANCIAL MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

Analyzes long term decision making for the firm. The course will investigate various techniques in capital budgeting. An emphasis on the impact on shareholder wealth will be stressed. Additional topics include the analysis of cost of capital and capital structure issues. Dividend policy will be presented as it impacts share value and financing. The course will use spreadsheet analysis models for case work.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: FIN 0300 and STAT 1040; CREQ: FIN 1310

## **FIN 1365 - FINANCE SPECIAL TOPICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Detailed analysis of a particular topic not covered by regularly scheduled courses.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: FIN 0300 and FIN 1310

## **FIN 1370 - PORTFOLIO THEORY**

**Minimum Credits:** 3

**Maximum Credits:** 3

The economics of pricing in the securities, options, commodities, and foreign exchange markets. Covers speculation and the nature of financial markets.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: FIN 1310

## **FIN 1380 - DERIVATIVES AND ALTERNATIVE INVESTMENTS**

**Minimum Credits:** 3

**Maximum Credits:** 3

An overview of derivative securities and their use in corporate strategy and risk management, this course employs quantitative methods to analyze, design, price and use derivative instruments in a managerial context. Basic derivative contracts such as forward, futures, options and swaps are covered, as well as the pricing of these claims, arbitrage, and hedging in these markets. Students apply the analytical models to real-life situations through case studies.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Grad LG/SU3 Basis

**Course Requirements:** PREQ: FIN 0300 and FIN 1310

## **FIN 1390 - INTERNATIONAL FINANCE**

**Minimum Credits:** 3

**Maximum Credits:** 3

The course provides an introduction to multinational finance by examining how international business markets work, and how multinational firms operate within that environment. Topics covered in the course include an examination of the international monetary system, the foreign exchange markets, international trade, global cost of capital, foreign exchange exposure and hedging risk in international exchange markets.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: FIN 0300 and STAT 1040

## **FIN 1483 - FINANCE INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 6

The student undertakes, under specific conditions, an independent program of study, research, or creative activity usually off-campus and with less immediate and frequent guidance from the sponsoring faculty member than is typically provided in directed reading and directed research courses.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

## **FIN 1486 - FINANCE INTERNSHIP 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

A beginning-level internship experience in which students provide technical expertise in finance to business, industry, government, or nonprofit organizations. Academic credits are proportioned on the basis of approximately 10 hours per week per term equal to 3 credits. Placements are arranged by the coordinator and supervised by a faculty member in finance. Students must write and present an extensive analysis of the internship experience.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** H/S/U Basis

## **FIN 1487 - FINANCE INTERNSHIP 2**

**Minimum Credits:** 6

**Maximum Credits:** 6

An advanced internship experience in which students provide technical expertise in finance to business, industry, government, or nonprofit organizations. Academic credits are proportioned on the basis of approximately 10 hours per week per term equal to 3 credits. Placements are arranged by the coordinator and supervised by a faculty member in finance. Students must write and present an extensive analysis of the internship experience.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** H/S/U Basis

## **Fine Arts**

### **FA 0015 - HISTORY OF WESTERN ART 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introductory survey course that explores the major accomplishments in Western art (painting, sculpture, architecture, and the minor arts) from prehistory to the arrival of the Black Death. A strongly interdisciplinary approach is taken, one that considers how religious, political, economic and social conditions affected the creation of art.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **FA 0016 - HISTORY OF WESTERN ART 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introductory survey course that explores the major accomplishments in Western art (painting, sculpture, architecture, and the minor arts) from the Renaissance through the modern era. A strongly interdisciplinary approach is taken, one that considers how religious, political, economic and social conditions affected the creation of art. It is not necessary to have taken FA 0015 History of Western Art 1 before taking this course.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **FA 0031 - MODERN ART**

**Minimum Credits:** 3

**Maximum Credits:** 3

A period survey that examines the most influential art styles of the 19th and 20th centuries. The complex relationship between art movements and the societal conditions that affected the creation and meaning of this art is examined through readings, class discussion and visual/contextual analysis. Writing skills are emphasized.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **FA 0050 - MEDIEVAL ART**

**Minimum Credits:** 3

**Maximum Credits:** 3

A period survey that examines the art and architecture of the European Middle Ages, beginning with the emergence and legalization of Christianity in the late Roman empire and ending with the arrival of the Black Death. Particular attention is paid to the evolution of Christian imagery as it relates to historical and theological developments over time, as well as the structural, functional and aesthetic characteristics of individual monuments. Writing skills are emphasized.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **FA 0054 - ART LOOTING AND DESTRUCTION**

**Minimum Credits:** 3

**Maximum Credits:** 3

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade



## **FA 0080 - WORLD RELIGIOUS ARCHITECTURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introductory-level course that examines a rich variety of the world's major religious buildings and complexes, focusing particular attention on understanding structural, functional and aesthetic characteristics of individual monuments. Societal conditions and religious beliefs that affected their design and meaning are examined through readings, discussion and visual/contextual analysis.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **FA 0150 - ANCIENT ART**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines in full or in part the artistic and cultural traditions of the ancient world, including the ancient near east, Egypt, the Aegean, Greece and Rome. Religious, literary and political documents are analyzed to better understand the form and function of ancient sculpture, painting and architecture.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **FA 0304 - RENAISSANCE ART**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines the art and architecture created in Italy and in Northern Europe during the 15th and 16th centuries. Focus is placed on defining the term "renaissance," as well as exploring the major artists, patrons and cultural centers of the period. Historical events, pertinent literary and philosophical sources, and religious figures are explored to contextualize the work of great masters such as Giotto, Masaccio, Leonardo da Vinci, Raphael, Michelangelo, Titian and Palladio.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **FA 0351 - BAROQUE ART**

**Minimum Credits:** 3

**Maximum Credits:** 3

The Protestant reformation brought about not only a strong Catholic counter-reformation, but also entirely new economic and social conditions under which art and architecture thrived in 17th and 18th century Italy, Spain, Flanders, Holland, France and England. In this course we closely examine how societal conditions affected the creation, type, subject matter and meaning of this art, through readings, classroom discussion and visual/contextual analysis.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **FA 0440 - FRANK LLOYD WRIGHT**

**Minimum Credits:** 3

**Maximum Credits:** 3

A comprehensive study of master architect Frank Lloyd Wright, this course carefully investigates his life, his career and his far-reaching beliefs on a number of topics. All of his major structures and creative periods are examined, including those buildings and projects Wright undertook in the Pittsburgh region, especially the world-famous Kaufmann House, Fallingwater. In addition, a broader discussion of modern architectural movements and relevant architects will be undertaken in order help students contextualize Wright's ideas and achievements. Writing skills are emphasized.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **FA 0450 - TWENTIETH CENTURY ARCHITECTURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course closely examines the development of architectural styles and building technologies from the late nineteenth century to the present. This is accomplished by thoroughly investigating (through assigned readings, classroom discussion and visual/contextual analysis) individual architects and their significant structures, as well as the relationship between the built-environment and societal conditions.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **FA 0521 - AMERICAN PAINTING 19TH CENTURY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines the major movements, artists and cultural issues in the development of nineteenth century American painting. Chronologically or thematically this course addresses portraiture, landscape, still-life, genre and history painting, up to the 1913 Armory Show.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **FA 0621 - ART OF CHINA**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces students to the rich artistic and cultural traditions of Asia, particularly China, but also India and Japan. Singular monuments of great importance receive intensive study, such as the Great Stupa at Sanchi, Taj Mahal, Angkor Wat, the Forbidden City and the Ise Grand Shrine. Other major topics include Chinese bronze ritual object, Hindu architecture, Chinese scroll painting and Japanese prints.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **FA 1902 - INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 3

Independent reading and research to be arranged in consultation with instructor.

**Academic Career:** Undergraduate  
**Course Component:** Independent Study  
**Grade Component:** LG/SU3 Elective Basis

## **Foundations of Education**

### **FDSSED 0001 - HIST/PHIL OF ED: AMER EMPHSS**

**Minimum Credits:** 3

**Maximum Credits:** 3

American education is studied from a historical, cultural and philosophical perspective. Students will develop their philosophy of education, cultivate skills that enable them to analyze educational issues, and enhance their learning through local school classroom observations and reflective laboratory activity.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

### **FDSSED 0002 - INTRODUCTION TO EDUCATION**

**Minimum Credits:** 1

**Maximum Credits:** 1

This course is designed to help all first-time; full-time students develop the knowledge and skills to transition successfully to college life and prepare for a career in education. Students are provided with fundamental instruction in the development of critical thinking and analytical skills and will explore academic success strategies, as well as online learning and the University library. This course will assist students with major and career exploration in the field of education and provide an extended orientation to University resources and campus life.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

### **FDSSED 1020 - SPANISH FOR EDUCATORS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed for educators to communicate effectively in Spanish with students and parents whose first language is not English. There is a focus on oral and aural communication. Grammar and vocabulary specific to educators is emphasized as well as the cultures of the Hispanic peoples.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

### **FDSSED 1026 - ENGLISH LANGUAGE LEARNERS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Designed primarily for pre-service teachers, this course familiarizes students with basic materials, resources, and strategies for making appropriate adaptations and accommodations in the classroom for students whose first language is not English. The course will also cover the characteristics of English language learners and methods for performing effective non-discriminatory assessment.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: LVL: Sophomore level or higher

## **FDSSED 1030 - CULTURAL DIVERSITY AMONG NATIVE AND HERITAGE SPANISH SPEAKERS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This class explores the cultural diversity in Spanish-speaking countries and the United States. Students learn about the language commonalities and differences between countries, learn about the role Hispanics have in the United States both culturally and socially, and current issues. Students will investigate issues of Spanish-English bilingualism and explore the differences between Native and Heritage Speakers.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **FDSSED 1036 - FOUNDATIONS OF ESL INSTRUCTION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course offers students an introduction to theory, research and practice in teaching English language learners in the elementary, middle and secondary grades. The course begins with an overview of sociocultural characteristics of ELLs, legal responsibilities, and educational and language policies in the United States. Students will also learn the basic theories and principles associated with second language acquisition. Students will explore the philosophies of bilingual and ESL education as well as different program models that address the education of linguistically diverse students. Students will be introduced to an array of contemporary, research-based instructional approaches, including content-based instruction, task-based language teaching, and sheltered English instruction. As a result, they will gain an understanding of how to adapt standards-based lessons for English language learners. Through a practicum component, students will learn to design lessons and assessments for small-group instruction. Students will also develop cross-cultural competence through interactions with ELLs, teachers and school staff.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **FDSSED 1046 - CONTEXTS FOR TEACHING AND LEARNING ENGLISH**

**Minimum Credits:** 3

**Maximum Credits:** 3

In this course, the student will explore the sociocultural and political dimensions of language learning and teaching situations both in the U.S. and in international contexts. Students will learn that language acquisition is not politically neutral and it is rich with implications for the learner and the society. In many aspects of learning a language, language itself is a privilege and is closely related to issues of power. By focusing on sociocultural, political, racial, and economic perspectives, this course examines the interplay between the macro-level relations of power in society and the micro-level experiences of language learners; to take a critical look at why language learning is encouraged and valued in certain situations while it is discouraged and marginalized in other situations.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **FDSSED 1056 - LANGUAGE ACQUISITION & DEVELOPMENT OF ENGLISH LANGUAGE LEARNERS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The focus of this course is how academic language is implemented for ELLs to be successful in U.S. schools. Students will study linguistic foundations of language structures such as English phonology, morphology and syntax as well as a thorough review of key theories and principles in first and second language acquisition. The course examines particular issues faced by students at different points in their education: elementary, middle and high school and the role of literacy in the content areas. With this, students will understand the complexities of reading and writing development in more than one language.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **FDSED 1066 - CURRICULUM AND ASSESSMENT FOR ESL PROGRAM SPECIALISTS**

**Minimum Credits:** 3

**Maximum Credits:** 3

In this course students will learn to apply principles of ELL curriculum design and teacher-based assessment. Course readings, assignments and class discussions are implemented to guide the student in the understanding of how to best teach English language learners by adapting the established curriculum, or by creating a curriculum from scratch. In this course, curriculum is conceived of as an instructional process which includes preparation, instruction, and assessment. A foundational idea in this course is that assessment can and should be integrated into instruction. As such, you will learn how to sequence instruction in response to students' performance on a variety of authentic assessments. You will also learn approaches to environment and needs analysis and will experience how these analyses can inform teaching and curriculum design.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **FDSED 1171 - EDUCATIONAL LAW, POLICY, AND ETHICAL LEADERSHIP**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to provide candidates with an overview and examination of laws and policies that govern K-12 education systems. Candidates will engage in an analysis of current trends in education, the roles of federal and local authorities, and issues of equitable educational opportunities for diverse communities. Lastly, candidates will develop a framework for the establishment and maintenance of professional relationships and networks with school/district personnel, related service providers and for ethical leadership practices governing one's role as a professional educator.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **FDSED 1188 - STUDENT TEACHING IN NEW ZEALAND**

**Minimum Credits:** 7

**Maximum Credits:** 7

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** Letter Grade

## **FDSED 1197 - STUDENT TEACHING SEMINAR ABROAD**

**Minimum Credits:** 1

**Maximum Credits:** 1

Student teaching seminar abroad

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **FDSED 1240 - SPANISH METHODS I (PRE K -5)**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course familiarizes pre-service Spanish educators with strategies for developing materials and teaching Spanish to Pre-K - 5 students. It introduces students to Pennsylvania, ACTFL guidelines and national standards for world language learning in the 21st Century, curriculum and standards. Differentiated instruction techniques, student-centered approaches and assessment of learning difficulties introduced. Students will concurrently participate in pre-student teaching field experience. This course includes both lecture and hands on activities.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **FDSED 1250 - SPANISH METHODS II (G 6-12)**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course continues to familiarize students to Spanish teaching-learning theories, strategies and issues in world language education. Students will focus on advanced teaching methodology of middle and secondary students, heritage language instruction, Spanish curricula, academic stands, research trends, resources and materials. This course also emphasizes advanced differentiated instruction techniques, student-centered approaches, assessment of learning difficulties, and professional growth. Students will concurrently participate in pre-student teaching field experience. This course includes both lecture and hands-on activities.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **French**

### **FR 0052 - FRENCH FOR READING KNOWLEDGE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed for students who have never studied french and desire to study french for reading knowledge and translation essential for graduate schooling in the humanities, social sciences, and natural sciences. In this course, students will learn basic french grammar rules, vocabulary, and syntax essential to comprehending basic french texts in their respective areas of study.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

### **FR 0054 - FRENCH CONVERSATION FOR BUSINESS AND TRAVEL**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course would give the business student and the traveler the knowledge and skills necessary to communicate with others during business and travel in francophone nations. Learning French can also help them improve the interpersonal skills they would need in an international career.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **FR 0101 - ELEMENTARY FRENCH 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

A study of the grammar and vocabulary of elementary spoken and written French. Stresses grammatical structure and its correct application.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

## **FR 0102 - ELEMENTARY FRENCH 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

A continuation of elementary French 1. A study of the grammar and vocabulary of elementary spoken and written French. Stresses grammatical structure and its correct application.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

**Course Requirements:** PREQ: FR 0101 or 0111

**Course Attributes:** DSAS Second Language General Ed. Requirement

## **FR 0211 - INTERMEDIATE FRENCH 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is a logical continuation of the first year, elementary French 1 and 2 sequence. Emphasis continues to be placed on communication.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: FR 0102 or 0112

## **FR 0212 - INTERMEDIATE FRENCH 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is a continuation of intermediate French 1.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: FR 0211

## **FR 0311 - BUSINESS FRENCH**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will be an introduction to business practices in France. The major topics covered in class will include written business, communication, financial institutions, trade, and advertising. The students will be asked to do translations, to write professional correspondence, and to read articles related to the world of business, economics, and finance. Cross-cultural differences regarding the work place are also a focus of the course.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: FR 0212

## **FR 0320 - INTRODUCTION TO CIVILIZATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to lead students to a better understanding of France today. Particular attention is directed to the major aspects of contemporary French life and society.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: FR 0212

## **FR 0321 - APPROACHES TO FRENCH LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

The goal of this course is to illustrate ways of looking at literary texts. We shall examine plays, short prose works and poems focusing on textual elements such as narrative technique, characterization, societal factors and language.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: FR 0212

## **FR 0355 - FRENCH CONVERSATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to help students already familiar with the basic grammatical structure of the language to improve their facility in oral expression.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: FR 0212

## **FR 0356 - WRITTEN FRENCH 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to enable students to improve their understanding and control of essential elements of written



French.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: FR 0212

### **FR 0452 - INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 9

To be arranged in consultation with instructor.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: FR 0212

### **FR 0610 - FRENCH HUMANIST WRITERS OF THE RENAISSANCE (ENGLISH OR FRENCH)**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students will read English translations of sixteenth-century French prose with a focus on the historical, intellectual, and literary contexts.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

### **FR 0620 - NINETEENTH-CENTURY FRENCH SHORT STORIES (ENGLISH OR FRENCH)**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students will read English translations of nineteenth-century French short stories and will be introduced to French history, art, and literary theory.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** Letter Grade

### **FR 0630 - MEDIEVAL EPIC POETRY (ENGLISH OR FRENCH)**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students will read English translations of several French epic poems and will study the epic tradition along with French cultural history from the 9th century through the 12th century.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

### **FR 0640 - MEDIEVAL FRENCH COURTLY ROMANCE (ENGLISH OR FRENCH)**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will introduce students to the courtly romance of 12th century France through such works as the Arthurian tales of "Chretien de Troyes," the romance of "Tristan and Iseult," and "Aucassin and Nicolette." (In English)

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **FR 0650 - FRENCH LITERATURE AND MODERN CINEMA (ENGLISH OR FRENCH)**

**Minimum Credits:** 3

**Maximum Credits:** 3

This literature in translation course focuses on Canonical texts and their modern American adaptations. The texts will cover an area from the seventeenth century to WWII. We will study French culture and watch famous films such as "Beauty and the Beast", and "The Monuments Men". We will pay attention to the audiences of these works and study the main differences between the original French texts and the American films.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **FR 1019 - 20TH CENTURY TOPICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course, offered infrequently, will treat some aspect of the literature of the 20th century in France.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: FR 0212

## **FR 1060 - FRANCOPHONE LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will cover the social, cultural, and political issues of French-speaking Africa and Canada as represented in poetry and fiction. (In French)

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **FR 1062 - ALGERIAN LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will explore Algerian literature written by Algerian writers as well as French writers in the 19th and 20th centuries. (In French)

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

## **FR 1083 - SPECIAL TOPICS IN LIT (ENGLISH)**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course taught in English and offered infrequently, will treat some aspect of French literature.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **FR 1090 - INTRODUCTION TO TRANSLATION STUDIES**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course serves as a foundation course for the professional translation certificate program, and for related fields. It deals with translation theory and the general problematics of the translation process, providing a theoretical framework for translation and systematically linking theory and practice.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

## **Geography**

### **GEOG 0100 - ECONOMIC GEOGRAPHY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Analysis of the location of economic activities and factors that affect locational decisions. Models of location for agriculture, manufacturing, retailing, and transportation systems provide a conceptual basis for examining world patterns.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **GEOG 0210 - PHYSICAL GEOGRAPHY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduction to the study of the geographical characteristics and relationships of all phenomena within the earth's physical environment. Emphasis placed on air, land and water distributions and the interactions between people and the physical environment.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **GEOG 0310 - GEOGRAPHY OF THE UNITED STATES**

**Minimum Credits:** 3

**Maximum Credits:** 3

A survey course dealing with the broad patterns of physical, cultural, and human geography of the United States.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **GEOG 0320 - GEOGRAPHY OF AFRICA**

**Minimum Credits:** 3

**Maximum Credits:** 3

Presents the cultural, political, demographic and physical features of Africa emphasizing the location, spatial distribution and interrelations among these features.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **GEOG 0325 - GEOGRAPHY OF EUROPE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to acquaint the student with geographic perspectives on Europe. Throughout the semester, the course will follow a systematic approach, examining the physical, cultural, demographic, political, urban, and economic patterns that make up the geography of contemporary Europe. Students are introduced to the diversity of the physical and human landscapes of Europe; the patterns of language, religion, and ethnicity; and the ways in which Europeans have used their land for economic and cultural purposes. Geography of Europe also examines the background and prospects of a united (and divided) Europe. Europe is experiencing tremendous change with the continued growth of the European union and the transition to market economies in eastern Europe. While its physical configuration remains unaltered, a process of disintegration and reintegration has changed the map in response to social, cultural, political and economic pressures. The course provides a useful geographic appreciation for the casual European traveler and valuable insights for the serious student of Europe. Making use of the tools and techniques of geographic inquiry, the course will delve into issues to provide a comprehensive understanding of today's Europe.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **GEOG 0350 - GEOGRAPHY OF THE MIDDLE EAST**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines the patterns of the Middle East including places, people, physical and cultural environments, religion, climate, landforms, natural resources, livelihoods, ethnic groups, language, population, and settlement patterns. Emphasizes recent geopolitical disputes in the Middle East, giving special attention to the Arab-Israeli conflict, including the formation of a Palestinian state and current Arab-world events.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **GEOG 0420 - CARTOGRAPHY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Examines the interpretation of social, political, economic, demographic and physical data through the use of maps and charts. Mapping software is used to explore map projections; scale; the selection, organization and presentation of data; cartographic techniques and map interpretation. The history of mapmaking and maps as propaganda tools is also discussed. Computers are used for all mapping projects; no manual drafting is involved.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **GEOG 0610 - URBAN DEVELOPMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

The processes and consequences of urban growth are examined in cases ranging from early Mesopotamia, West Africa, and Meso-America to contemporary world urbanization patterns. The U.S. Urban experience is examined in depth, with particular attention given to problems of town planning, housing, transportation, and environmental quality.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **GEOG 0810 - EARTH AND PEOPLE**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduces the student to the nature and scope of the field of geography and demonstrates the methodology which geographers use to examine people and land relationships. A number of world regions will be analyzed in this class.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **GEOG 1130 - POLITICAL GEOGRAPHY**

**Minimum Credits:** 3

**Maximum Credits:** 3

The principles of political geography are developed by a problem approach. The problems range from those of local boundaries and political patterns on the land, to national boundaries and inventories with their attendant effect on national power. The classic studies in political geography are examined with emphasis on those current problems that will concern the student as a citizen in the years ahead.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **GEOG 1160 - POPULATION GEOGRAPHY**

**Minimum Credits:** 3

**Maximum Credits:** 3

A geographical study of population which examines the distribution of people on earth, analyzes the changing patterns of fertility and mortality with its resulting natural growth, surveys the different forms of spatial mobility, both international and internal, and considers the problem of world's population growth.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **GEOG 1190 - GEODEMOGRAPHY**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to various demographic concepts as applied to selected geographic areas.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: GEOG 0810 or Permission of Instructor

## **GEOG 1200 - ENVIRONMENTAL PLANNING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Examination of the environmental concepts and issues that planners face. Focus on land use planning, planning and use of resources, interactions of people and the environment, and the role of government in formulating policies and strategies.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **GEOG 1210 - CLIMATOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Fundamentals and applications of climatology. Climate classification and climatic change discussed. Human bioclimatology, agroclimatology and climate modification examined.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **GEOG 1220 - NATURAL HAZARDS**

**Minimum Credits:** 3

**Maximum Credits:** 3

An examination of the threatening forces of nature, such as volcanoes, earthquakes, severe weather, droughts and floods, and how people enhance and respond to hazards.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **GEOG 1230 - RESOURCE MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

An examination of alternatives in environmental management. Historical, political, social, and economic aspects of conservation and resource management are studied.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **GEOG 1240 - WATERSHEDS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will present hydrology and management of watersheds for upper level undergraduates. Integrated watershed management is the process of organizing and guiding land, water, and other natural resource use on a watershed to provide desired goods and services to people without affecting adversely soil and water resources.

Embedded in the concept of integrate watershed management is the recognition of the interrelationships among land use, soil, and water, and the linkages between uplands and downstream areas. This course will have in-class activities and exercises, as well as on-campus field investigations including a full stream assessment and a wetland delineation and assessment.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **GEOG 1260 - ENERGY, ENVIRONMENT AND SOCIETY**

**Minimum Credits:** 3

**Maximum Credits:** 3

An examination of society's production and consumption of energy, and how it is affected by the distribution of energy resources and other social, political, and economic factors. Special consideration is given to the spatial organization of the energy system and its impact on the landscape, current energy uses, and sustainable energy futures.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **GEOG 1300 - RUSSIA AND EURASIAN STATES**

**Minimum Credits:** 3

**Maximum Credits:** 3

Presents a systematic analysis of the area's physical, human, and cultural variables and analyzes the distribution, arrangement, and interrelations of these variables.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **GEOG 1350 - GEOGRAPHY OF TERRORISM**

**Minimum Credits:** 3

**Maximum Credits:** 3

The class will explore theoretical and applied spatial topics of geography in terrorist networks, geostrategies, propaganda and other topics of contemporary terrorism research. Global terrorism and counter terrorism, regional conflicts and mass violence, along with American reaction to global terrorism will be examined. Current events, relative to course material, will be discussed. Class discussion will be an integral part of this course.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: Any GEOG class or instructor consent

## **GEOG 1410 - FIELD RESEARCH**

**Minimum Credits:** 3

**Maximum Credits:** 3

Examines various field techniques for the collection, analysis, and interpretation of data. Both physical and cultural variables are studied. Students are expected to spend time in an out-of-class situation.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **GEOG 1420 - GIS SPECIAL PROJECTS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course provides the student with an opportunity to develop and demonstrate proficiency in the design and execution of an original, substantive, term-length project using geographic information systems. Students work one-on-one with a faculty supervisor.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: GEOG 0420 and GEOG 1425 and GEOG 1440

## **GEOG 1425 - REMOTE SENSING**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course provides an introduction to remote sensing. The major goal of remote sensing is to obtain information about the earth's surface from measurements by aircraft or satellite sensors of radiated energy. Remote sensing is considered an important research field in geography and other earth sciences. Throughout the course, students will learn the basic physical principles underlying remote sensing analysis and how to process and interpret images obtained from satellite sensors. The course will introduce the basic principles of image interpretation in relation to optical, thermal, and microwave remote sensing systems. Examples of remote sensing applications will be presented along with methods for obtaining quantitative information from remote sensing images. Interpretation of remote sensing images will emphasize the importance of spatial and society-environment relationships.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **GEOG 1440 - GEOGRAPHIC INFORMATION SYSTEMS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Explores the use of computer-based GIS (Geographic Information Systems) and spatially-referenced data to solve problems of accessibility, optimal routes, site selection and land use planning, market area analysis and spatial modeling for raster and vector GIS. GIS software is used in all lab exercises.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: GEOG 0420 and MATH 0001 or Math Placement Score (46 or greater)

## **GEOG 1600 - JOHNSTOWN AREA STUDY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This seminar affords participants the opportunity to devise, implement, analyze and write up an actual research project, drawing on data from the Johnstown area. The substantive topic varies from year to year; whatever the topical focus, considerable attention is paid to the practical aspects of conducting research.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

## **GEOG 1610 - URBAN PLANNING**



**Minimum Credits:** 3

**Maximum Credits:** 3

Urban planning aims to promote the social, economic, and environmental well-being of local communities. In this course, students will explore the purpose, practice, and theories of contemporary planning. They will also develop the ability to observe, analyze, and evaluate the built environment, which provides a crucial foundation for good urban policy decision-making. Through reality-based problems, students will understand the interplay between planning analysis, regulation, markets, and the political process. Course themes include the history of planning, land use and zoning, the legal framework of planning, downtown redevelopment, suburban sprawl and new urbanism, public space, transportation planning, citizen participation in planning, and other topics.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **GEOG 1615 - SUSTAINABLE CITIES 1: THEORIES AND CONCEPTS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Explorations of the sustainability concept and how it applies to cities, including efforts to build more livable, equitable, energy efficient, and ecologically sound places. Technological, social, and cultural innovations that shape the form and function of the built environment will be examined on location in Amsterdam, the Netherlands

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: GEOG 1620

## **GEOG 1620 - SUSTAINABLE CITIES 2: FIELD RESEARCH**

**Minimum Credits:** 3

**Maximum Credits:** 3

Focuses on field research in Amsterdam, the Netherlands. Students are expected to build on knowledge acquired in Sustainable Cities 1 and develop an independent project which will result in research on a topic related to sustainable cities.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: GEOG 1615

## **GEOG 1800 - SPECIAL TOPICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Detailed analysis of a particular topic not covered by regularly scheduled courses.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **GEOG 1810 - DIRECTED READING**

**Minimum Credits:** 1

**Maximum Credits:** 6

The student undertakes a specified course of study, comparable in content to a special topics course, under the direct supervision of a faculty member.

**Academic Career:** Undergraduate  
**Course Component:** Directed Studies  
**Grade Component:** LG/SU3 Elective Basis

## **GEOG 1820 - DIRECTED RESEARCH**

**Minimum Credits:** 1

**Maximum Credits:** 6

The student undertakes a defined task of research under the supervision of a faculty member, and in which the results of the research are embodied in a thesis, extended paper, laboratory report, or other appropriate form.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

## **GEOG 1830 - INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 6

The student undertakes, under specific conditions, an independent program of study, research, or creative activity, usually off-campus and with less immediate and frequent guidance from the sponsoring faculty member than is typically provided in directed reading and directed research courses.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

## **Geology**

### **GEOL 0010 - PRINCIPLES OF ASTRONOMY**

**Minimum Credits:** 4

**Maximum Credits:** 4

The course involves a systematic survey of both the solar system and stellar astronomy which includes historical perspectives and modern discoveries. The planets, stars, galaxies and cosmology are discussed in detail homework and class exercises expose the student to practical methods of astronomy and utilize basic math skills of algebra and trigonometry.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **GEOL 0024 - METEOROLOGY**

**Minimum Credits:** 4

**Maximum Credits:** 4

This course will provide students with an overview of the earth's weather systems. Emphasis will be on lab-centered, hands-on activities designed to demonstrate weather phenomenon through a holistic approach. Topics will include, but are not limited to, structure and composition of the atmosphere, global patterns of circulation, pressure systems, fronts, air masses, weather maps and weather prediction, and climate systems. Students will be required to complete weekly assignments; there will be a semester project; at least one class session will be a field trip.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0001 or Math Placement Score (46 or greater)

## **GEOL 0061 - HISTORICAL GEOLOGY**

**Minimum Credits:** 4

**Maximum Credits:** 4

Basic principles for reconstructing the geologic past are introduced, and earth history is surveyed in terms of geological and biological evolution from the origin of the solar system to the present. Laboratory work includes study of rocks as clues to earth history, identification of fossils, stratigraphic correlation, paleoenvironmental and paleogeographic reconstruction, and interpretation of geologic history from geologic maps.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: GEOL 0015

## **GEOL 0083 - INTRO TO PHYSICAL OCEANOGRAPHY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Emphasis on physical aspects of the oceans. Topics include geology of the seafloor, chemical and physical nature of seawater, waves, tides, coastal systems, ocean resources, and environmental concerns.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **GEOL 0086 - ENVIRONMENTAL GEOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will provide the student with an awareness of the environmental problems and geologic hazards facing mankind today. Case studies of environmental disruption, both natural and manmade, will be presented. The main topics include: volcanism, earthquakes, flooding, slope instability, hydrologic cycle, surface and ground water supply, water law, water pollution, fuel resources, acid mine drainage, and greenhouse effect.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **GEOL 0090 - EARTHQUAKES AND VOLCANOES**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introductory class that will provide the student with an understanding of how earthquakes and volcanoes occur and impact our planet. Earthquakes and volcanoes can vary from small phenomena with little effect on their surrounding environment to large-scale disasters that impact a wide-geographical region. This course will explore the physical causes, the differences between small and large events, and the results that impact the landscape of our planet.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **GEOL 0091 - PREHISTORIC LIFE**

**Minimum Credits:** 3

**Maximum Credits:** 3

How has life on earth changed throughout the last 3.8 billion years of geologic time? This course is an overview of the science of paleontology and the fossil record of ancient life. Geological and biological principles for interpreting ancient life are introduced and examined. The earth's geologic timescale and methods of absolute and relative age dating techniques will be discussed. Important groups from the invertebrate and vertebrate fossil records, including, plants, dinosaurs, and other organisms will be covered. The course will include several field trips to nearby locations to collect and examine fossils along with the rocks in which they are found.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **GEOL 0092 - GEOLOGY OF NATIONAL PARKS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The basic principles of physical geology are explored within the context of observed geology at United States National Parks. The basic science of various geological concepts are introduced and specific Nationals Parks are explored as examples of those processes. Each section of the course is designed to fully incorporate the natural examples of geology within our wonderful National Park system.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **GEOL 0093 - GEOLOGY AND CINEMA**

**Minimum Credits:** 3

**Maximum Credits:** 3

How does Hollywood get science so wrong? This course explores Hollywood's depiction of science, especially natural disasters, and the liberties they take. Lecture will introduce topics and explain the foundations of the scientific principles that help us understand how our Earth works. Disaster movies are viewed in lecture followed by a discussion of the scientific accuracies and inaccuracies. This course provides a fun way to learn more about science by breaking down the poor, glamorized science depicted in movies.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **GEOL 0200 - GEODYNAMICS**

**Minimum Credits:** 4

**Maximum Credits:** 4

The earth operates as a system on long time scales and millennia of scientific investigation has revealed the processes at work. This course is designed to build on topics introduced in introductory geology and strengthen the understanding of basic geologic / scientific principles. This course will provide the history, data and empirical derivation of the principles of earth science as we know them today.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **GEOL 0210 - EARTH MATERIALS**

**Minimum Credits:** 4

**Maximum Credits:** 4

This course provides a detailed investigation into the formation and properties of earth's primary materials: rocks and minerals. Topics include: the physical, chemical, structural, and optical properties of minerals; description and identification of common rock-forming and ore minerals; minerals assemblages and associations; and classification and identification of common rock types.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **GEOL 0220 - FOSSIL FUELS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course provides an overview of energy resources, with special attention given to fossil fuels and the resources of Western Pennsylvania. Emphasis will be placed on the origin, development, and distribution of resources. Alternative energy sources, such as renewable energy and nuclear, will also be covered, as well the environmental implications of use, production, and disposal of the various resources.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **GEOL 1000 - MINERALOGY & OPTICAL MINERALOGY**

**Minimum Credits:** 4

**Maximum Credits:** 4

The symmetry, structure, and crystal chemistry of minerals are the focus of this course. Laboratory work includes the physical properties of minerals and hand sample identification. The student is introduced to the use of the polarizing microscope as a tool for mineral identification.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: GEOL 0015

## **GEOL 1004 - IGNEOS & METM PETRLGY & PETGRPHY**

**Minimum Credits:** 4

**Maximum Credits:** 4

The origin, occurrence, and classification of rocks form the heart of the course. Problems of petrogenesis are approached through the use of phase equilibria and crystal chemistry. Laboratory work includes hand specimen identification and the use of the polarizing microscope.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: GEOL 1000

## **GEOL 1005 - SEDIMENTATION & STRATIGRAPHY**

**Minimum Credits:** 4

**Maximum Credits:** 4

Course focuses on sedimentological processes and products, depositional environments, and modern stratigraphic principles. Lab emphasizes description and interpretation of various types of sedimentological and stratigraphic data.

**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** PREQ: GEOL 0061

## **GEOL 1010 - COMPUTER APPLICATIONS IN GEOSCIENCE**

**Minimum Credits:** 4

**Maximum Credits:** 4

This course will offer students a chance to gain familiarity with computer applications that are commonly used by working geoscientists. The students will work through real-world example problems and implement software solutions to solve geologic problems, produce publication-grade graphs and figures, perform data analysis, utilize geospatial technology (remote sensing, GIS, GPS, and mapping), and become more familiar with the management of small and large data sets.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **GEOL 1061 - GEOMORPHOLOGY**

**Minimum Credits:** 4

**Maximum Credits:** 4

This course is a survey of the major landform features found on the earth's surface. Each landform type is first described qualitatively and then examined in terms of the processes, such as stream flow or glacial activity, which cause its development. The purpose of the course is to familiarize students with geomorphic principles.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: GEOL 0015

## **GEOL 1090 - GEOCHEMISTRY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Geochemistry is an interdisciplinary subject that explores the common ground between the more traditional subject of chemistry and geology. In this context, the purpose of this course is to examine the chemistry of natural waters (both surface and subsurface), radiogenic isotopes, and trace element partitioning through the application of thermodynamic and kinetic models of geologic environments at low to moderate temperatures. The basic objective is to gain a more broad understanding of how chemical reactions control geologic processes.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: GEOL 0200

## **GEOL 1105 - HYDROLOGY**

**Minimum Credits:** 4

**Maximum Credits:** 4

Detailed discussion of all parts of the hydrologic cycle except for ground water. Topics include: precipitation, evaporation, transpiration, interception, surface water runoff, watershed analysis, flood and low-flow frequency analysis, water quality, statistical treatment of hydrologic data.

**Academic Career:** Undergraduate

**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** PREQ: GEOL 0015

## **GEOL 1106 - HYDROGEOLOGY**

**Minimum Credits:** 4

**Maximum Credits:** 4

Topics to be covered include soil moisture and groundwater regimes, water mass budgets, precipitation, evapotranspiration, interception, surface water runoff, hydraulic conductivity of earth materials, principles of groundwater flow, well hydraulics, geology of groundwater occurrence, watershed analysis, statistical treatment of hydrologic data, and water quality. A number of labs will be field exercises. Permission of instructor required if prerequisite is not met.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: GEOL 0015

## **GEOL 1108 - RPT WRITNG & COMP APPLIC IN GEOL**

**Minimum Credits:** 3

**Maximum Credits:** 3

Conventions of scientific writing are introduced and applied to the preparation of geologic reports. Covers use of various types of software and web-based resources used in geologic research and report writing. Poster and oral presentation are required term projects.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: GEOL 0015 and 0061

## **GEOL 1109 - REPORT WRITING AND COMPUTER APPLICATIONS IN GEOL**

**Minimum Credits:** 4

**Maximum Credits:** 4

Report Writing and Computer Applications in Geology. Conventions of scientific writing are introduced and applied to the preparation of geologic reports. Covers use of various types of software and web-based resources used in geologic research and report writing. Poster and oral presentation are required term projects. The lab component is an opportunity to highlight advanced uses of commonly used compute programs. Students benefit from lessons showing advanced uses of these programs to process geologic data.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: GEOL 0061 or GEOL 0200

## **GEOL 1110 - STRUCTURAL GEOLOGY**

**Minimum Credits:** 4

**Maximum Credits:** 4

Mechanical properties of rock deformation, the principles of geologic mapping, and introductory methods of structural analysis. Laboratory work includes solving geologic structural problems using orthographic and stereographic methods, fault motion, and drill hole interpretation.

**Academic Career:** Undergraduate

**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** PREQ: GEOL 0015

## **GEOL 1139 - GEOLOGY OF SOILS**

**Minimum Credits:** 4

**Maximum Credits:** 4

The genesis, classification, properties, and utilization of soil are discussed with emphasis on topics of current interest. Relationships of soils to geology, chemistry, and biology are stressed.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: GEOL 0015

## **GEOL 1150 - SENIOR PROJECT**

**Minimum Credits:** 4

**Maximum Credits:** 4

The student selects, with the project director's assistance, an area of study, prepares a proposal, performs the research, and prepares both written and oral reports to be presented to the GPS faculty.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: GEOL 1108

## **GEOL 1157 - GEOLOGIC FIELD METHODS**

**Minimum Credits:** 4

**Maximum Credits:** 4

Course format emphasizes practical work in field situations with supplemental lectures, and includes introduction to the use of Brunton compass, altimeter, allidade, and field mapping techniques.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: GEOL 0015

## **GEOL 1170 - INTERNSHIPS**

**Minimum Credits:** 1

**Maximum Credits:** 12

Experience with local and state cooperating agencies; also departmental assistantships.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** LG/SU3 Elective Basis

## **GEOL 1202 - INTRODUCTION TO PALEONTOLOGY**

**Minimum Credits:** 4

**Maximum Credits:** 4

Geologically significant fossils are studied with emphasis on paleoecology and evolution. Laboratory work involves



morphological study of fossils, and use of fossils in solving geological and paleontological problems.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: GEOL 0015

## **GEOL 1406 - INTRO TO SOLID-EARTH GEOPHYSICS**

**Minimum Credits:** 4

**Maximum Credits:** 4

Study in the application of gravity, seismology, magnetism and resistivity to determination of the composition and structure of the earth. Geophysical equipment operation, data collection, and interpretation are covered.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: GEOL 0015

## **GEOL 1905 - INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 12

This course permits undergraduates to explore specific topics in the geological sciences. The course is designed in a more flexible format than a directed study, stressing a higher degree of independent library research.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

## **GEOL 1906 - DIRECTED RESEARCH**

**Minimum Credits:** 1

**Maximum Credits:** 12

This course provides the opportunity for under graduates to obtain "hands on" experience in geology by actively interacting with faculty members on research projects.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

## **Healthcare**

### **HLTHCR 1050 - HEALTH CARE EDUCATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is restricted to health care majors only. This course will present the basic principles of education to include objective writing, didactic lab and clinical teaching techniques, and student evaluation as it pertains to health education.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **HLTHCR 1054 - HEALTH CARE MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is restricted to health care majors only. This course will present the various aspects of health management to include basic management principles and their application to the ever-changing health care environment.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **HLTHCR 1060 - COMPARATIVE HEALTHCARE**

**Minimum Credits:** 1

**Maximum Credits:** 1

This course examines the structure of the current health care system in Belgium, with a focus on comparing and contrasting European and American systems. Students will examine the roles of various health care professionals within the systems, and will have the opportunity to discuss issues such as quality of care, access to care, financial considerations, and perception of outcomes with Europeans currently working in or preparing for careers in the health professions. The course includes visits to both acute care and community care facilities serving diverse groups of patients, where students will observe and interact with health care professionals. In addition, students will participate in activities including a service-learning experience that will serve as a basis for a reflection paper and presentation.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **HLTHCR 1061 - SPECIAL TOPICS IN HEALTH CARE**

**Minimum Credits:** 1

**Maximum Credits:** 1

Analysis of a particular health care topic not covered by regularly scheduled courses.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **HLTHCR 1095 - HEALTH CARE INTERNSHIP**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is restricted to health care majors only. This internship will allow the student to explore areas of interest in health care management and education in clinical, administrative or business environments. The experience will be structured to include a preliminary project description, measurable goals/objectives, and a time line of activities. Evaluation will be based upon a journal documenting activities, achievement of goals and objectives, oral and written summation of experience and independent evaluation by faculty.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: HLTHCR 1050 and 1054

## **HLTHCR 1119 - LEGAL ASPECTS OF HEALTH CARE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is restricted to health care majors only. Discusses principles of hospital law and aspects of handling confidential and health records information. Actual cases and statutes are discussed.

**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis

## **HLTHCR 1120 - LANGUAGE OF MEDICINE**

**Minimum Credits:** 3  
**Maximum Credits:** 3  
**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** PREQ: Information Systems Major or Management (Healthcare Management Subplan) Major

## **History**

### **HIST 0120 - WESTERN CIVILIZATION 1**

**Minimum Credits:** 3  
**Maximum Credits:** 3  
This course explores the origins of the Western traditions and the changes which occur in the political, social, economic, intellectual, artistic and other aspects, over time, and with shift in geographical focus. The course begins with the Bronze Age and ends with the Reformation and Age of Exploration. Writing skills are emphasized.  
**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis

### **HIST 0130 - WESTERN CIVILIZATION 2**

**Minimum Credits:** 3  
**Maximum Credits:** 3  
This course explores the changes which occur in Europe from the Age of Absolutism to the late twentieth century. Writing skills are emphasized.  
**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis

### **HIST 0424 - CLASSICAL EAST ASIA**

**Minimum Credits:** 3  
**Maximum Credits:** 3  
This course deals with geography, government society, economy, philosophy, and religions of china, Japan, and Korea from prehistoric times to the 18th century. Emphasizes the role of China and its influence upon its neighbors.  
**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis

### **HIST 0425 - MODERN EAST ASIA**

**Minimum Credits:** 3  
**Maximum Credits:** 3

Presents the history of China, Korea, and Japan in the nineteenth and twentieth centuries. Traces the Western impact on East Asia and the responses of these states as they become modern.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **HIST 0610 - UNITED STATES TO 1877**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is an introductory, lower division, course that develops the history of United States from the 1400s through the Civil War and Reconstruction

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **HIST 0620 - UNITED STATES 1877 - PRESENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to American history from 1877 to the present which emphasizes selected topics on changes in American society and politics as an earlier agrarian society became an industrial-urban one and as the nation took up an ever larger role in world affairs.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **HIST 0750 - HISTORICAL METHODS & THEORIES**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces students to various modes of historical thought and practice, ranging from major historiographical debates to hands-on practical instruction in methods of historical deduction, arguing, reading, and writing. Students will craft historical writing projects such as research papers, book reviews, and bibliographies, and will explore a wide variety of historical writings. This course will be an option for the methodology requirement for the history major. The course is intended to prepare students for upper level history courses, especially HIST 1002 writing seminar for majors.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: Any HIST course or instructor consent

## **HIST 0760 - INTRODUCTION TO PUBLIC HISTORY**

**Minimum Credits:** 3

**Maximum Credits:** 3

The course will introduce students to the theory, methodology, and practice of Public History. Public History is the employment of professional historical methods by public and private agencies to engage communities in shaping the presentation of the past into usable histories. Through the course, students will be able to analyze how Public historians and the Public collaborate to explain individual and collective human behavior through a variety of methods, mediums, and contexts. Moreover, students will learn how Public Historians and the Public create and express historical meaning for their local, state, national, and global communities.

**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** LG/SNC Elective Basis

## **HIST 0770 - HISTORICAL DOCUMENTARY FILM AND FILMMAKING**

**Minimum Credits:** 3  
**Maximum Credits:** 3  
**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** Letter Grade

## **HIST 0780 - FICTION AND NON-FICTION PUBLIC HISTORY WRITING**

**Minimum Credits:** 3  
**Maximum Credits:** 3  
This course will introduce students to five types of writing for Public and Applied Historians: Historical Fiction, such as novels, plays and screenplays; Museum and Exhibit Panels; Characters for First Personal Interpretation; Historical Preservation Applications and Grant Writing. Students will learn the principle for writing and editing for each of these fields.  
**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** Letter Grade

## **HIST 1002 - WRITING SEMINAR FOR MAJORS**

**Minimum Credits:** 3  
**Maximum Credits:** 3  
This course will reinforce the proper techniques of historical research in the development of a major research project.  
**Academic Career:** Undergraduate  
**Course Component:** Seminar  
**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** PREQ: Junior or Senior Status

## **HIST 1023 - SENIOR CAPSTONE IN PUBLIC AND APPLIED HISTORY**

**Minimum Credits:** 3  
**Maximum Credits:** 3  
This course will require the student to engage in a project that will produce a tangible work in Public and Applied History, either for an external agency or as a project created by the student and instructor. Possibilities include Digital History, Oral History, Historic Preservation, Museum Exhibit, Tourism and Urban Development, Historical First Person Interpretation, Interpretive Plans for Historical Societies, Annotated Bibliographies for Genealogic and Research libraries, etc.  
**Academic Career:** Undergraduate  
**Course Component:** Seminar  
**Grade Component:** Letter Grade  
**Course Requirements:** PREQ: HIST 0760 and HIST 0750

## **HIST 1113 - MEDIEVAL EUROPE: 1100-1500**

**Minimum Credits:** 3

**Maximum Credits:** 3

Role of nobility, peasantry, church, development of towns, beginnings of national states, education, and culture.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1127 - MODERN BRITAIN**

**Minimum Credits:** 3

**Maximum Credits:** 3

A seminar that examines the history of Britain in the Twentieth Century. Topics to be discussed include: the British constitution, parliament and parties, the monarchy, the economy, social classes, Britain and the two World Wars, "the troubles" in Ulster, the British Commonwealth, Britain and European Union, and Britain and America.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1170 - RENAISSANCE AND REFORMATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

The revival of classical thought, literature, and art in 14th- and 15th-century Italy; development of humanism with its secular tendencies and emphasis on the human personality; the Northern Renaissance of the 16th century; movements for reform in the church; Luther, Calvin, and the Protestant Reformation; the spread of Protestantism, and the Catholic Reformation (counter reformation).

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1300 - ENGLAND TO 1689**

**Minimum Credits:** 3

**Maximum Credits:** 3

Surveys the development of English social, political, economic and cultural history through the "glorious revolution".

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1342 - RUSSIA SINCE 1860**

**Minimum Credits:** 3

**Maximum Credits:** 3

Pre-Revolutionary Russia, its social structure, political tensions, beginnings of industrialization, 1905 Revolution, Bolshevik Revolution and establishment of the Soviet State, Civil War, the Stalin Period, World War II and the Post War "thaw."

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1381 - EUROPE 1914-1945**

**Minimum Credits:** 3

**Maximum Credits:** 3

History of both Western and Eastern Europe from World War I through the end of World War II, with emphasis on national and ethnic tensions, the failure of democracy, depression, the growth of fascism, international conflicts, and war.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1385 - EUROPE SINCE 1945**

**Minimum Credits:** 3

**Maximum Credits:** 3

History of Western and Eastern Europe: the Postwar reconstruction, communism in Eastern Europe; Europe in the Cold War; economic, social and cultural changes; the Revolutions of 1989.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Attributes:** DSAS Geographic Region General Ed. Requirement, DSAS Historical Analysis General Ed.

Requirement, SCI Polymathic Contexts: Global&Cross Cul GE. Req., SCI Polymathic Contexts: Soc/Behav. GE. Req.

## **HIST 1400 - COLONIAL AMERICA**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is an upper division course that develops the history of the North American English colonies from around 1400 through the early 1760s.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1405 - SLAVERY IN AMERICA, 1619-1865**

**Minimum Credits:** 3

**Maximum Credits:** 3

This reading/discussion seminar will consider a variety of issues relating to the enslavement and emancipation of African-Americans in Colonial America and the U.S., including but not limited to: African origins, the Atlantic slave trade, the middle passage, early colonial slavery, varieties of colonial slavery, slaves and free blacks and the American Revolution, slave religion, slave society, slave families, the politics and law of slavery, slave resistance and rebellions, slaves and free blacks and the Civil War, abolitionism, and abolition.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1409 - THE EARLY REPUBLIC: US 1789-1848**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines the social, ideological, political, diplomatic, geographic, and religious atmosphere that influenced the founding of the United States of America.

**Academic Career:** Undergraduate

**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis

### **HIST 1410 - AMERICAN REVOLUTION 1763-1783**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is an upper division course that considers the history of Revolutionary America between the 1750s and the 1790s.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **HIST 1413 - AMERICAN LABOR HISTORY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This three-credit upper division reading seminar will explore the development and implementation of labor systems and the roles and experiences of American workers within those systems from the Colonial Era to the present.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

### **HIST 1416 - AMERICAN WOMEN'S HISTORY TO 1890**

**Minimum Credits:** 3

**Maximum Credits:** 3

Exploration of women's themes in American history, including changing expectations of gender roles, evolving nature of work and family life, race relations and ethnic difference, and the participation of women in important social and political movements.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

### **HIST 1417 - AMERICAN WOMEN'S HISTORY SINCE 1890**

**Minimum Credits:** 3

**Maximum Credits:** 3

Continuation of topics covered in HIST 1416.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

### **HIST 1430 - CIVIL WAR HISTORY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is an upper division course that considers the impact of the Civil War upon the development of the United States.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis



## **HIST 1505 - FILM AND HISTORY**

**Minimum Credits:** 3

**Maximum Credits:** 3

A seminar on the moving visual image as historical artifact. Examines the impact of film and video on the historical profession. Seeks to provide expertise in the technologies of film-making required for scholarly use of visual resources.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1521 - THE PACIFIC WAR**

**Minimum Credits:** 3

**Maximum Credits:** 3

An examination of the conflict between the United States (and its allies) and the Empire of Japan, 1941-1945. Both American and Japanese perspectives are explored.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1535 - COLD WAR CULTURES**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course explores the political, social, and cultural history of the Cold War in the United States, emphasizing themes such as civil rights and civil liberties, the McCarthy period, the Kennedy and Johnson administrations, the Vietnam War, the rise of the new left and the new right, the Reagan presidency, and the fall of the Soviet Empire.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: HIST 0620 or 0602

## **HIST 1600 - POSTWAR JAPAN**

**Minimum Credits:** 3

**Maximum Credits:** 3

An exploration of the social, political, economic and industrial elements which allowed the Japanese to create an economic superpower on a resource poor archipelago. Using an historical framework, the course will concentrate on the post-World War II era.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1602 - RELIGIONS OF THE WORLD**

**Minimum Credits:** 3

**Maximum Credits:** 3

A seminar that examines the origins, identities, and theological conceptions of the major non-Judeo/Christian religious traditions. The course of study includes the scriptures, cultural contexts and worship practices of these religions as well as the intimate relationship of religion to other aspects of human behavior.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1603 - JUDAISM, CHRISTIANITY AND ISLAM**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is a study of the beliefs and practices of the three major Monotheistic religions. The course examines the historical origins, development, theological concepts and worship practices of what are sometimes called the 'Abrahamic Faiths.' It emphasizes the distinct character of each religion as well as variations within each, and seeks to discern continuity and differences among the three. This course is designed to be a companion to History/RELGST 1602, "Religions of the World," to provide a more searching treatment of the Western religious traditions. The approach combines elements of a seminar, in which student preparation and participation are important, with lecture segments and also makes significant use of video and web-based resources.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1605 - RECONSTRUCTION AND REFORM, 1865-1916**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines the long-range impact of the Northern victory in the Civil War; the restructuring of the economy of the United States, business expansion, the rise of finance capitalism, and various reform movements.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1608 - NOTORIOUS WOMEN I**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines scandalous episodes in 17th-20th century American history, emphasizing issues of sexuality and gender subversion; political and religious extremism; and violent passions leading to controversial and infamous acts. Unlike many courses, this one focuses on "fringe," controversial, or disenfranchised persons, to explore how events and persons, despite their "abnormality," shaped and reflected the cultural and political values of their day. Topics include witchcraft and the occult, utopian communities, religious and political radicals, changing ideas of gender roles and sexuality, and accused murderers. "Typical" women analyzed include Marie Laveau, the Salem "witches," and Lizzie Borden. This course is reading-intensive, and depends on students' active participation.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: LOWER LEVEL HIST COURSE; PLAN: HIST

## **HIST 1609 - NOTORIOUS WOMEN II**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines scandalous episodes in 16th-21st century American and world history, emphasizing issues of sexuality and gender subversion; political and religious extremism; and violent passions leading to controversial and infamous acts. Unlike many courses, this one focuses on "fringe,"

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: LOWER LEVEL HIST COURSE; PLAN: HISTORY

## **HIST 1613 - PEOPLE'S REPUBLIC OF CHINA**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course traces the revolutionary process which brought the communist party of China to power. Changes which have occurred socially, politically, and economically are explored, as are the relations with the countries of Asia, the United States, and various international bodies.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1617 - UNITED STATES IN THE 1960'S**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course explores American politics, culture, and society in the 1960s. Topics include the "Camelot's" years of the Kennedy administration, the great society, the Vietnam War at home, the civil rights movement and the rise of the new left and women's liberation movements, rock and roll, the sexual revolution and the counterculture, and the emergence of new age spirituality.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: HIST 0620 or 0601

**Course Attributes:** DSAS Historical Analysis General Ed. Requirement, SCI Polymathic Contexts: Soc/Behav. GE. Req.

## **HIST 1620 - THE VIETNAM WAR**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to acquaint the student with American involvement in Southeast Asia, in particular with the second Indochina War. Some attempt will be made to provide a background of Vietnamese historical and cultural perspective. The major portion of the course will focus on American policy, at home and abroad, and the manner in which five American presidents tried to deal with the "Indochina problem".

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1624 - AGE OF REAGAN: 1980 & BEYOND**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course deals with the U.S. between World War II and the 21st century, with primary emphasis on the 1980s and 1990s. The struggle between Communism and the "Free World," haunted by the specter of potential nuclear war, shadowed most aspects of U.S. political, cultural, and social life during these decades, and profoundly shaped entertainer-politician Ronald Reagan, who emerged as one of the U.S.'s most iconic presidents. This reading- and discussion-intensive course will discuss Reagan's life, policies and philosophy; the emergence and significance of the New Left and the New Right; and changing ideas about race, family, and sexuality at the center of the "Culture Wars"

of the 1980s and beyond. Topics include civil rights and race relations, changing family and gender roles, AIDS, popular culture, and American foreign policy. We also analyze how Reagan's presidency shaped later political leaders in both major parties.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

**Course Requirements:** PREW: LOWER LEVEL HIST COURSE; PLAN: HISTORY

## **HIST 1679 - MEXICO**

**Minimum Credits:** 3

**Maximum Credits:** 3

Mexican history from the Aztecs to the present. We will discuss the conquest, the Colonial Era, the struggle for independence, nineteenth-century liberalism, the Porfirian dictatorship, the Twentieth-Century Revolution, the formation of a single party state, the temptations of socialism, the oil boom, the debt crisis, and the "crisis of the system" now being experienced by Mexico.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1774 - HISTORY OF CHRISTIANITY**

**Minimum Credits:** 3

**Maximum Credits:** 3

An examination of the foundations of Christianity in Roman times and its worldwide diffusion up to the present. The emergence of differing Christian identities, the experiences of Christians in various societies, and the role of Christianity in significant social and political developments in the West are emphasized.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1800 - DIRECTED READING**

**Minimum Credits:** 1

**Maximum Credits:** 6

The student undertakes a specified course of study, comparable in content to a special topics course, under the direct supervision of a faculty member.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1810 - SPECIAL TOPICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Detailed analysis of a particular topic not covered by regularly scheduled courses.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1820 - DIRECTED RESEARCH**

**Minimum Credits:** 1

**Maximum Credits:** 6

The student undertakes a defined task of research on campus under the supervision of a faculty member of an appropriate department, and in which the fruits of the research are embodied in a thesis, extended paper, laboratory report, or other appropriate form.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1830 - INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 6

The student undertakes, under specific conditions, an independent program of study, research, or creative activity usually off-campus and with less immediate and frequent guidance from the sponsoring faculty member than is typically provided in directed reading and directed research courses.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

## **HIST 1855 - PUBLIC & APPLIED HISTORY INTERNSHIP**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will require the student to perform 126 hours of work for a museum, archives, historical society or government agency to gain experience in some field of public and applied history. The student will read books and articles as assigned by the instructor on a topic related to the internship, keep a journal of all work hours and experience, make a portfolio of any work they create. The student will write a reflective essay that incorporates the scholarship they engage and their work experience.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** Letter Grade

**Course Requirements:** COREQ: HIST 0760

## **HIST 1860 - EXPERIENTIAL LEARNING IN PUBLIC AND APPLIED HISTORY**

**Minimum Credits:** 3

**Maximum Credits:** 3

For students who do not meet the 2.5 overall gpa threshold for History 1850 Internship in Public & Applied History, or for students working independently on a special project. This course will require the student to perform 126 hours of instructor-supervised work on a public history project, conceived by the student and the instructor. The assignments will engage the student in a number of public history practices to further develop skills introduced in History 0750.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: HIST 0760; PLAN: HISTORY

## **Humanities**

### **HUMAN 0500 - DIGITAL TOOLS & TECHNOLOGIES**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to introduce tools and technologies in humanities computing for undergraduate digital research. We will create opportunities for engagement beyond the classroom, as students work together in teams to create websites, produce scholarship, and offer service in the public humanities. The course is modeled on the "Humanities Lab", which emphasizes project-based learning, collaboration, and long-term project development. The course does require some programming, database design, and mark-up instruction, but on a level that assumes no prior knowledge or experience with computers.

**Academic Career:** Undergraduate

**Course Component:** Workshop

**Grade Component:** Letter Grade

## **HUMAN 1350 - MULTIMEDIA AND DIGITAL CULTURE INTERNSHIP**

**Minimum Credits:** 1

**Maximum Credits:** 3

The MMDC Internship course is designed to provide MMDC majors with opportunities to apply discipline-specific knowledge and skills to a modern workplace, thus allowing for a supervised structure for using MMDC theory and practice in a practical, hands-on environment.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** H/S/U Basis

## **HUMAN 1500 - MULTIMEDIA AND DIGITAL CULTURE CAPSTONE**

**Minimum Credits:** 3

**Maximum Credits:** 3

A capstone course in which students will refine their previous digital projects and produce new ones to be assembled in a digital portfolio, suitable for job applications or graduate school applications. Students will also begin their job search by identifying and locating potential employers and targeting their materials for those positions.

**Academic Career:** Undergraduate

**Course Component:** Workshop

**Grade Component:** Letter Grade

**Course Attributes:** Capstone Course

## **Information Systems**

### **IS 0400 - INTRO TO INFORMATION SYSTEMS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to introduce students to contemporary information systems and demonstrate how these systems are used throughout global organizations. The focus of this course will be on the key components of information systems people, software, hardware, data, and communication technologies, and how these components can be integrated and managed to create competitive advantage. Through the knowledge of how IS provides a competitive advantage students will gain an understanding of how information is used in organizations and how IS enables improvement in quality, speed, and agility. This course also provides an introduction to systems and development concepts, technology acquisition, and various types of application software that have been prevalent or are emerging in modern organizations and society.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **IS 1410 - DATABASE MANAGEMENT SYSTEMS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The database-oriented course provides the students with an introduction to core concepts in data and information management. It is centered on the core skills of identifying organizational information requirements, modeling them using conceptual data modeling techniques, converting the conceptual data models into relational data models and verifying its structural characteristics with normalization techniques, and implementing and utilizing a relational database using a multi-user database management system. The course will also include coverage of basic database administration tasks and key concepts of data quality and data security.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: IS 0400

## **IS 1412 - GRAPHIC DESIGN**

**Minimum Credits:** 3

**Maximum Credits:** 3

In this course, students learn how to effectively use Adobe Creative Suite programs: Photoshop, Illustrator, and InDesign. Through a series of lectures and hands-on exercises and projects, you will gain a working knowledge with each of the Adobe applications and learn the advantages they provide. Skills learned in this class allow students to design for printed or electronically displayed materials, such as business logos, brochures, posters, flyers, or websites. These skills are typically needed to pursue a career as a Graphic Designer, but are useful across many different disciplines to make an employee more resourceful, especially Marketing.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **IS 1415 - WEB DEVELOPMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is intended to provide the basis needed for students to become a web professional or a key contributor to web application decisions made by an organization. Students will gain front-end web development skills, positioning them to become a Front-end Web Developer, Web/User Experience Designer, Web System Analyst, or Website/E-commerce site content manager. Knowledge of the web will be critical as no matter what career is pursued, as the web is the platform of the present & future. Proper HTML & CSS conventions will be learned as these web technologies are leveraged in the construction of user interfaces. JavaScript & jQuery will be introduced late in the course to come full circle on the technologies used in front-end web development. Along the way, useful development tools, browser nuances & the evolution of web standards will be discovered by the students as their knowledge of website development grows.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: IS 0400 or CS 0100 or CS 0455 or HUM 0500 or HIST 0760

## **IS 1420 - SYSTEMS ANALYSIS AND DESIGN**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course discusses the processes, methods, techniques and tools that organizations use to determine how they should

conduct their business, with a particular focus on how computer-based technologies can most effectively contribute to the way business is organized and operates. The course covers a systematic methodology for analyzing a business problem or opportunity, determining what role, if any, computer-based technologies can play in addressing the business need, articulating business requirements for the technology solution, specifying alternative approaches to acquiring the technology capabilities needed to address the business requirements, and specifying the requirements for the information systems solution in particular, in-house development, development from third-party providers, or purchased commercial-off-the-shelf packages.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: IS 0400

## **IS 1425 - NETWORKING**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course provides in-depth knowledge of data communications and networking requirements including networking and telecommunications technologies, hardware, and software. Emphasis is upon the analysis and design of networking applications in organizations. Management of telecommunications networks, cost-benefit analysis, and evaluation of connectivity options are covered. Students learn to evaluate, select, and implement different communication options within an organization.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: IS 0400

## **IS 1426 - HARDWARE AND OPERATING SYSTEMS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Information technology professionals will encounter a variety of platforms in their career. The role of the IT professional is to select, deploy, integrate, and administer platforms or components to support the organizations infrastructure. This course covers the fundamentals of hardware and operating systems and how they integrate to form essential components of its systems. In addition, this course positions students to pass the CompTia A+ Certification exam. Students will gain hands-on experience with the many components inside of a computer, along with gaining operating system knowledge to accomplish the many routine tasks of a PC technician or IT specialist.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: IS 0400 or CS 0100 or CS 0455

## **IS 1428 - MOBILE APPS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course teaches students how to take a mobile application from the ground to market by developing a mobile strategy, weighing design options, and leveraging technologies to build a desired application. Students will learn about the different components that form the mobile landscape and how we came to the rapid success that is seen today. Students will become familiar with the most widely adopted mobile platforms, the differences they have between them and learn about the distribution channels these apps must travel through before they are available in the marketplace. Students will design and prototype mobile apps using a variety of tools. Lastly, students will go through the application building process learning the concepts behind building basic Android mobile applications.



**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** PREQ: IS 1420

## **IS 1435 - IS PROJECT MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course allows students to experience the fundamentals of project management & demonstrates its value in helping organizations successfully complete projects. The course traverses through the Systems Development Life Cycle by understanding and applying techniques from different project management methodologies, such as the Waterfall & Agile methods. Creation of key project management deliverables, developed by student teams, emphasizes these learning objectives.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: IS 1420

## **IS 1440 - QUALITY ASSURANCE**

**Minimum Credits:** 3

**Maximum Credits:** 3

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: IS 1420

## **IS 1441 - BUSINESS INTELLIGENCE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course provides an introduction to Business Intelligence, including the processes, methodologies, infrastructure, and current practices used to transform business data into useful information and support business decision-making. The development and use of data warehouses and data marts to support business analytics is discussed. Data mining, visualization, and statistical analysis along with reporting options such as key performance indicators, management dashboards and balanced scorecards will be covered. Text and web mining are discussed, and the application of selected data mining techniques to business decision making situations is illustrated. Technologies utilized in the course may include SAP Business Warehouse, SAP Business Objects, Crystal Reports, RapidMiner, Tableau, SAS, and R.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: IS 1410

## **IS 1445 - IS SPECIAL TOPICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course involves a detailed analysis of particular topic not covered by regularly scheduled courses.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **IS 1450 - ENTERPRISE APPLICATIONS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines the role of enterprise systems in organizations. It will focus on business processes, business process integration, and information technology for enabling the integration. This is necessary for effective planning and control of the organization to better utilize its resources and knowledge to obtain a competitive advantage. The course also covers selection and implementation of ERP systems. A part of the course will be set aside for demonstration and 'hands on' exercises with one of the available ERP software.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: IS 0400

## **IS 1460 - HEALTH INFORMATION MANAGEMENT APPLICATIONS 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will introduce students to the application of clinical information systems utilized in modern healthcare. Healthcare processes and concepts will be reinforced through a hands on learning environment, enhancing a students familiarity with a healthcare information system. Scenario based learning will push students to analytically come upon solutions and apply them in this simulated environment.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **IS 1461 - HEALTH INFORMATION MANAGEMENT APPLICATIONS 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

Building upon HIM Application 1 experiences, students will explore various types of clinical information systems that are utilized in the healthcare industry. Students will perform common tasks within simulated environments to gain practical knowledge of these multi-faceted systems.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: IS 1460

## **IS 1488 - IS INTERNSHIP**

**Minimum Credits:** 3

**Maximum Credits:** 3

The IS internship uses the workplace as a living laboratory for students to study in depth about the IS discipline. An internship is primarily an academic experience, not a part-time or full-time job, in which students work for a firm or organization under a supervisor and faculty sponsor to achieve specific education objectives. Thus, a student earns degree credits for what is learned, not for work performed for the internship supervisor. Instructor consent required.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** H/S/U Basis

## **IS 1489 - IS INDEPENDENT STUDY**

**Minimum Credits:** 3

**Maximum Credits:** 3

The student undertakes, under specific conditions, an independent program of study, research, or creative activity, usually off-campus and with less immediate and frequent guidance from the sponsoring faculty member that is typically provided in directed reading or directed research courses.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

## **Instruction and Learning**

### **IL 1900 - INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 3

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SNC Elective Basis

## **Instructional Technology**

### **IT 1101 - INSTRUCTIONAL TECHNOLOGY FOR 21ST CENTURY LEARNING ENVIRONMENTS**

**Minimum Credits:** 2

**Maximum Credits:** 2

The computer is becoming an increasingly important tool for teaching and learning as computers with considerable capabilities proliferate in K-12 schools. In this course you will thus learn about computing in general and about computer-based education in particular. The course will examine other tools available to teachers, such as digital cameras, scanners and so forth. The accompanying labs will emphasize hands-on learning of these teacher tools.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

### **IT 1145 - INSTRNL TECHN LGY SCED-ENGLISH**

**Minimum Credits:** 2

**Maximum Credits:** 2

Computers are making a dramatic impact on teaching and learning. This course deals with how to use the computer and related technologies in the secondary education English classroom. The student will learn how to use computers for instructional purposes, to evaluate educational software designed for use in the secondary English classroom, to utilize the computer as a local and global communications tool, and to develop materials that incorporate communications technology for the teaching of English.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: IT 1101

### **IT 1161 - INSTRNL TECHN SEC ED-SOC STDS**

**Minimum Credits:** 2

**Maximum Credits:** 2

This course will give the student the opportunity to become familiar with instructional technology appropriate for secondary education social studies. The student will extend the skills and broaden the concepts learned in IT 1101 with an emphasis on social studies education. The student will learn to use computers for instructional purposes, to evaluate educational software designed for use in the classroom, and to utilize the computer as a communications tool. This will involve web-based and other multimedia project work relevant to the social studies classroom.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: IT 1101

## **IT 1165 - INSTRC TECHNOLOGY SCED-SCIENCE**

**Minimum Credits:** 2

**Maximum Credits:** 2

This course will give the student the opportunity to become familiar with instructional technology appropriate for secondary education science. The student will extend the skills and broaden the concepts learned in IT 1101 with an emphasis on science education. The student will learn to use computers for instructional purposes, to evaluate educational software designed for use in the secondary science classroom, and to utilize the computer as a communications tool. This will involve web-based and other multimedia project work relevant to the science classroom.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: IT 1101

## **IT 1171 - INSTRNL TECHN SEC ED-MATH**

**Minimum Credits:** 2

**Maximum Credits:** 2

This course will allow the student to become familiar with instructional technology appropriate for secondary education mathematics. The student will extend the skills and broaden the concepts learned in IT 1101 with an emphasis on math education. The student will learn to use computers for instructional purposes, to evaluate educational software, to utilize the computer as a local and global communications tool, and to develop materials that incorporate communications technology for the teaching of mathematics. This will involve web-based and other multimedia projects.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: IT 1101

## **IT 1172 - CALCULATORS IN MATH INSTRUCTN**

**Minimum Credits:** 1

**Maximum Credits:** 1

This course is designed to provide prospective mathematics teachers with expertise in the appropriate use of calculators, including graphing calculators, for teaching mathematics at the secondary level. Pedagogical and content knowledge are integrated within the context of technology usage and discussion of current reform efforts and issues.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade  
**Course Requirements:** PREQ: IT 1101

## **Interdisciplinary Studies**

### **INDIST 0004 - CAREER EXPLORATION AND PLANNING**

**Minimum Credits:** 1

**Maximum Credits:** 1

This course will focus on major theoretical approaches to career development and the decision-making process. Its goals are to help students identify and explore their academic and career options and maximize the college experience to achieve their post-graduate plans.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

**Course Requirements:** CREQ: Plan must be Undeclared and level must be Freshman or Sophomore.

## **Italian**

### **ITAL 1033 - DANTE'S DIVINE COMEDY**

**Minimum Credits:** 3

**Maximum Credits:** 3

A reading of Dante's divine comedy in English, using a bilingual edition.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **ITAL 1181 - DANTE'S DIVINE COMEDY**

**Minimum Credits:** 3

**Maximum Credits:** 3

A reading of Dante's divine comedy in English, using a bilingual edition.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **Journalism**

### **JOURNL 0053 - INTRODUCTION TO JOURNALISM**

**Minimum Credits:** 3

**Maximum Credits:** 3

A course designed to provide both philosophical and historical foundations for consumers of mass media and those wishing to practice journalism. Provides an overview of American journalism-its underlying philosophies, history, theories, functions and ethics.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **JOURNL 1132 - REPORTING 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

A course in news gathering and reporting with coverage of Richland township supervisors' meetings or in-class exercises. Students are called upon to produce a range of journalistic writing, including hard news and human interest. Emphasis on deadline writing; reporter initiative; and clear and concise writing. Associated press style.

**Academic Career:** Undergraduate

**Course Component:** Workshop

**Grade Component:** LG/SU3 Elective Basis

## **JOURNL 1133 - MAGAZINE WRITING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students produce four or five magazine articles with emphasis on student ideas. Interviewing and information gathering skills are developed. The objective is publication with research of magazine markets. Associated press style.

**Academic Career:** Undergraduate

**Course Component:** Workshop

**Grade Component:** LG/SU3 Elective Basis

## **JOURNL 1134 - FEATURE WRITING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students produce weekly feature articles based on their ideas. Emphasis on student initiative and writing skills, including analysis of the best of American journalism. Consistent productivity is tested. Associated press style.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **JOURNL 1135 - EDITORIAL WRITING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Designed to introduce journalism students to an area of specialization in communications--the editorial. Emphasis on writing opinion for newspaper and electronic media and discussion of editorial policy-making, the means of persuasion and the roles of syndicated and local columns, editorial cartoons, letters to the editor and journals of opinion.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **JOURNL 1136 - COPYREADING/EDITING**

**Minimum Credits:** 3

**Maximum Credits:** 3

A workshop in which students receive editing and headline writing experience of the type they would receive in a daily newspaper newsroom. The emphasis is on "doing," with deadlines and demands for accuracy in a job potential field consistently in demand.

**Academic Career:** Undergraduate

**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis

## **JOURNL 1137 - NEWSPAPER LAYOUT/DESIGN**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students study and utilize a wide variety of newspaper lay out-makeup styles in this workshop. Speed, accuracy, and imagination are combined to produce attractive, readable page designs.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **JOURNL 1138 - REPORTING 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

A rigorous course in which students accept responsibility for beat coverage. Students produce two stories a week with a minimum of errors. Emphasis on productivity, initiative and error-free writing under deadline pressure. Associated press style.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: JOURNL 1132

## **JOURNL 1140 - PHOTOGRAPHY IN COMMUNICATIONS**

**Minimum Credits:** 3

**Maximum Credits:** 3

A workshop in newspaper photography emphasizing coordination with writers and editors, artistic aspects, productivity and digital darkroom.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **JOURNL 1142 - JOURNALISM PRACTICUM**

**Minimum Credits:** 1

**Maximum Credits:** 1

Award of academic credits based on experience. Course available to members of the advocate, WUPJ radio station, editorial staff of backroads, and staff of the UPJ yearbook, with faculty consultation.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** H/S/U Basis

## **JOURNL 1144 - PUBLIC RELATIONS 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students study the concepts and practices of internal and external public relations. Along with contemporary theory, the course stresses writing, communication, layout and design. Writing skills expected.

**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis

## **JOURNL 1145 - BROADCAST JOURNALISM**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students are introduced to broadcast journalism through traditional classroom instruction and writing of stories for radio and television formats.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **JOURNL 1146 - PUBLIC RELATIONS 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students study public relations taking a problem-solving approach. The workshop method enables students to experience various public relations "hands on."

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: JOURNL 1144

## **JOURNL 1147 - THE MEDIA AND THE LAW**

**Minimum Credits:** 3

**Maximum Credits:** 3

A study of the legal framework in which the mass media-law operates.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **JOURNL 1171 - CONFERENCE IN WRITING**

**Minimum Credits:** 3

**Maximum Credits:** 3

The students are required to produce a 12,000-word writing project, a portion or all of which will be submitted for publication. Journalism students are required to write nonfiction projects, which might include a series of newspaper stories, one or more magazine articles, or a lengthy investigative reporting project. Non-journalism students may submit works of fiction (short stories, novel, etc.). Independent study format.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

## **JOURNL 1173 - INTERNSHIP**

**Minimum Credits:** 3

**Maximum Credits:** 12

3-, 6-, 9-, and 12-credit journalism internships have been established with area media, businesses, and organizations in



order to provide a practical experience supplement to the academic program. Six internship credits may be applied to the journalism major. The credit value of each internship program is determined by the number of working hours involved.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** H/S/U Basis

## **Justice Administration and Criminology**

### **JAC 0100 - COMMUNITY LAB PROJECT**

**Minimum Credits:** 0

**Maximum Credits:** 3

The community lab project provides JAC students experiential learning opportunities through job-shadowing, field trips, workshops, demonstrations, web-based certifications, service projects, and additional community-based activities. JAC Majors will be required to earn 3 credits of JAC 0100. The course will be offered every semester on a pass/fail basis and be worth 0.5 credits.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** H/S/U Basis

**Course Requirements:** UPJ JAC Majors

### **JAC 0200 - CORRECTIONS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is an overview of the systems and practices of American criminal corrections, including the historical development of correctional practices, contemporary correctional structures and treatment, the experience of prisoners, alternatives to incarceration, punishment philosophies, and some of the most pressing problems and controversies in modern corrections.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **JAC 0265 - INEQUALITY, CRIME, AND JUSTICE**

**Minimum Credits:** 3

**Maximum Credits:** 3

Issues of crime and justice with respect to race, ethnicity, gender, and class will be examined from the perspectives of law enforcement, corrections, the legal process, and different socio-demographic groups in society. This course will explore the challenges of addressing crime in a society stratified by race, ethnicity, gender, and class, specifically looking at the experiences of socially disadvantaged groups (as both victims and perpetrators), the applicability of criminological theories to minority criminality, and the impact of inequality on the law-making process, the content of the law, the administration and enforcement of the law, and the quality of justice afforded socially disadvantaged groups.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SOC 0100 or JAC 0715

### **JAC 0400 - BASIC COMPUTER FORENSICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is an introduction to the theory and principles of computer forensics, including search and seizure procedures, handling of evidence, hard drives as physical devices, file systems, and information storage.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **JAC 0715 - INTRODUCTION TO CRIMINAL JUSTICE**

**Minimum Credits:** 3

**Maximum Credits:** 3

The purpose of this course is to introduce students to the numerous elements of the American criminal justice system, from defining and measuring crimes to the major components of the criminal justice system (police, criminal courts, and corrections). By exploring law and society in general, including the history, structure, function, and contemporary problems faced by each of the elements of the criminal justice system, the goal of this course is to create a fuller understanding of the criminal justice system, the ways it impacts our lives on a daily basis, and potential avenues of reform.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **JAC 0720 - CRIMINOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Criminology refers to the scientific study of crime, its causes, and social responses to it. This course provides a broad overview of the study of crime. It examines the legal definitions and elements of crime; surveys the major categories of crime, i.e. predatory and nonpredatory acts; reviews the major measures of crime; identifies the major correlates of crime, reviews and assesses the major theories of crime; differentiates types of offenders and explores various dimensions of their offending; and examines and evaluates the working of the criminal justice system.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SOC 0100 or SOC 0010 or JAC 0715 or SOC 0715

## **JAC 0725 - CRIMINAL COURT PROCEDURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This introductory course provides a broad overview of the role of courts in the American criminal justice system, including judicial procedure, organization, and personnel. The course will focus on how courts function and the elements of courts, trials, and criminal law. Students will explore theories of justice, dispute resolution, and criminal responsibility; learn about the roles played by the major participants in the process of adjudication and what happens at each stage of the criminal process; and discuss the influence of current political and social debates on the operation of the criminal courts.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **JAC 0726 - DIGITAL AGE CRIME AND JUSTICE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to introduce students to the impact of technology and science on the criminal justice system. It includes an overview of the use of technology to commit crimes like fraud, money laundering, identity and other theft, and child pornography, as well as a focus on technology in protecting the public (crime mapping, locating and tracking illicit activities, detecting weapons, explosives, and contraband, etc.), And science and technology in confirming the guilty and protecting the innocent (DNA analysis, biometrics, processing digital evidence, etc.).

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **JAC 0735 - CONTEMPORARY ISSUES IN CRIMINAL JUSTICE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course offers an in-depth analysis and examination of current controversies in the criminal justice system, including contemporary criminal justice policy, application of the law, and criminal justice ethics. Students will be expected to acquire an informed understanding of the history and current status of these debates, the arguments being made on all sides, and the evidence used in support of each position in order to be able to formulate, articulate, and defend an informed opinion on these current controversies.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **JAC 1150 - SOCIOLOGY OF LAW**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to introduce students to the sociological study of the law and legal institutions through an exploration of legal culture and the rule of law. The purpose of the course is to gain an understanding of how scholars have examined law-related phenomena to increase the understanding of broader social and cultural issues that influence the law and are influenced by the law. Students will be expected to gain an appreciation of the law as a complex, dynamic process that is part of the culture and society in which it exists.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **JAC 1400 - ADVANCED COMPUTER FORENSICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course includes hands-on instruction in a computer laboratory. Topics include wiping and verifying target media, identifying and recovering windows artifacts, and forensics software tools such as FTK.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: JAC 0400

## **JAC 1433 - JUVENILE DELINQUENCY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Course provides an overview to the field of juvenile delinquency. Topics covered include theories and research on causes of juvenile delinquency; juvenile treatment under law; correctional philosophy and practices in juvenile justice; and impacts of juvenile criminality upon the rest of society. Students emerge from the course with knowledge of causes, prevention, treatment, and control of juvenile delinquency and should be prepared to move into more detailed study of this subject.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SOC 0100

## **JAC 1700 - JUSTICE ADMINISTRATION AND CRIMINOLOGY SENIOR SEMINAR**

**Minimum Credits:** 3

**Maximum Credits:** 3

In this required senior capstone course, students will draw on previous coursework and internship experience to produce a research project on a relevant issue in justice administration and criminology.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PLAN: Justice Admin and Criminology, LVL: Senior

## **JAC 1801 - INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 6

The student undertakes, under specific conditions, an independent program of study, research, or creative activity usually off-campus and with less immediate and frequent guidance from the sponsoring faculty member than is typically provided in directed reading and directed research courses.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: JAC 0715

## **JAC 1803 - DIRECTED READING**

**Minimum Credits:** 1

**Maximum Credits:** 6

The student undertakes a specific course of study, comparable in character to a regular course, under the direct supervision of a faculty member.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: JAC 0715

## **JAC 1810 - SPECIAL TOPICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Detailed analysis of a particular topic not covered by regularly scheduled courses.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **JAC 1900 - JUSTICE ADMINISTRATION AND CRIMINOLOGY PRACTICUM**

**Minimum Credits:** 1

**Maximum Credits:** 6

Students will gain experience in a public or private organization or agency appropriate to their fields of interest. Supervision by the host agency and faculty advisor. Students must write a summary and analysis of their field experiences.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** H/S/U Basis

## **Management**

### **MGMT 0500 - PRINCIPLES OF MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introductory course in management. This course is designed to enhance the student's knowledge and understanding of the four primary processes of management: planning, organizing, leading and controlling, with special emphasis on the planning and leading processes. We will also explore the major schools of management thought, the social role of business, managerial decision making processes and managerial ethics. Upon completion of the course the student should have a clear understanding and knowledge of the current managerial environment, its scope and complexities.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **MGMT 1000 - MANAGEMENT POLICY**

**Minimum Credits:** 3

**Maximum Credits:** 3

An integrative course that focuses on strategic planning, policy formulation, and corporate decision making. Comprehensive cases are used to give the student practice in applying business theories to the solution of management problems.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MGMT 1520

### **MGMT 1435 - MANAGERIAL PROJECT MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces students to the fundamentals of project management and demonstrates its value in helping organizations successfully complete projects. The course will cover topics such as the project life cycle, and other valuable tools and techniques related to project management. The use of MS project will also be included.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: MGMT 0500

### **MGMT 1510 - HUMAN RESOURCES MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

Advanced course in management. A study of current policy and practices in human resource management. Topics include recruitment, selection, training, performance appraisal and compensation. Special attention is given to the legal environment surrounding human resource management.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **MGMT 1515 - RECRUITMENT, SELECTION, RETENTION, AND SEPARATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines key concepts and techniques for developing a process to recruit and select qualified staff and create an environment that encourages high performers to continue working for your organization. The course will also explore some key elements that an organization should consider in situations where an employment relationship must come to an end.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MGMT 0500

## **MGMT 1520 - ORGANIZATIONAL BEHAVIOR**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course integrates concepts from the behavioral sciences into the study of human behavior in business organizations. The course is designed to: enhance the student's knowledge and understanding of individual, group and organizational processes which affect human behavior in the formal organization (personality, perception, motivation, stress, power and politics, etc.); Enhance the student's knowledge and understanding of managerial techniques and applications that can be used to improve both individual and organizational performance (job design, MCO, employee selection, etc.).

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MGMT 0500

## **MGMT 1525 - EMPLOYMENT LAW AND NEGOTIATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course surveys the legal factors that affect the general practice of human resources management in both the private and public sectors, and in both union and non-union environments.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MGMT 0500

## **MGMT 1530 - OPERATIONS AND SUPPLY CHAIN MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

Advanced course in management. The focus is on solving production and operational problems using both quantitative and qualitative techniques. Topics include total quality management, statistical process control, inventory control, scheduling, linear programming, PERT, and CPM.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MGMT 0500 and (MATH 0121 or MATH 0120); CREQ: STAT 1040 or STAT 1100

## **MGMT 1535 - ORGANIZATIONAL CHANGE MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MGMT 1520

## **MGMT 1545 - COMPENSATION, BENEFITS AND PERFORMANCE MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course familiarizes students with the concepts of compensation management and employee benefits within the wider context of human resource management. The main components of compensation management are presented through: pay survey, job evaluation, and the design of pay structures. It also provides students with an understanding of the performance management process which includes the primary purposes: strategic, administrative, and developmental.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: MGMT 0500

## **MGMT 1550 - GLOBAL ISSUES IN BUSINESS MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course focuses on a variety of global business issues. The specific issues addressed will vary by instructor, but include global trends in business, international competition, and cultural issues associated with global business.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MGMT 0500

## **MGMT 1610 - QUALITY MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is an introduction to the study of total quality management, its philosophies and tools. More specifically, the quality dimensions of products and services, the impact of quality on productivity, and the quality philosophies of Deming, Juran, and Crosby will be examined. The student will become familiar with problem solving and some of the primary tools of quality management to include: brain storming, histograms, flow charts, cause and effect diagrams, Pareto Charts and especially control charts for variables and attributes.

**Academic Career:** Undergraduate

**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** PREQ: MGMT 0500 and STAT 1040

## **MGMT 1683 - MANAGEMENT INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 6

The student undertakes, under specific conditions, an independent program of study, research, or creative activity, usually off-campus and with less immediate and frequent guidance from the sponsoring faculty member than is typically provided in directed reading and directed research courses.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

## **MGMT 1686 - MANAGEMENT INTERNSHIP 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

The management internship uses the work place as a living laboratory for students to study in depth a managerial discipline. An internship is primarily an academic experience, not a part-time or full-time job, in which students work for a firm or organization under a supervisor and faculty sponsor to achieve specific educational objectives. Thus, a student earns degree credits for what is learned, not for work performed for the internship supervisor.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** H/S/U Basis

## **Marketing**

### **MRKT 0600 - PRINCIPLES OF MARKETING**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introductory course in marketing. Examines the role of marketing in our society and within the organization. Emphasis is placed on marketing mix issues: product, place, price, and promotion.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **MRKT 1600 - CONSUMER BEHAVIOR**

**Minimum Credits:** 3

**Maximum Credits:** 3

An advanced course in marketing which focuses on how consumers make purchase decisions in a market-oriented society. The course then builds upon this knowledge by examining how managers can use this information to develop marketing strategies for their own products.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MRKT 0600



## **MRKT 1610 - MARKETING RESEARCH**

**Minimum Credits:** 3

**Maximum Credits:** 3

An intensive "hands-on" course which integrates the concepts learned in undergraduate studies of marketing and statistics. The course is designed to enhance understanding of why and how organizations conduct market research to develop and deliver innovative goods and services.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MRKT 0600

## **MRKT 1620 - MARKETING TOOLS AND ANALYTICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

An intensive hands on course that identifies the key statistical metrics used in the Marketing field, and then provides students with concrete real world experiences in the analysis of these metrics associated with marketing analytics and ROI for investment in traditional and new owned, paid and earned media channels. The course will examine statistical theory and traditional metrics such as awareness and market share and then examine cutting edge statistical tools such as the suite of metrics available in Google Analytics.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MRKT 0600

## **MRKT 1630 - INTEGRATED DIGITAL MARKETING**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is an exploration of various potential applications of internet marketing in addition to the evolving role of e-commerce. Topics include web business models, online branding, creating community and commitment, online research and the impact of the internet on B2C and B2B enterprises. It should be noted that this is a marketing strategy course. It does not involve hands-on applications of the technology, but it does assume a user-based understanding of the web and associated information technology and the ability to use the internet for research purposes.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MRKT 0600

## **MRKT 1635 - SOCIAL MEDIA WAR ROOM**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is an advanced course that builds on MRKT 1620 and 1630 and provides an intense immersion in the management of a social media presence for a brand. The course essentially places students in a real world simulation of the day to day operation of an array of social media applications and best practices. Students will work as content marketing teams to promote and generate earned media for community and corporate events as a capstone of the course. This course may be taught in a special environment like those found at digital agencies.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MRKT 0600

## **MRKT 1640 - INTERNATIONAL MARKETING**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is an advanced course that explores the opportunities for organizations to expand their operations globally, and the marketing challenges that are associated with this expansion. The course helps students understand the political, legal, social, cultural, economic, and technological factors related to international marketing, and provides strategies for addressing each of the issues.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Grad LG/SU3 Basis

**Course Requirements:** PREQ: MRKT 0600

## **MRKT 1645 - SALES MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course begins with an introduction to the field of sales and sales management. We will explore ethical issues in selling and some specific communication principles related to the sales function. You will then learn the elements of the sales cycle from determining who to call, to planning the sales call, to actually making the sales call and completing follow up activities. Time will be devoted to learning how to respond to objections and developing your negotiating skills. You will have the opportunity to put these skills into action through a series of role play exercises.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MRKT 0600

## **MRKT 1650 - PRODUCT MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

An advanced course in marketing focusing on the development and management of products, including brand management and new product development.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: MRKT 0600 and MRKT 1610

## **MRKT 1655 - PROMOTION MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

An advanced course in marketing focusing on the role of marketing communications, with emphasis on the development of an integrated marketing communications campaign.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MRKT 0600 and MRKT 1610

## **MRKT 1660 - PRICING MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

An advanced course in marketing combining economic and marketing principles with accounting and financial information to analyze the pricing policies used by real world organizations.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: MRKT 0600 and MRKT 1610

## **MRKT 1665 - DISTRIBUTION MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

An advanced course in marketing focusing on management of distribution channels, with emphasis on studying channels of existing 'real world' organizations.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: MRKT 0600 and MRKT 1610

## **MRKT 1670 - MARKETING SPECIAL TOPICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Detailed analysis of a particular topic not covered by regularly scheduled courses.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MRKT 0600

## **MRKT 1671 - MARKETING INTERNSHIP 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

The marketing internship uses the work place as a living laboratory for students to study in depth a marketing discipline. An internship is primarily an academic experience, not a part-time or full-time job, in which students work for a firm or organization under a supervisor and faculty sponsor to achieve specific educational objectives. Thus, a student earns degree credits for what is learned, not for work performed for the internship supervisor.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** H/S/U Basis

**Course Requirements:** PREQ: MRKT 0600

## **MRKT 1672 - MARKETING MADE IN ECUADOR TO THE WORLD**

**Minimum Credits:** 1

**Maximum Credits:** 1

Currently, Ecuador is in the midst of building its brand to the world and is seen as the crucible of the chocolate industry. Ecuador's stunning volcanic peaks and rich tropical rainforest offer some of the greatest destinations on the

planet along with unique and marketable resources of foods and culture. This course is designed to give you an understanding of Ecuador's natural and cultural assets including art, chocolate, ancient cities and adventure destinations and how to best market them to the world. This will be a hands-on experience where you will make your own chocolate, pottery and help locals prepare native crops as well as design promotions and refine and position their natural and cultural offerings for the global market.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MRKT 0600

## **MRKT 1673 - SOCIAL MEDIA FOR SUSTAINABLE AMAZON**

**Minimum Credits:** 3

**Maximum Credits:** 3

To give a greater voice to the importance of the sustainable development Amazon to the resident peoples and the planet, this course is designed to train students as new cadre of communicators that can share in a fresh and rich way the value and contribution this complex natural resource, endemic cultures, regional assets and ecosystem has for us all. The course gives the student a deep understanding of area media and social channels, their mission and goals and the types of stories and imagery employed in shaping the story of Ecuador's culture, resources, bio-diversity and treasures found in the Amazon. Additionally, they will learn and build stories and promote value of the rich biological and economic resources and enterprises ranging from new sources of caffeine, guayusa, to cultural-tourism. These stories will be designed for dissemination through a wide range of media channels and would include development of social media content, infographics, video and slide shows. Students will select an elements of the rainforest, enterprise and/or community and share it through digital channels (Facebook, Pinterest, Instagram, Periscope, Twitter, YouTube) created to highlight these stories and value to audiences in North American audiences. Their results will be posted on websites and social media for The Andes Field School and partner agencies. At the end of the course, students will have built a rich portfolio of content and present it to their peers, faculty and local representatives as a tool for expanding and extending the remarkable stories and resources found in Amazonia.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **MRKT 1675 - CONSUMER BEHAVIOR**

**Minimum Credits:** 3

**Maximum Credits:** 3

An advanced course in marketing which focuses on how consumers make purchase decisions in a market-oriented society. The course then builds upon this knowledge by examining how managers can use this information to develop marketing strategies for their own products.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MRKT 0600

## **MRKT 1680 - ENTREPRENEURS IDEA LAB**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed as a pragmatic approach to converting a new idea into a new venture. Students are led through a step-by-step process of developing an idea in context with a beachhead market so that it will be commercially viable. Students will present new ideas, select the best and work on the strongest innovations for presentation to local entrepreneurs at the end of the course. Local business experts and business owners will mentor students during the

course.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **MRKT 1690 - MARKETING MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

An advanced course in marketing focuses on the major decisions facing marketing professionals in their attempt to meet consumer demand while achieving corporate objectives. Emphasis on case analyses, and the development of a marketing plan for a "real world" client.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MRKT 1600 and MRKT 1610 and MRKT 1620

## **Mathematics**

### **MATH 0001 - ALGEBRA 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is a beginning algebra through intermediate algebra course. This course is intended to develop student proficiency and confidence in the basic algebraic skills such as simplifying algebraic expressions, solving equations, factoring, and simplifying rational and radical expressions.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** H/S/U Basis

### **MATH 0002 - COLLEGE ALGEBRA**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is intended for students who have a good background in elementary and intermediate algebra. Topics include a review of the topics in math 0001, the Cartesian plane and graphing, systems of equations, and linear quadratic, exponential, and logarithmic functions. This course can be used to prepare students for pre-calculus and business calculus as well as to satisfy the general education mathematics quantitative reasoning requirement. The prerequisite can be met by placement.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0001 or Math Placement Score (46 or greater)

### **MATH 0004 - PRE-CALCULUS: FUNCTIONS AND TRIGONOMETRY**

**Minimum Credits:** 4

**Maximum Credits:** 4

This course provides the necessary background for math 0221. Topics include an extension of the topics in math 0002, polynomial and rational functions and their behavior, analytic and calculator graphing, and trigonometry. The prerequisite can be met by placement.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0002 or Math Placement Score (61 or greater)

## **MATH 0071 - STRUCTURE OF THE REAL NUMBER SYSTEM**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course begins with the counting numbers and gradually builds the real number system. The structure of the real number system is explored through problem solving with a focus on number operations and properties, as well as set theory and number theory. The prerequisite can be met by placement.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0001 or 0031 or Math Placement Score (46 or greater)

## **MATH 0080 - FUNDAMENTALS OF MODERN MATHEMATICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed primarily for students whose interests lie outside the natural sciences. It emphasizes problem solving approaches common to many mathematical areas. Topics include geometry, measurement, probability, and statistics. The prerequisite can be met by placement.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0001 or 0031

## **MATH 0121 - BUSINESS CALCULUS**

**Minimum Credits:** 4

**Maximum Credits:** 4

This course is designed for students in business, economics, and other social sciences. It introduces the basic concepts of limits, continuity, differentiation, integration, and optimization. Applications to the social sciences, especially business and economics are emphasized. The prerequisite can be met by placement.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0002 or Math Placement Score (61 or greater)

## **MATH 0212 - INTRODUCTION TO BIOSTATISTICS**

**Minimum Credits:** 4

**Maximum Credits:** 4

In this course the beginning biology student learns the concepts of probability and statistical inference from a non-calculus point of view. Applications are emphasized. Topics include probability distributions, sampling distributions, confidence intervals, hypothesis testing, and analysis of variance. Further topics such as correlation and regression analysis may be covered if time permits.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0004

## **MATH 0221 - ANALYTIC GEOMETRY AND CALCULUS 1**

**Minimum Credits:** 4

**Maximum Credits:** 4

This is the first of a sequence of three basic calculus courses intended for mathematics, engineering technology, computer science, and natural sciences students. Topics include the derivative and integral of functions of one variable and their applications. Trigonometric functions are included. The prerequisite can be met by placement.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0004 or Math Placement Score (76 or greater)

## **MATH 0231 - ANALYTIC GEOMETRY AND CALCULUS 2**

**Minimum Credits:** 4

**Maximum Credits:** 4

This is the second of a sequence of three basic calculus courses intended for engineering, mathematics, statistics, and science students. It covers the calculus of transcendental functions, techniques of integration, sequences and series.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0221 or 0220

## **MATH 0241 - ANALYTIC GEOMETRY AND CALCULUS 3**

**Minimum Credits:** 4

**Maximum Credits:** 4

This is the third of a sequence of three basic calculus courses intended for engineering, mathematics, statistics, and science students. It covers vectors and surfaces in space and the calculus of functions of several variables including partial derivatives and multiple integrals; also conic sections, parametric curves and polar coordinates. Of time, Green's and Stoke's theorems, may be covered.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0231 or 0230

## **MATH 0401 - DISCRETE MATHEMATICAL STRUCTURES**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is intended for students contemplating a major in mathematics or computer science. Topics include the basic concepts of set theory, logic, combinatorics, Boolean algebra, and graph theory with an emphasis on applications. The prerequisite can be met by placement.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0001 or 0031 or Math Placement Score (46 or greater)

## **MATH 1012 - INTRODUCTION TO THEORETICAL MATHEMATICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is an introduction to the theoretical treatment of sets, functions, relations, partitions, compositions, add inverses. Classwork and homework will concentrate on the writing and understanding of proofs and theorems.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (MATH 0221 or 0220) and 0401

## **MATH 1019 - TECHNICAL SPEAKING IN MATHEMATICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to teach oral presentation theories and techniques specific to situations involving mathematics. Content includes audience analysis, organization delivery, presenting mathematical material to non-expert and technical audiences, and the use of visuals. Computer software to give oral presentations will be used in some of the speeches. Students will be required not only to give excellent presentations but also to analyze their own and other presentations based on the theories learned in this course.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 1012

## **MATH 1035 - DIFFERENTIAL EQUATIONS WITH MATRIX THEORY**

**Minimum Credits:** 4

**Maximum Credits:** 4

This course is intended for engineering technology students. Topics include matrix methods, first and higher order ordinary differential equations, Laplace transformations, series solutions of differential equations and systems of differential equations.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0241

## **MATH 1051 - COMBINATORIAL MATHEMATICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Topics covered may include the binomial theorem, inclusion-exclusion principle, recurrence relations, and generating functions. Topics may also include paths, circuits, trees, planar graphs, coloring problems, matching theory, and network flows. The instructor's discretion determines the topics included in the course.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0401 and 1012

## **MATH 1071 - NUMERICAL ANALYSIS**



**Minimum Credits:** 3

**Maximum Credits:** 3

This course is an introduction to numerical analysis at the advanced undergraduate level. Topics include interpolation, numerical differentiation and integration, solution of non-linear equations, numerical solutions of ordinary differential equations, and additional topics as time permits. Emphasis is on understanding the algorithms rather than on detailed coding, although some programming will be required. As a prerequisite, at least one '1000 level' mathematics course such as 1181, 1271, 1012, or permission of instructor is needed.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (MATH 0241 or 0240) and (MATH 1012 or 1181 or 1271)

## **MATH 1117 - HISTORY OF MATHEMATICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Traces the history of mathematics from primitive number concepts through the beginnings of calculus. It emphasizes a "hands-on" approach to significant mathematical discoveries while discussing the lives and contributions of great mathematicians within their cultural settings.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (MATH 0231 or 0230) and 1012

## **MATH 1125 - ABSTRACT ALGEBRA**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to provide depth and comprehension in the study of abstract algebra. Topics include groups, finite abelian groups, symmetric groups, rings, integral domains, fields, homomorphism's, and isomorphism's.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 1012

## **MATH 1153 - INTRODUCTION TO PROBABILITY AND STATISTICS 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course presents the basic probability concepts required for statistical inference at both theoretical and applied levels. Topics include set theory and basic probability; independence and Bayes' theorem, discrete random variables and their distributions--Bernoulli, binomial, poisson, and geometric, continuous random variables and their distributions--uniform, exponential, gamma, beta, and normal, transformation of random variables, moments and moment generating functions, multivariate discrete DIST, marginal and conditional DIST and independent variables.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0241 or 0240

## **MATH 1154 - INTRODUCTION TO PROBABILITY AND STATISTICS 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces the elementary concepts of statistical inference. Topics include functions of random variables, sampling distributions, decision criterion, estimation, hypothesis testing, regression and analysis of variance.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 1153

## **MATH 1155 - INTRODUCTION TO STATISTICAL INFERENCE**

**Minimum Credits:** 1

**Maximum Credits:** 1

This course is intended for secondary education mathematics majors, and includes topics which are not typically covered in probability and Statistics 1. Topics include elementary functions of random variables, sampling, distributions, basic estimation theory, and hypothesis testing. (This course cannot be taken if a student has received credit for, or is enrolled in MATH 1154.)

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 1153

## **MATH 1163 - MATHEMATICS SEMINAR 1**

**Minimum Credits:** 1

**Maximum Credits:** 1

This course introduces students to a variety of mathematics specific technology. Topics include computational and algebraic manipulator software and mathematical typesetting programs at the instructor's discretion.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

## **MATH 1164 - MATHEMATICS SEMINAR 2**

**Minimum Credits:** 1

**Maximum Credits:** 1

Utilizing exams previously given by the society of actuaries, this course examines material typically included in probability and statistics. Through careful investigation of these problems, students will gain familiarity with the examination and will develop problem solving strategies.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 1154

## **MATH 1175 - TOPICS IN APPLIED MATHEMATICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Topics in mathematics are covered to enhance the student's understanding of how mathematics may be applied to real world. Possible topics may include: game theory, cryptography, partial differential equations, complex variables, stochastic processes, the calculus of variation, control theory, and the application of such topics to a particular discipline.

**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** PREQ: (MATH 0241 or 0240) and 1012

## **MATH 1178 - OPERATIONS RESEARCH**

**Minimum Credits:** 4

**Maximum Credits:** 4

An introduction to the mathematical study of management decisions concerning business, government and other organizations and operations. Topics may include linear programming, dynamic programming, inventory theory, queuing theory, network models, and non-linear programming. Standard linear programming computer algorithms are used.

**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** PREQ: MATH 1181

## **MATH 1179 - MATHEMATICAL MODELING**

**Minimum Credits:** 3

**Maximum Credits:** 3

In this course the students learn to use the modeling process to translate problem situations to mathematical expressions, apply a variety of mathematical resources and tools to study problem situations, and use appropriate technology to assist in the problem-solving process.

**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** Letter Grade  
**Course Requirements:** PREQ: MATH 0241 - Analytic Geometry and Calculus III AND at last one 1000-level course such as 1181, 1271, 1012 or permission of instructor is needed.

## **MATH 1181 - LINEAR ALGEBRA**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is intended as an introduction to linear algebra. This course stresses the computational methods of linear algebra and covers the theoretical development of matrix algebra and vector spaces. Topics include systems of linear equations, matrices, matrix algebra, determinants, vector spaces, linear dependence and independence, spanning sets of vectors, bases, orthogonality, inner product spaces, gram-Schmidt process, eigenvalues, eigenvectors, characteristic equations, and diagonalization. Other topics will be covered as time permits.

**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** PREQ: MATH 0231 or 0230

## **MATH 1271 - ORDINARY DIFFERENTIAL EQUATIONS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course covers methods of solving ordinary differential equations which are frequently encountered in applications. General methods will be taught for single nth order equations, and systems of first order nonlinear equations. These will include phase plane methods and stability analysis. Computer experimentation will be used to illustrate the

behavior of solutions of various equations. Credit may be received for only one: ordinary differential equations (1271) or differential equations with matrix theory (1035).

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0241

## **MATH 1291 - TOPICS IN GEOMETRY**

**Minimum Credits:** 3

**Maximum Credits:** 3

A course intended to give a "modern" view of geometry. Possible approaches include (1) the exploration of geometric properties on various surfaces, (2) the axiomatic development of finite geometries, (3) the deductive, synthetic development of Euclidean and non-Euclidean geometry and (4) the connection of geometries to abstract algebraic systems.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (MATH 0241 or 0240) and 1012

## **MATH 1296 - TOPICS IN APPLIED STATISTICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course contains topics concerning the applications of statistics. Topics will be chosen based on faculty interests and students' needs. Examples of possible topics include: resampling techniques in statistics, statistical graphics, cluster analysis, and classification methods.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 1154

## **MATH 1531 - ADVANCED CALCULUS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course contains a rigorous development of the calculus of functions of a single variable, including compactness on the real line, continuity, differentiability, integration, and the uniform convergence of sequences and series of functions. Other topics may be included, such as the notion of limits and continuity in metric spaces.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (MATH 0241 or 0240) and 1012

## **MATH 1561 - COMPLEX VARIABLES AND APPLICATIONS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course covers the following topics: elementary operations with complex numbers, derivatives and integrals of complex-valued functions, Cauchy's theorem, the integral formula, power series, residue theorem, and applications to real integrals and series.

**Academic Career:** Undergraduate

**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** PREQ: (MATH 0241 or 0240) and 1012

## **MATH 1701 - INTRODUCTION TO TOPOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course may include topics from point-set topology such as topological spaces, metric spaces, connectedness, compactness, and countability axioms. The course may also include some topics from algebraic-combinatorial topology such as simplicial complexes, the fundamental group, Jordan curve theorem, Euler characteristic classification theorem of compact surfaces, homology groups, homotopic groups, vector fields, and fixed points.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (MATH 0241 or 0240) and 1012

## **MATH 1901 - INTERNSHIP**

**Minimum Credits:** 1

**Maximum Credits:** 3

Under faculty supervision the student participates in a mathematics related experience, project, or job.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** LG/SU3 Elective Basis

## **MATH 1903 - DIRECTED STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 3

Under the direction of a faculty member, a student studies a mutually agreed upon topic in mathematics.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

## **Mechanical Engineering**

### **ME 0024 - INTRODUCTION TO MECHANICAL ENGINEERING DESIGN**

**Minimum Credits:** 3

**Maximum Credits:** 3

Provides knowledge of design graphics and manufacturing processes by conventional and computer-aided methods.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ENGR 0017 or (ET 0079 and ET 0023)

### **ME 0040 - MATERIALS & MANUFACTURING**

**Minimum Credits:** 3

**Maximum Credits:** 3

An overview of a variety of manufacturing processes that are available to process materials into finished products. Special emphasis is placed on the "traditional" processes from the standpoint of production methods, sequence of operations, and economic decision analysis. The impact of computer-aided design (CAD) utilizing numerically-controlled equipment to perform these processes, and the integration of automation into manufacturing processes is introduced. A laboratory component is included.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: ENGR 0022

## **ME 0052 - THERMODYNAMICS 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

Basic concepts and interlinking relationships of thermodynamics, fluid mechanics and heat transfer; fluid statics; system and control volumes; thermodynamic properties; work and heat; first law of thermodynamics for control mass and control volume; integral forms of conservation of mass and momentum.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: (CHEM 0111 or CHEM 0150) and PHYS 0150; CREQ: MATH 0241

## **ME 0071 - FLUID MECHANICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Fundamentals of fluid mechanics, with emphasis on inviscid and linearly viscous, incompressible fluids. Basic physical phenomena of fluid mechanics including fluid dynamics, internal flow and fluid measurements. A laboratory component is included.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: MATH 0231; CREQ MATH 1271

## **ME 1013 - DYNAMIC SYSTEMS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Modeling and analysis of physical systems. Time- and frequency-domain analyses; transient and steady state system response to various excitations; transfer function and state space model representations; Laplace and Fourier transforms.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: MATH 1271 and EE 0031 and ENGR 0152 and (ENGR 0018 or ET 0030)

## **ME 1026 - MECHANICAL DESIGN 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

Stress and deflection analysis; survey of mechanical design criteria; selection and applications of working stresses for ductile and brittle materials; static, fatigue, and impact loading and combination of stresses.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ENGR 0132 and ENGR 0142 and ENGR 0022

## **ME 1027 - MECHANICAL DESIGN 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

Analysis and design of machine elements, components, and mechanical systems. Machine elements include shafts, keys, bearings, gears, belts, chains, springs, screws, and motors.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ME 0024 and ME 1026

## **ME 1044 - MEASUREMENTS 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

A laboratory-oriented course covering the fundamentals of mechanical measurement. Various methods and techniques are used to measure basic performance parameters, such as temperature, pressure, velocity, acceleration, strain and force. Lectures cover data reduction techniques and instrument theory. Computerized data acquisition topics are introduced and utilized in the laboratory experiments.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: EE 0031 and MATH 1271; CREQ: ME 1013

## **ME 1046 - MEASUREMENTS 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

Builds on the foundation of mechanical measurements provided in ME1044 to provide students with the ability to properly design and analyze an experiment on a complex mechanical system in order to determine specific characteristics or performance of that system. Specific material includes extended knowledge of statistics and error analysis, computer-based data acquisition, and technical communications.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ME 1044

## **ME 1053 - APPLIED THERMODYNAMICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Thermodynamic processes involving energy and entropy changes in real and ideal gases, vapors, and liquids, and mixtures of those fluids. Basic thermodynamic cycles (vapor and gas power, refrigeration, and heat pumps). Discussion of thermodynamic relations for simple compressible substances and introduction to psychometrics.

**Academic Career:** Undergraduate

**Course Component:** Lecture  
**Grade Component:** Letter Grade  
**Course Requirements:** PREQ: ME 0052

## **ME 1054 - HEAT AND MASS TRANSFER**

**Minimum Credits:** 3

**Maximum Credits:** 3

One- and two-dimensional steady and unsteady heat conduction; internal and external forced convection; free convection; engineering principle of radiation; heat exchangers and special topics.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ME 0052; CREQ: ME 0071

## **ME 1056 - ENERGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course presents an analysis of the present fuel shortage and the more serious long-range problems resulting from a conflict between the rapidly increasing demand for energy and the earth's limited resources. Technical alternatives are discussed and their potential analyzed.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ME 1053

## **ME 1059 - HEATING, VENTILATING AND AIR CONDITIONING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Presents the design and analysis of HVAC systems for maintaining a proper thermal environment for buildings. A case study approach is utilized. The students will design an HVAC system for an actual building.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ME 1053; CREQ: ME 1054

## **ME 1061 - OFF-ROAD VEHICLE DYNAMICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students will learn the theory behind the dynamic systems integral to an off-road vehicle, including engine, transmission, and suspension. Theory will be applied to the development of proposals for the design of off-road vehicles. Subjects include: researching and developing engine performing data; dynamics of rotating mass - engine balancing, inertia loads of driveline, torsional stiffness of driveline; modeling the performance of a Continuously Variable Transmission; frame stiffness and fatigue life under impact loading; suspension design and tuning; tire to soil interface.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ME 1027 and ME 0024



## **ME 1071 - APPLIED FLUIDS**

**Minimum Credits:** 3

**Maximum Credits:** 3

In this course, topics addressed include turbomachinery design, compressible fluid flow, unsteady fluid dynamics and cavitation. Subjects will be addressed using an applications approach.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ME 0071

## **ME 1094 - SPECIAL PROJECT INDEPENDENT**

**Minimum Credits:** 1

**Maximum Credits:** 4

Independent study designed to give the student an opportunity to study a particular aspect of the discipline in some depth.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** Letter Grade

## **ME 1095 - PROFESSIONAL PRACTICE**

**Minimum Credits:** 3

**Maximum Credits:** 3

Course introduces basic concepts in project management, business principles, public policy, engineering economics, global integration, ethics and leadership in relation to the mechanical engineering profession. In addition, student teams prepare a written proposal for the ME 1099, Senior Project, course detailing the functional specifications for a project and the time schedule for completion. Course should be taken in the next to last term.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: ME 1027

## **ME 1099 - SENIOR PROJECT**

**Minimum Credits:** 3

**Maximum Credits:** 3

Applies previously learned material, such as motion and forces in mechanisms, thermal fluid power systems, and mechanical components analysis, to a design. Project involves design of a new or modified mechanical system with demonstrated feasibility. A technical report, formal presentation and a poster presentation are performed by each team.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ME 1095

## **ME 1172 - CADD/CAE**

**Minimum Credits:** 3

**Maximum Credits:** 3

The course is an introduction to solid modeling using pro/ engineer. This course stresses modeling techniques to create

parametric solid models with appropriate design intent and parametric relations. Investigating models to assess model relationships, history, measurements, and mass properties are important aspects of the course. Fundamentals of creating detail drawings of parts as well as creating assemblies from parts and generating assembly drawings for the designs are also covered.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: ME 0024

## **ME 1173 - FINITE ELEMENT METHODS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The fundamentals of the finite element method are presented. A general approach to the development of the finite element method is given. Emphasis is placed on understanding the theory behind the development of the method as well as applications to engineering analysis problems. Application problems are solved by the students during the course on a general-purpose finite element analysis program. Students perform model generation, solution, and post processing of results.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: (ET 0030 or ET 0031 or ENGR 0018) and (MATH 1035 or MATH 1271) and (MET 1170 or ME 1026 or CE 1330)

## **Mechanical Engineering Technology**

### **MET 1061 - MANUFACTURING LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Through a series of experiments and exercises, understanding of key CNC concepts are developed. Particular focus is placed on computer/machine tool inter-relationships in manufacturing and design.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

### **MET 1062 - MATERIALS LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Through a series of experiments and exercises, understanding of key materials are developed. Particular focus is placed on structure/property relationships in materials used in manufacturing and design.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

### **MET 1110 - THERMODYNAMICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Covers the basic laws of thermodynamics, the thermodynamic properties of perfect and real gases, vapors, solids, and

liquids, Carnot principles and cycles.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: CHEM 0111 or 0110 and MATH 0241 or 0240

## **MET 1111 - APPLIED THERMODYNAMICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Serves as an application-oriented extension of thermodynamics. Areas covered include steam and gas turbine design, fluid machinery, compressors, internal combustion engines and cycles, refrigeration and air conditioning systems, and humidity measurements.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MET 1110

## **MET 1114 - THERMODYNAMICS AND HEAT TRANSFER**

**Minimum Credits:** 3

**Maximum Credits:** 3

Covers the basic laws of thermodynamic properties of substances encountered in real devices, the thermodynamic cycles associated with real devices, and the Carnot principles that govern these cycles. Rotating machinery, internal combustion engines, and refrigeration and air conditioning will be studied. The course then concentrates on the specifics of heat transfer, specifically: conduction, convection, and radiation. This portion of the course uses real examples as the instrument for learning.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (Math 0240 or 0241) and (CHEM 0111 or 0110)

## **MET 1116 - HEAT TRANSFER**

**Minimum Credits:** 3

**Maximum Credits:** 3

A study of the fundamental laws of conduction, convection, and radiation. Application of the basic laws to heat exchanger design. Analytical and graphical methods are applied to one and two dimensional heat transfer.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (Chem 0111 or 0110) and Math 1035 and MET 1154

## **MET 1122 - MECHANICAL VIBRATIONS**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to the vibrations of mechanical systems and the application of vibration theory to solving problems. Emphasis is on the single degree of freedom system and its application using equivalent lumped parameters. Topics include vibration with harmonic excitation, general periodic forcing functions, and general forcing functions. Two degree of freedom and continuous systems are covered briefly. Lab exercises include utilizing computerized data acquisition to determine natural frequencies, damping, and response under forced vibration. Computer techniques

included.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ET 0052 and MATH 1035

## **MET 1135 - ENGINEERING MEASUREMENTS 1**

**Minimum Credits:** 4

**Maximum Credits:** 4

A laboratory-oriented course dealing with various techniques available to measure basic performance parameters, such as temperature, pressure, velocity, acceleration, strain and force. Lectures cover data reduction techniques and instrument theory. Computerized data acquisition topics are introduced and utilized in the laboratory experiments.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: EET 0010 and 0110

## **MET 1136 - ENGINEERING MEASUREMENTS 2**

**Minimum Credits:** 2

**Maximum Credits:** 2

The application of techniques presented in engineering measurements 1 to measure and evaluate the performance of various types of mechanical systems in heat transfer, thermodynamics, and machine design. Computerized data acquisition skills are utilized in making measurements.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MET 1135

## **MET 1144 - ENERGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course presents an analysis of the present fuel shortage and the more serious long-range problems resulting from a conflict between the rapidly increasing demand for energy and the earth's limited resources. Technical alternatives are discussed and their potential analyzed.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: MET 1111

## **MET 1154 - FLUID MECHANICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Fluid mechanics is developed using the general energy principle equations. Includes fluid pressure, fluid pumps and motors, laminar and turbulent flow, fluid friction, pipeline systems, open channel flow, flow measurement devices, and fluid dynamics.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ET 0052 and MATH 0231 or 0230

## **MET 1155 - FLUID MECHANICS LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

Laboratory work with a "team concept" approach to the performance of experiments involving the application of principles and theory associated with the lecture course in fluid mechanics.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: MET 1154

## **MET 1156 - ADVANCED FLUID MECHANICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

In this course, topics addressed include turbomachinery design, compressible fluid flow, unsteady fluid dynamics and cavitation. Subjects will be addressed using an applications approach.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MET 1154 and 1155

## **MET 1157 - HEATING, VENTL, & AIR CNDTNG**

**Minimum Credits:** 3

**Maximum Credits:** 3

Presents the design and analysis of HVAC systems for maintaining a proper thermal environment for buildings. A case study approach is utilized. The students will design an HVAC system for an actual building.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MET 1111; CREQ: MET 1116

## **MET 1161 - MANUFACTURING PROCESSES**

**Minimum Credits:** 3

**Maximum Credits:** 3

An overview of a variety of manufacturing processes that are available to process materials into finished products. Special emphasis is placed on the "traditional" processes from the standpoint of production methods, sequence of operations, and economic decision analysis. The impact of computer-aided design (CAD) utilizing numerically-controlled equipment to perform these processes, and the integration of automation into manufacturing processes is introduced.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ET 0053 and 0054

## **MET 1162 - MATERIALS**

**Minimum Credits:** 3

**Maximum Credits:** 3

An overview of materials used in engineering applications. The basic principles of materials science are used as the basis for understanding structural property relationships which are the key to successful application of materials in engineering.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (CHEM 0111 or 0110) and ET 0053 and 0054

## **MET 1163 - MATERIALS & MANUFACTURING LAB**

**Minimum Credits:** 1

**Maximum Credits:** 1

Through a series of experiments and exercises, understanding of key materials and CNC concepts is developed. Particular focus is placed on structure/property relationships in materials and computer/machine tool inter-relationships in manufacturing and design.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MET 1161 and 1162

## **MET 1170 - MACHINE DESIGN**

**Minimum Credits:** 3

**Maximum Credits:** 3

Fundamentals of engineering design. Design methodology and synthesis techniques are discussed. Structural and machine elements are designed, with consideration given to stress, weight, and size limitations for various applications.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ET 0053 and 0054 and MET 1162

## **MET 1171 - ADVANCED MACHINE DESIGN**

**Minimum Credits:** 3

**Maximum Credits:** 3

Design of selected machine components including curved beams; power screws; preloaded bolts and other fasteners; helical compression, extension, and torsion springs; Belleville and leaf springs; spur gears; shafts; clutches; brakes; and flywheels. Emphasis on fatigue strength of components subjected to fluctuating stresses due to axial, bending torsion, and combined loading. Computer approaches to design are included, such as the finite element method.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: MET 1170

## **MET 1172 - CADD/CAE**

**Minimum Credits:** 3

**Maximum Credits:** 3

The course is an introduction to solid modeling using pro/ engineer. This course stresses modeling techniques to create parametric solid models with appropriate design intent and parametric relations. Investigating models to assess model

relationships, history, measurements, and mass properties are important aspects of the course. Fundamentals of creating detail drawings of parts as well as creating assemblies from parts and generating assembly drawings for the designs are also covered.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ET 0011 and 0035

## **MET 1173 - FINITE ELEMENT METHODS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The fundamentals of the finite element method are presented. A general approach to the development of the finite element method is given. Emphasis is placed on understanding the theory behind the development of the method as well as applications to engineering analysis problems. Application problems are solved by the students during the course on a general-purpose finite element analysis program. Students perform model generation, solution, and post processing of results.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ET 0030 or 0031 and MATH 1035 and MET 1170

## **MET 1183 - SOPHOMORE SEMINAR FALL**

**Minimum Credits:** 0

**Maximum Credits:** 0

Seminar is designed to acquaint the student with engineering practice outside of the academic arena. Speakers from industry and private practice are invited to discuss various aspects of "real world" engineering.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **MET 1184 - SOPHOMORE SEMINAR SPRING**

**Minimum Credits:** 0

**Maximum Credits:** 0

Seminar is designed to acquaint the student with engineering practice outside of the academic arena. Speakers from industry and private practice are invited to discuss various aspects of "real world" engineering.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **MET 1185 - JUNIOR SEMINAR FALL**

**Minimum Credits:** 0

**Maximum Credits:** 0

Seminar is designed to acquaint the student with engineering practice outside of the academic arena. Speakers from industry and private practice are invited to discuss various aspects of "real world" engineering.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **MET 1186 - JUNIOR SEMINAR SPRING**

**Minimum Credits:** 0

**Maximum Credits:** 0

Seminar is designed to acquaint the student with engineering practice outside of the academic arena. Speakers from industry and private practice are invited to discuss various aspects of "real world" engineering.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **MET 1187 - SENIOR SEMINAR FALL**

**Minimum Credits:** 0

**Maximum Credits:** 0

Seminar is designed to acquaint the student with engineering practice outside of the academic arena. Speakers from industry and private practice are invited to discuss various aspects of "real world" engineering.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **MET 1188 - SENIOR SEMINAR SPRING**

**Minimum Credits:** 0

**Maximum Credits:** 0

Seminar is designed to acquaint the student with engineering practice outside of the academic arena. Speakers from industry and private practice are invited to discuss various aspects of "real world" engineering.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **MET 1195 - SENIOR PROJECT PROPOSAL**

**Minimum Credits:** 1

**Maximum Credits:** 1

Students are organized into project teams, various project ideas are considered, a final project topic is chosen and researched, and a formal proposal is written. This course should be taken the semester prior to the senior design project course.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** LG/SU3 Elective Basis

## **MET 1198 - SPECIAL PROJECTS**

**Minimum Credits:** 1

**Maximum Credits:** 4

Directed study, independent study or internship designed to give the student an opportunity to study a particular aspect of the discipline in some depth.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis



## **MET 1199 - SENIOR DESIGN PROJECT**

**Minimum Credits:** 3

**Maximum Credits:** 3

Applies previously learned material, such as motion and forces in mechanisms, fluid power systems, and mechanical components analysis, to a design. Project involves design of a new or modified mechanical system with demonstrated feasibility.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MET 1195

## **Middle Level Education**

### **MLED 0012 - DIRECTED STUDY IN MIDDLE LEVEL EDUCATION**

**Minimum Credits:** 1

**Maximum Credits:** 3

Provides individual Middle Level Education and Pre-Education majors the opportunity to explore in-depth specific topics in education.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

### **MLED 1101 - READING AND LANGUAGE ARTS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The course will examine specific methods in how to conduct reading and writing lessons designed to help self-extending learners to become proficient, fluent readers in grades 4-8. Students will be introduced to learning theories, research, philosophies, and instructional practices related to a developmental approach to literacy instruction. Differentiated strategies, management of lessons and routines, and methods for assessing reading/language arts will be examined.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: Admittance to Upper Level as Middle Level Education student (Plan either JMLED-BS or JMLESE-BA)

### **MLED 1111 - FIELD PRACTICUM 1**

**Minimum Credits:** 1

**Maximum Credits:** 1

Course will be taken during the first term of the upper-level program; the first of three such courses prior to student teaching. Students will be assigned to a middle school cooperating teacher, 4-8, for a minimum of 20 hours for observation and participation. Students will be asked to focus on the teacher's instructional strategies related to individual students, including those with particular problems or challenges.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: MLED 1144 or MLED 1121 or MLED 1141 or MLED 1131

## **MLED 1112 - FIELD PRACTICUM 2**

**Minimum Credits:** 1

**Maximum Credits:** 1

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** Letter Grade

## **MLED 1113 - FIELD PRACTICUM 3**

**Minimum Credits:** 1

**Maximum Credits:** 1

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: Admittance to Upper Level as Middle Level Education student (Plan either JMLED-BS or JMLESE-BA)

## **MLED 1121 - MATHEMATICS METHODS FOR THE MIDDLE-LEVEL GRADES**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduces students to mathematics teaching-learning theories, strategies, experiences, and issues in mathematics education. Principles and techniques of lesson planning and assessment will be explored. Varied activities and professional growth of the middle level mathematics teacher, resources and materials, differentiated instruction techniques, and student-centered approaches will be examined.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: MLED 1111

## **MLED 1131 - SOCIAL STUDIES METHODS FOR THE MIDDLE-LEVEL GRADES**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to provide both the theoretical and practical background necessary for planning, implementing, and assessing a social studies program in grades 4-8. The intent is to provide a foundation for long-term growth. Becoming a social studies teacher requires broad knowledge, reflection on educational theory and purposes, an understanding of schools and institutions, and an ability to transform knowledge into meaningful learning experiences. The course will focus on how to present social studies concepts, with an emphasis on how to address the Pennsylvania academic standards for geography, history, economics, and civics & government and the national council for the social studies themes.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: MLED 1111

## **MLED 1141 - SCIENCE METHODS FOR THE MIDDLE-LEVEL GRADES**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will examine the major concepts, theories and trends in science education. The content is designed to provide a teaching pedagogy for middle level education majors. Materials, methods and strategies for teaching life, physical and earth sciences to grade levels 4-8 will be presented. The course will seek to help pre-service teachers develop an understanding of ways to help children acquire knowledge, attitudes and skills essential to science literacy.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: MLED 1111

## **MLED 1144 - ENGLISH METHODS FOR THE MIDDLE LEVEL GRADES**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduces students to English/language arts teaching-learning theories, strategies, experiences, and issues in English education for the middle level classroom. Principles and techniques of lesson planning, content and curricula, academic standards, teaching methods, classroom management, and assessment will be explored and analyzed.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: MLED 1111

## **MLED 1151 - GENERAL METHODS FOR MIDDLE LEVEL GRADES**

**Minimum Credits:** 3

**Maximum Credits:** 3

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: Admittance to Upper Level as Middle Level Education student (Plan either JMLED-BS or JMLESE-BA)

## **MLED 1170 - LITERACY IN THE CONTENT AREAS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course emphasizes reading and writing as cognitive processes. Vocabulary development in content areas, reading comprehension, and current reading assessment practices are examined. Strategies for content area literacy development, evaluation of instructional resources, instructional interventions, and study skills for the inclusive middle level classrooms will be the focus. Prerequisite: admission to an upper-level secondary education program.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PLAN: Middle Level Education (JMLED-BS or JMLESE-BA)

## **MLED 1191 - MIDDLE LEVEL STUDENT TEACHING**

**Minimum Credits:** 5

**Maximum Credits:** 14

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** Letter Grade

## **MLED 1195 - MIDDLE LEVEL EDUCATION STUDENT TEACHING SEMINAR**

**Minimum Credits:** 1

**Maximum Credits:** 2

Designed to provide teacher candidates with the basic elements of professional development and career opportunities during student teaching. Emphasis is on professionalism, interviewing, resumes, professional meetings and other appropriate topics. Must be taken during student teaching term.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **MLED 1196 - MIDDLE LEVEL STUDENT TEACHING SEMINAR (US)**

**Minimum Credits:** 1

**Maximum Credits:** 1

Designed to provide teacher candidates with the basic elements of professional development and career opportunities during student teaching. Emphasis is on professionalism, interviewing, resumes, professional meetings and other appropriate topics. Must be taken during student teaching term.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **Military Science**

### **MILS 0011 - INTRODUCTION TO THE ARMY**

**Minimum Credits:** 1

**Maximum Credits:** 1

MILS 0011 is offered during the fall term. This freshman course is an introduction to army ROTC. Course instruction includes survival techniques, first aid, wear of the military uniform and organization, role and branches of the U.S. army.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

### **MILS 0012 - ADAPTIVE LEADERSHIP**

**Minimum Credits:** 1

**Maximum Credits:** 1

MILS 0012 is offered during the spring term. This freshman course is an introduction to army ROTC. Course instruction includes leadership and management, drill and ceremonies, land navigation, basic, pistol/rifle marksmanship and organization and role of the U.S. army reserve and national guard units.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

### **MILS 0021 - LEADERSHIP & DECISION MAKING**

**Minimum Credits:** 1

**Maximum Credits:** 1

MILS 0021 is offered during the fall term. This sophomore course is an introduction to army ROTC. Course instruction

includes the total army concept, army rank and structure, leadership and management, land navigation and drill and ceremonies.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **MILS 0022 - ARMY TEAM DEVELOPMENT**

**Minimum Credits:** 1

**Maximum Credits:** 1

MILS 0022 is offered during the spring term. This sophomore course is an introduction to army ROTC. Course instruction includes group communication, decision making and problem solving techniques, military history, leadership and management and land navigation.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **MILS 1031 - TRAINING MANAGEMENT**

**Minimum Credits:** 1

**Maximum Credits:** 1

MILS 1031 is offered during the fall term. This junior course prepares the army ROTC student for commissioning into the U.S. army as a second lieutenant. Course instruction is coupled with practical exercises in tactical and technical military subjects with particular emphasis on leadership development, problem solving and decision making.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **MILS 1032 - APPLIED LEADERSHIP**

**Minimum Credits:** 1

**Maximum Credits:** 1

MILS 1032 is offered during the spring term. This junior course prepares the army ROTC student for commissioning into the U.S. army as a second lieutenant. Course instruction is coupled with practical exercises in tactical and technical military subjects with particular emphasis on leadership development, problem solving and decision making.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **Music**

### **MUSIC 0062 - CONCERT CHOIR**

**Minimum Credits:** 1

**Maximum Credits:** 1

Open to all students interested in developing musical techniques. The repertoire includes music of all periods from the Renaissance to the present.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

## **MUSIC 0063 - CHAMBER CHOIR**

**Minimum Credits:** 1

**Maximum Credits:** 1

The chamber choir is a select group of singers that come from the UPJ concert choir. Admission into this ensemble is by audition only.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

## **MUSIC 0065 - WOMEN'S CHORUS**

**Minimum Credits:** 1

**Maximum Credits:** 1

The women's chorus performs literature from all historical periods. Admission into this ensemble is by audition only.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

## **MUSIC 0069 - CONCERT BAND**

**Minimum Credits:** 1

**Maximum Credits:** 1

Open to all students interested in ensemble playing. Rehearsals twice a week. Performs concerts and participates in sports events. A varied repertoire is performed.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

## **MUSIC 0123 - BASIC MUSICIANSHIP: CLASS VOICE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed for non-voice majors who want to develop their singing and sight-reading skills. It provides an introduction to posture, breathing, tone production, diction, and interpretation, while introducing students to the elements of music theory and notation.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

## **MUSIC 0212 - INTRO TO WESTERN ART MUSIC**

**Minimum Credits:** 3

**Maximum Credits:** 3

The course presents the historical unfolding of the major achievements of music in Western culture from Gregorian chant to the twentieth century. The course assumes no ability to read musical score; the emphasis is on developing intelligent and creative listening skills.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **MUSIC 0223 - HISTORY OF WESTERN MUSIC TO 1750**

**Minimum Credits:** 3

**Maximum Credits:** 3

A study of selected master works of Western art music in a historical context from Gregorian chant through Johann Sebastian Bach. Emphasis is on musical understanding through critical listening, score study and lectures.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **MUSIC 0225 - HIST WESTERN MUSIC SINCE 1750**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course surveys the music of the classical, romantic and modern periods. Selected genres such as symphonies and masses will be analyzed, along with specific composers from these eras. Special attention will be given to stylistic and structural procedures. Emphasis will be on listening in a more critical fashion. No ability to read music is assumed.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **MUSIC 0230 - BEETHOVEN SYMPHONIES**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces students to the compositional techniques of Beethoven by emphasizing listening and discussing his nine symphonies. Students will learn about Beethoven's life and the events in his life that inspire him to write each symphony. Students will also be introduced to basic music elements such as rhythm, melody and symphonic form. No prior musical background or knowledge is needed for this course.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **MUSIC 0243 - MAJOR COMPOSERS 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines the life of one or more major figures in Western art music. The content of the course changes, but it emphasizes music in its historical and cultural contexts, as well as individual genres and styles.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **MUSIC 0244 - MAJOR COMPOSERS 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is a continuation and further in-depth study of the musical giants from the romantic period to the twentieth century. We will study the lives and compositions of the great composers of this time, within the context of their living standards, personal circumstances and political ideologies.

**Academic Career:** Undergraduate

**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis

## **MUSIC 0413 - THEORY AND EAR-TRAINING 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces students to the basic materials of music. Students will be introduced to such topics as note/rest values, intervals, rhythm and meter, key signatures, scales and triads. Students will become familiar with how to notate these elements, both by sight and aural recognition. Concepts will be practiced through singing and writing. This course assumes no ability to read music.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **MUSIC 0414 - THEORY AND EAR-TRAINING 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is a continuation of the materials learned in theory and ear-training 1. New topics will include triads and their harmonic functions within a key, sight-singing, melodic and harmonic dictation and beginning part-writing. Students will demonstrate learned knowledge through singing, keyboard playing and composition. This course does assume the ability to read music.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MUSIC 0413

## **MUSIC 0425 - WRITING ABOUT MUSIC**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course focuses on how to write critical and analytical papers on the subject of music. Students are expected to learn musical terminology and how to use that terminology in a paper. Students will be asked to attend events such as concerts, lectures, rehearsals, and film viewings.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **MUSIC 0531 - VOICE**

**Minimum Credits:** 1

**Maximum Credits:** 6

This course provides group and individual instruction in vocal techniques. Topics will include posture, breath support, diction and sight-singing. Ability to read music is assumed for this course. In addition, students must have choral or private voice study experience.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

## **MUSIC 0641 - JAZZ ENSEMBLE**



**Minimum Credits:** 1

**Maximum Credits:** 1

The University Jazz Ensemble is a performance ensemble that provides sectional and solo experience in a big band jazz and combo jazz setting. The University Jazz Ensemble is open to all University students and community members including instrumentalists and vocalists, without audition. Students will develop musicianship and specific performance skills through group and individual settings for the study and performance of the varied styles of instrumental and vocal jazz. Idioms included are jazz, swing, shuffle, rock, funk, ballads, Latin, blues, and more. These idioms will be introduced as selected. Improvisation skills will be encouraged, but not required. Students will be able to develop their creative skills through improvisation, arranging, performing, listening and analyzing jazz and popular music. Concert performances include major concerts each semester in the Pasquerilla Performing Arts Center. There is the potential for additional on-campus or off-campus performances.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

## **MUSIC 0712 - JAZZ**

**Minimum Credits:** 3

**Maximum Credits:** 3

The course focuses on the chronological development of jazz from its beginnings on the plantation to its present state as a world concert music. Various influences such as spirituals, ragtime and blues will be examined. The primary focus of the course will be of listening and analyzing jazz in a more critical fashion.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **MUSIC 0801 - HISTORY OF ROCK AND ROLL**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines the origins of Rock and Roll from its earliest influences, such as work songs and the Blues, and will follow its development as a musical genre. Students will then learn about the different musical genres that are spawned from the development of Rock and Roll. Critical listening of the music is required for this course. Students will also be exposed to general music elements such as rhythm, form, harmony and melody. This course assumes no prior musical knowledge.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **MUSIC 0802 - MUSIC FOR SOCIAL CHANGE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will look at the evolution of music as a tool in the quest for change the United States and the world as a whole. Students will be introduced to the important pieces of music that have been created and used to shed light on social and political aspects in our country such as racism, war, poverty, prison reform and the ecology. The course will then examine how music has aided in more global reform efforts and how music has become a very influential tool in shaping these efforts.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **MUSIC 0845 - SPECIAL TOPICS IN MUSIC**

**Minimum Credits:** 3

**Maximum Credits:** 3

Topics for this course will be chosen by the instructor for each subsequent time the course is offered. This course will allow students to do in-depth exploration of a given topic.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **MUSIC 0846 - THE BEATLES**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will take an in-depth look at the Beatles' music, personalities, compositional techniques, and their influence on our culture from the 1960's into the 21st century. The major emphasis of this course will be focused on student listening skills and the fostering of a deeper appreciation for the Beatles and their music.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **MUSIC 0897 - MUSIC AND FILM**

**Minimum Credits:** 3

**Maximum Credits:** 3

Film music is capable of powerful effects which are a product of a unique combination of art forms. The course will explore both properties of music and cinematic practice and the way that film music functions in partnership.

Examination of film history and trends in film music will guide the course chronologically. Material will be drawn from American film with occasional analysis of foreign film. The process of critique will be used as students review examples and advance skills in watching and listening to this art form.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **MUSIC 1905 - INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 3

Independent study is elected by students who are making significant use of university resources in an independent project not related to any regularly offered course. The project is often off campus, but with some guidance from sponsoring faculty member(s).

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** Letter Grade

## **Natural Science**

### **NATSC 0080 - INTEGRATED SCIENCES**

**Minimum Credits:** 3

**Maximum Credits:** 3

An overview of the concepts, principles, and processes of science essential for teaching in the elementary school. Topics covered include physical science, life science, and earth/space science. The course may be taken prior to, or after, admittance to the education division.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **Nursing**

### **NUR 0001 - FIRST YEAR SEMINAR**

**Minimum Credits:** 1

**Maximum Credits:** 1

This course is designed to provide beginning nursing students with an overview of the nursing profession and an introduction to the school of nursing. The purpose of the course is to facilitate the students' adjustment to the University environment and to acquaint them with the skills and resources available to promote success.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** H/S/U Basis

### **NUR 0020 - PATHOPHYSIOLOGIC FOUNDATIONS OF NURSING CARE**

**Minimum Credits:** 4

**Maximum Credits:** 4

This course will examine mechanisms that produce disease and injury, the ways in which the body responds to these mechanisms, and the clinical manifestations produced by the body's response.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: BIOL 0980 and NUR 0051

### **NUR 0051 - INTRODUCTION TO PROFESSIONAL NURSING**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course provides a broad overview and synthesis of the issues and trends most relevant to the practice of professional nursing. Historical, contemporary and potential influences on professional nursing practice are reviewed. An emphasis on the unique and varied roles of nurses in today's interdisciplinary health care environment are examined within the context of individual, family, community, and global health. Characteristics and major changes in health care delivery systems (federal, state, and local) are discussed. Components of professional nursing values and core practice competencies are presented. The concept of an evidence-based approach to clinical practice is introduced. Critical thinking strategies are introduced in the context of the nursing process.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

### **NUR 0053 - INTRODUCTION TO INCLUSION, EQUITY, AND DIVERSITY IN HEALTH CARE**

**Minimum Credits:** 1

**Maximum Credits:** 1

**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** H/S/U Basis

## **NUR 0066 - NUTRITION FOR CLINICAL PRACTICE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course focuses on nutrition for clinical practice for nurses. Food for energy and the major nutrients are considered for the promotion of health and for medical nutrition therapy for selected disruptions of health. Emphasis is placed on nutrition assessment and interventions in relation to the goals of the current healthy people document and dietary guidelines for Americans.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: BIOL 0970 and CHEM 0190

## **NUR 0067 - NURSING RESEARCH: AN INTRODUCTION TO CRITICAL APPRAISAL AND EVIDENCE-BASED PRACTICE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to provide the opportunity for students to become consumers of research and to provide the basis for evidence-based practice and the provision of culturally-congruent care. Students gain an understanding of research processes to the development of nursing knowledge and the contributions of research to evidence based practice. Students are expected to critically appraise research articles, to identify useful, valid research that can be applied to nursing practice.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: NUR 0080

## **NUR 0080 - FOUNDATIONS OF NURSING PRACTICE 1**

**Minimum Credits:** 3.5

**Maximum Credits:** 3.5

This course focuses on the concepts of communication, therapeutic intervention, and decision-making as they relate to the nursing process. Techniques of assessment of the physical, psychological, and developmental dimensions of the individual are explored through a variety of learning strategies. Variations of expected findings based on influences such as age, social condition, and culture are discussed. Emphasis is placed on the therapeutic interventions of safety, hygiene and comfort, health assessment and health promotion.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

**Course Requirements:** PREQ: BIOL 0970 and NUR 0051; CREQ: NUR 0020

## **NUR 0080C - FOUNDATIONS OF NURSING PRACTICE 1 CLINICAL**

**Minimum Credits:** 2

**Maximum Credits:** 2

This course is designed to provide clinical experiences related to the theory provided in Foundations of Nursing Practice 1. Techniques used in the assessment of the physical, psychological and development dimensions of the

individual within an acute care setting are demonstrated. Variations of findings based on influences such as age and culture are identified. Emphasis is placed on the therapeutic interventions of safety, hygiene and comfort, health assessment and health promotion.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** H/S/U Basis

**Course Requirements:** CREQ: NUR 0080

## **NUR 0081 - FOUNDATIONS OF NURSING PRACTICE 2**

**Minimum Credits:** 2

**Maximum Credits:** 2

This course builds on the fundamental skills learned in NUR 0080. The focus is on direct practice and correct manipulation of equipment during the performance of psychomotor skills. During laboratory sessions, students will have the opportunity to practice simulated clinical skills. The nursing process and clinical reasoning will serve as the framework for decision-making during skill performance. Through active laboratory participation, the student will demonstrate self-direction as a learner.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

**Course Requirements:** PREQ: NUR 0020 and 0080

## **NUR 0082 - NURSING MANAGEMENT OF ADULT WITH ACUTE/CHRONIC HEALTH PROBLEMS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course focuses on the nursing care of adults, including older adults, with acute and/or chronic illnesses. Students will be guided in critical thinking exercises and the use of therapeutic interventions and research findings in the management of adults. Nursing process, critical thinking, and decision-making serve as the framework for acquisition of knowledge for the management of patients. Societal and cultural influences will be emphasized.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: NUR 0020; CREQ: NUR 0081

## **NUR 0082C - NURSING MANAGEMENT OF ADULT WITH ACUTE/CHRONIC HEALTH PROBLEMS CLINICAL**

**Minimum Credits:** 4

**Maximum Credits:** 4

This course focuses on the nursing care of adults, including older adults, with acute and/or chronic illnesses. Students will be guided in critical thinking exercises and the use of therapeutic interventions and research findings in the management of adults with acute and/or chronic illnesses. During clinic, students will have the opportunity to practice clinical skills learned in the lab. Nursing process, critical thinking, and decision-making serve as the framework for acquisition of clinical psychomotor skills. Common concepts of care will be emphasized, including societal and cultural influences.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** H/S/U Basis

## **NUR 0086 - NURSING INFORMATICS**

**Minimum Credits:** 2

**Maximum Credits:** 2

This course focuses on concepts relevant to the practice of nursing informatics. The course emphasizes information technology applications and the principles of nursing informatics from a current and historical perspective. Learners will examine the analysis of healthcare data and its transformation to nursing knowledge. Nursing language concepts and their importance in clinical information system development will be identified. Learners will examine information technologies that manage clinical information and support patient care. Social and ethical issues in the context of clinical information systems will be examined. The impact of evolving/emerging information technologies on healthcare provider and consumer roles will be discussed.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **NUR 0087 - PHARMACOLOGY AND THERAPEUTICS ACROSS THE LIFESPAN**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course provides an introduction to pharmacology that integrates the concepts of physiology, pathophysiology, chemistry, and nursing fundamentals to build a foundation for administering drug therapy to patients. Using a simple to complex approach, key content areas are presented to help conceptualize the important components related to pharmacology. The basic concepts of pharmacology, such as drug testing and approval, pharmacokinetics and pharmacodynamics, pharmacotherapeutics and toxic effects, dosage calculations, and challenges related to drug therapy, provide the foundation from which drug therapy associated with specific body systems can be addressed. Discussion of the major drug groups focuses on therapeutic actions and indications, mechanism of action, pharmacokinetics, contraindications and precautions, adverse effects, clinically important drug-drug interactions and nursing implications which emphasize the nursing process and focus on patient care and education. Prototypes of the major drug groups are emphasized. Lifespan considerations, evidence for best practice, patient safety, and critical thinking are integrated throughout the course.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: BIOL 0970 and CHEM 0190; CREQ: BIOL 0980

## **NUR 0088 - INTRODUCTION TO BASIC STATISTICS FOR EVIDENCE-BASED PRACTICE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces students to descriptive statistics and parametric and nonparametric statistical tests that are commonly used by researchers in the health sciences and appear in published research reports. Emphasis is placed on student mastery of concepts and principles that are fundamental to descriptive and inferential statistics, as well as interpretation and critical appraisal of their use in research studies. Opportunities are provided to manipulate data, perform basic statistical tests, and summarize findings in tabular, graphical, and narrative form.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **NUR 0090 - FOUNDATIONS OF NURSING PRACTICE 1 CLINICAL**

**Minimum Credits:** 1

**Maximum Credits:** 1

This course is designed to provide clinical experiences related to the theory provided in Foundations of Nursing

Practice 1. Techniques used in the assessment of the physical, psychological and development dimensions of the individual within an acute care setting are demonstrated. Variations of findings based on influences such as age and culture are identified. Emphasis is placed on the therapeutic interventions of safety, hygiene and comfort, health assessment and health promotion.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** H/S/U Basis

## **NUR 0092 - NURSING MANAGEMENT OF ADULT WITH ACUTE/CHRONIC HEALTH PROBLEMS CLINICAL**

**Minimum Credits:** 3.5

**Maximum Credits:** 3.5

This course focuses on the nursing care of adults, including older adults, with acute and/or chronic illnesses. Students will be guided in critical thinking exercises and the use of therapeutic interventions and research findings in the management of adults with acute and/or chronic illnesses. During clinic, students will have the opportunity to practice clinical skills learned in the lab. Nursing process, critical thinking, and decision-making serve as the framework for acquisition of clinical psychomotor skills. Common concepts of care will be emphasized, including societal and cultural influences.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** H/S/U Basis

## **NUR 0197 - DIRECTED STUDY IN NURSING**

**Minimum Credits:** 1

**Maximum Credits:** 6

This course is independent study in a topic in nursing.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SNC Elective Basis

## **NUR 1020 - ADVANCED NURSING MANAGEMENT OF THE ADULT WITH ACUTE/COMPLEX HEALTH PROBLEMS CLINICAL**

**Minimum Credits:** 2

**Maximum Credits:** 2

This clinical course focuses on the nursing care of adults with acute and complex illnesses in a hospital setting. Emphasis is placed on using the nursing process to assist students with the development of priority nursing goals and in applying critical thinking skills to patient care. The clinical nursing responsibilities include interpretation of diagnostic studies, medical/surgical patient management, evaluation of outcomes, health promotion, and support for individuals and families experiencing acute and complex health problems. This course includes application of cultural diversity awareness training to the nursing process. Clinical learning is focused on developing and refining the knowledge and skills to manage patient care as part of inter-professional teams. Clinical experiences are offered in acute care, critical care, and monitored units.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** H/S/U Basis

## **NUR 1042 - NURSING CARE OF CHILDREN AND THEIR FAMILIES CLINICAL**

**Minimum Credits:** 2

**Maximum Credits:** 2

This course focuses on nursing practice for restoration and maintenance of health in children in various stages of development within their families and the broader social contexts in which children grow and develop. Nursing approaches used in the clinical setting are based on the use of best evidence, developmental perspectives, and cultural competence. The nursing process is applied to the child and family to minimize the effects of stressors which have resulted in a disruption of health. There is an emphasis on critical thinking and decision making as the student applies theory to nursing care.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** H/S/U Basis

## **NUR 1050 - NURSING CARE OF MOTHERS, NEWBORNS AND FAMILIES**

**Minimum Credits:** 2.5

**Maximum Credits:** 2.5

This course provides an introduction to the process of childbirth and the dynamics of the childbearing family. It explores the areas of health promotion, physiologic changes associated with pregnancy, high risk conditions associated with pregnancy and the development of the fetus and newborn. Emphasis is on adaptation to the biopsychosocial needs of the childbearing family with sensitivity to the cultural needs and ethical issues of a diverse population. Critical thinking, problem solving, stress adaptation, role, family and nursing theories provide a major focus for understanding childbearing.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: NUR 0066 and 0082

## **NUR 1050C - NURSING CARE OF MOTHERS, NEWBORNS AND FAMILIES CLINICAL**

**Minimum Credits:** 2.5

**Maximum Credits:** 2.5

This course provides an introduction to the process of childbirth and the dynamics of the childbearing family. It explores the areas of health promotion, physiologic changes associated with pregnancy, high risk conditions associated with pregnancy and the development of the fetus and newborn. Emphasis is on adaptation to the biopsychosocial needs of the childbearing family with sensitivity to the cultural needs and ethical issues of a diverse population. Critical thinking, problem solving, stress adaptation, role, family and nursing theories provide a major focus for understanding childbearing. Clinical experiences reflect a diversity of settings including outpatient, inpatient, and community programs that provide services to the childbearing family.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** H/S/U Basis

**Course Requirements:** CREQ: NUR 1050

## **NUR 1052 - NURSING CARE OF CHILDREN AND THEIR FAMILIES**

**Minimum Credits:** 2.5

**Maximum Credits:** 2.5

This course focuses on the unique health and developmental needs of infants, children and adolescents with an emphasis on family-centered care. The course incorporates principles of assessment, planning and implementation of nursing interventions appropriate for health promotion, wellness, health restoration and various complex health problems. Nursing approaches are based on the use of best evidence, developmental perspectives, and cultural



competence with a focus on critical thinking.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: NUR 0066 and 0082

## **NUR 1052C - NURSING CARE OF CHILDREN AND THEIR FAMILIES CLINICAL**

**Minimum Credits:** 2

**Maximum Credits:** 2

This course focuses on nursing practice for restoration and maintenance of health in children in various stages of development within their families and the broader social contexts in which children grow and develop. Nursing approaches used in the clinical setting are based on the use of best evidence, developmental perspectives, and cultural competence. The nursing process is applied to the child and family to minimize the effects of stressors which have resulted in a disruption of health. There is an emphasis on critical thinking and decision making as the student applies theory to nursing care.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** H/S/U Basis

**Course Requirements:** CREQ: NUR 1052

## **NUR 1054 - NURSING CARE OF OLDER ADULTS**

**Minimum Credits:** 2

**Maximum Credits:** 2

This course is designed to ensure competency in providing evidence-based nursing care to older adults and their families, across a continuum of health care settings. Attention is given to the complex interaction of acute and chronic co-morbid conditions, interdisciplinary collaboration, the recognition of risk factors, valid and reliable health assessment, and individualized and evidence-based care for older adults across a continuum of health care settings. The influence of attitudes, age, gender, race, culture, religion, language, lifestyle, technology, and health care policy on the biological, psychological, and social functioning of older adults is considered.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: NUR 0082

## **NUR 1054C - NURSING CARE OF OLDER ADULTS CLINICAL**

**Minimum Credits:** 1

**Maximum Credits:** 1

This course is designed to ensure competency in providing evidence-based nursing care to older adults and their families, across a continuum of health care settings. Attention is given to the complex interaction of acute and chronic co-morbid conditions, interdisciplinary collaboration, the recognition of risk factors, valid and reliable health assessment, and individualized care for older adults across a continuum of health care settings. The influence of attitudes, age, gender, race, culture, religion, language, lifestyle, technology, and health care policy on the biological, psychological, and social functioning of older adults is considered.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** H/S/U Basis

**Course Requirements:** CREQ: NUR 1054

## **NUR 1057 - NURSING CARE OF MOTHERS, NEWBORNS AND FAMILIES CLINICAL**

**Minimum Credits:** 2

**Maximum Credits:** 2

This course provides an introduction to the process of childbirth and the dynamics of the childbearing family. It explores the areas of health promotion, physiologic changes associated with pregnancy, high risk conditions associated with pregnancy and the development of the fetus and newborn. Emphasis is on adaptation to the biopsychosocial needs of the childbearing family with sensitivity to the cultural needs and ethical issues of a diverse population. Critical thinking, problem solving, stress adaptation, role, family and nursing theories provide a major focus for understanding childbearing. Clinical experiences reflect a diversity of settings including outpatient, inpatient, and community programs that provide services to the childbearing family.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** H/S/U Basis

## **NUR 1060 - NURSING CARE OF CLIENTS WITH PSYCHIATRIC MENTAL HEALTH PROBLEMS**

**Minimum Credits:** 2.5

**Maximum Credits:** 2.5

This course is designed to teach basic psychiatric mental health nursing concepts and their application to clinical practice. Classroom learning is focused on developmental, psychological, and biological theories in order to enhance understanding of psychiatric illness. Major psychiatric illnesses throughout the lifespan as well as contemporary methods of treatment are addressed. Emphasis is placed on understanding the unique contributions of social and cultural factors to mental health.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: NUR 0067

## **NUR 1060C - NURSING CARE OF CLIENTS WITH PSYCHIATRIC MENTAL HEALTH PROBLEMS CLINICAL**

**Minimum Credits:** 2

**Maximum Credits:** 2

This course focuses on nursing practice of health promotion and restoration in individuals with mental health problems. Application of theoretical concepts and nursing interventions is the focus of the clinical experience in acute, chronic, and community mental health settings. Emphasis is placed on understanding the unique contributions of social and cultural factors in the development of treatment plans for clients experiencing psychiatric problems.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** H/S/U Basis

**Course Requirements:** CREQ: NUR 1060

## **NUR 1061 - INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 3

An independent study is a student-initiated experience planned to permit students to pursue an area of interest in nursing with guidance of a faculty preceptor.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

## **NUR 1066 - NURSING CARE OF CLIENTS WITH PSYCHIATRIC MENTAL HEALTH PROBLEMS CLINICAL**

**Minimum Credits:** 2

**Maximum Credits:** 2

This course focuses on nursing practice of health promotion and restoration in individuals with mental health problems. Application of theoretical concepts and nursing interventions is the focus of the clinical experience in acute, chronic, and community mental health settings. Emphasis is placed on understanding the unique contributions of social and cultural factors in the development of treatment plans for clients experiencing psychiatric problems.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** H/S/U Basis

## **NUR 1074 - PROFESSIONAL DEVELOPMENT AND PRACTICUM 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course enables the registered nurse student to further develop critical thinking, leadership abilities, communication and decision-making skills in the development and implementation of an evidence-based clinical capstone project to enhance patient care quality. A systematic approach is used to identify a clinical topic for evidence-based literature review, presentation, and evaluation. Each student identifies specific learning activities for the practicum, which relate directly to a selected culturally diverse environment. Under the guidance of faculty and a clinical preceptor, didactic seminars, assignments, and mentored clinical practicum are used to foster independence and self-direction for all students.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: NUR 0067

## **NUR 1077 - SCHOOL NURSE SEMINAR**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to prepare the professional nurse for certification as a school nurse in Pennsylvania; both the theory component (NUR 1077) and the practicum (NUR 1078) are required for eligibility. The role of the school nurse is explored through the historical, legal, ethical, research and practice perspectives. The biological, physical, developmental, behavioral, cultural and psychosocial needs of children of all ages in the school setting are examined. Throughout the course, current evidence related to school nursing and Pennsylvania educational requirements is applied to the health needs of school age children, including those with special health and learning needs, the culturally diverse and English language learners (ell's). The independent and collaborative aspects of the school nurse role are explored.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** COREQ: NUR 1078

## **NUR 1078 - SCHOOL NURSE PRACTICUM**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to prepare the professional nurse for certification as a school nurse in Pennsylvania; both the theory component (NUR 1077) and this practicum (NUR 1078) are required for eligibility. This course provides the

required 100 hours of clinical practicum experience in elementary, middle and high school settings. The nursing care of children requiring acute, chronic and episodic care is performed under the guidance of an experienced school nurse. Throughout the course, the application of the nursing process and evidence-based approaches are employed when providing nursing services to school age children. Interdisciplinary care and management for school age children with special health and learning needs, including the culturally diverse and English language learners (ELL's) is emphasized. The independent and collaborative aspects of the school nurse role are explored within the school setting.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: NUR 1077

## **NUR 1085 - ETHICS IN NURSING AND HEALTH CARE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces students to the domain of clinical ethics as a foundation for developing ethical expertise in nursing practice. The course focuses on contemporary nursing and health care issues that raise personal and professional ethical concerns. Emphasis is placed on cultural differences, current legislation, political and religious controversy, economic constraints, and professional commitment related to the resolution of the identified ethical dilemmas. The process of ethical analysis and reasoning is used to resolve representative patient and health care situations.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **NUR 1100 - SPECIAL TOPICS**

**Minimum Credits:** 1

**Maximum Credits:** 3

Study of a special topic in nursing.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** Letter Grade

## **NUR 1120 - ADVANCED NURSING MANAGEMENT ADULT ACUTE/COMPLEX HEALTH PROBLEMS**

**Minimum Credits:** 2.5

**Maximum Credits:** 2.5

This course focuses on the patient centered nursing care of adults experiencing acute and complex illnesses. Emphasis is placed on the prioritization and decision making processes of nursing care and the nursing responsibilities associated with translating, integrating and applying medical/surgical management, evaluation of outcomes, health promotion, and support for individuals and families experiencing acute and complex health problems. This course will also discuss the increasing diversity of this nation's population as expressed through age, racial, ethnic, gender, cultural, spiritual and sexual orientation. Discussions will occur with the effect of socio-economic differences and how it may affect the patient's overall health care. Discussion of interdisciplinary collaboration healthcare professional is emphasized.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

**Course Requirements:** PREQ: NUR 0066

## **NUR 1120C - ADVANCED NURSING MANAGEMENT OF THE ADULT WITH ACUTE/COMPLEX HEALTH PROBLEMS CLINICAL**

**Minimum Credits:** 2.5

**Maximum Credits:** 2.5

This clinical course focuses on the nursing care of adults with acute and complex illnesses in a hospital setting. Emphasis is placed on using the nursing process to assist students with the development of priority nursing goals and in applying critical thinking skills to patient care. The clinical nursing responsibilities include interpretation of diagnostic studies, medical/surgical patient management, evaluation of outcomes, health promotion, and support for individuals and families experiencing acute and complex health problems. This course includes application of cultural diversity awareness training to the nursing process. Clinical learning is focused on developing and refining the knowledge and skills to manage patient care as part of inter-professional teams. Clinical experiences are offered in acute care, critical care, and monitored units.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** H/S/U Basis

**Course Requirements:** CREQ: NUR 1120

## **NUR 1121 - ADVANCED CLINICAL PROBLEM SOLVING**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course focuses on the nursing management of the adult who experiences an acute or complex illness with an alteration in multiple body systems. The students' ability to apply the nursing process, using critical thinking skills, is expanded through classroom and case study activities. Professional competence is enhanced through the utilization of high fidelity human simulation technology.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: NUR 1052 and 1054 and 1060

## **NUR 1121C - ADVANCED CLINICAL PROBLEM SOLVING CLINICAL**

**Minimum Credits:** 2

**Maximum Credits:** 2

This course focuses on the nursing management of the adult who experiences an acute or complex illness with an alteration in multiple body systems. The students' ability to apply the nursing process, using critical thinking skills, is expanded through clinical activities. Collaboration with interdisciplinary health professionals in health promotion and restoration is fostered

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** H/S/U Basis

**Course Requirements:** CREQ: NUR 1121

## **NUR 1127 - COMMUNITY HEALTH NURSING**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will provide the student with a broad introduction to community health and the role of nursing within this context. Students will explore epidemiology; health promotion and disease prevention within groups; individual and family case management; community assessment and intervention; environmental hazards; and factors influencing the delivery of and access to community health services. The health care needs of selected at-risk populations will be

examined.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: NUR 0067

## **NUR 1127C - COMMUNITY HEALTH NURSING CLINICAL**

**Minimum Credits:** 0

**Maximum Credits:** 0

The overall objective of this course is to provide the student with a broad introduction to community health and the role of nursing within this context. Students will experience independence and collaboration with community-based clinicians in a variety of settings. Students will have opportunities to apply epidemiology; health promotion and disease prevention within groups; individual and family case management; community assessment and intervention; environmental hazards; and factors influencing the delivery of and access to community health services at the individual, family, and aggregate levels.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** H/S/U Basis

**Course Requirements:** CREQ: NUR 1128

## **NUR 1128 - COMMUNITY HEALTH NURSING**

**Minimum Credits:** 2.5

**Maximum Credits:** 2.5

The overall objective of this course is to provide the student with a broad introduction to community health and the role of nursing within this context. Students will explore epidemiology; health promotion and disease prevention within groups; individual and family case management; community assessment and intervention; environmental hazards; and factors influencing the delivery of and access to community health services. The health care needs of selected at-risk populations will be examined.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: NUR 1052 and 1054 and 1060

## **NUR 1128C - COMMUNITY HEALTH NURSING CLINICAL**

**Minimum Credits:** 2

**Maximum Credits:** 2

The overall objective of this course is to provide the student with a broad introduction to community health and the role of nursing within this context. Students will experience independence and collaboration with community-based clinicians in a variety of settings. Students will have opportunities to apply epidemiology; health promotion and disease prevention within groups; individual and family case management; community assessment and intervention; environmental hazards; and factors influencing the delivery of and access to community health services at the individual, family, and aggregate levels.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** H/S/U Basis

**Course Requirements:** CREQ: NUR 1128

## **NUR 1134 - TRANSITION INTO PROFESSIONAL NURSING PRACTICE**

**Minimum Credits:** 2

**Maximum Credits:** 2

Students synthesize knowledge about the professional nursing roles and increase their understanding of their responsibility and accountability for the nursing care of individuals, families and aggregates. Theory related to professional nursing roles, patient care management, and leadership is presented. In addition, health care policy related to specific nursing issues is examined.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: NUR 1050 and 1060 and 1120

## **NUR 1134C - TRANSITION INTO PROFESSIONAL NURSING PRACTICE CLINICAL**

**Minimum Credits:** 6

**Maximum Credits:** 6

This course is designed to facilitate the transition into professional practice through preceptorship with registered nurses in a variety of settings. Students synthesize knowledge about the professional nursing roles and increase their responsibility and accountability for the nursing care of individuals, families and aggregates. Theory related to professional nursing roles, patient care management, and leadership is presented. In addition, health care policy related to specific nursing issues is examined.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** H/S/U Basis

**Course Requirements:** CREQ: NUR 1134

## **NUR 1135 - TRANSITION INTO PROFESSIONAL NURSING PRACTICE CLINICAL**

**Minimum Credits:** 4

**Maximum Credits:** 4

This course is designed to facilitate the transition into professional practice through preceptorship with registered nurses in a variety of settings. Students synthesize knowledge about the professional nursing roles and increase their responsibility and accountability for the nursing care of individuals, families and aggregates. Theory related to professional nursing roles, patient care management, and leadership is presented. In addition, health care policy related to specific nursing issues is examined.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** H/S/U Basis

## **NUR 1138 - COMMUNITY HEALTH NURSING CLINICAL**

**Minimum Credits:** 2

**Maximum Credits:** 2

The overall objective of this course is to provide the student with a broad introduction to community health and the role of nursing within this context. Students will experience independence and collaboration with community-based clinicians in a variety of settings. Students will have opportunities to apply epidemiology; health promotion and disease prevention within groups; individual and family case management; community assessment and intervention; environmental hazards; and factors influencing the delivery of and access to community health services at the individual, family, and aggregate levels.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** H/S/U Basis

## **NUR 1154 - NURSING CARE OF OLDER ADULTS**

**Minimum Credits:** 2

**Maximum Credits:** 2

This course is designed to ensure competency in providing evidence-based nursing care to older adults and their families, across a continuum of health care settings. Attention is given to the complex interaction of acute and chronic co-morbid conditions, interdisciplinary collaboration, the recognition of risk factors, valid and reliable health assessments, and individualized care for older adults in acute and skilled nursing facilities. The influence of attitudes, age, gender, race, culture, religion, language, lifestyle, technology, and health care policy on the biological, psychological, and social functioning of older adults is considered.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **NUR 1680 - INTRODUCTION TO GENETICS AND MOLECULAR THERAPEUTICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is an introductory course that focuses on the fundamentals of genetics. The course is designed to give the student a basic understanding of genetic concepts so that this knowledge can be utilized to understand current and future genetic theories and therapeutics.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **NUR 1906 - DIRECTED INDIVIDUAL RESEARCH**

**Minimum Credits:** 1

**Maximum Credits:** 3

This course involves student participation in individual research supervised by a member of the department faculty.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** H/S/U Basis

## **NUR 1990 - SENIOR SEMINAR**

**Minimum Credits:** 1

**Maximum Credits:** 1

The goal of this course is to support the senior student's successful progression to entry-level professional nursing practice. Classroom activities and self-directed learning will prepare students to attain the benchmarks associated with professional licensure and provide a foundation for the continuous self-evaluation and life-long learning required to support professional nursing practice (AACN, 2008).

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** H/S/U Basis

## **Philosophy**

### **PHIL 0013 - CONCEPTS OF HUMAN NATURE**



**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to some ways in which ethical and social thought has been influenced by different views of human nature. Readings are from such authors as Plato, Hobbes, Rousseau, Marx, and Freud.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PHIL 0083 - INTRODUCTION TO PHILOSOPHICAL PROBLEMS**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to some classical problems of philosophy. Topics vary, but might include skepticism, free will, the existence of god, and the justification of ethical beliefs.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PHIL 0120 - ENVIRONMENTAL ETHICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course deals with moral and philosophical issues having to do with humanity's relationship to the environment and humanity's duties toward future generations and perhaps to nature itself. It will deal both with theory and with practice.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PHIL 0203 - PHILOSOPHY IN LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

An examination of philosophical themes in literature from both East and West. A novel, a play, folk tales, and poetry will be discussed.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

## **PHIL 0209 - HISTORY OF ANCIENT PHILOSOPHY**

**Minimum Credits:** 3

**Maximum Credits:** 3

The aim of this course is to introduce students to some of the main achievements and leading ideas of ancient Greek philosophy up to classical times. Emphasis will be on understanding and evaluating the arguments and ideas of the Greek philosophical tradition.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PHIL 0213 - HISTORY OF MODERN PHILOSOPHY**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to the philosophical period from Descartes through Kant. Special attention is given to at least one rationalist, one empiricist, and Kant.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PHIL 0214 - BIOETHICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Bioethics is the study of the ethics of life and death. Some of the topics to be covered in this class include: abortion, stem cell research, cloning, euthanasia, capital punishment, distribution of health care resources, and human and animal experimentation.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

## **PHIL 0220 - INTRODUCTION TO EXISTENTIALISM**

**Minimum Credits:** 3

**Maximum Credits:** 3

This introductory level course explores the central existentialist question of how to be a genuine individual or self through reading of several major authors, such as Pascal, Kierkegaard, Dostoevski, Nietzsche, and Sartre.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

**Course Attributes:** DSAS Phil. Think or Ethics General Ed. Requirement, Global Studies, SCI Polymathic Contexts: Ethical/Policy GE. Req., West European Studies

## **PHIL 0230 - PHILOSOPHY AND FILM**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is an introductory aesthetics course dealing with philosophy and film.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

**Course Attributes:** DSAS Phil. Think or Ethics General Ed. Requirement, SCI Polymathic Contexts: Ethical/Policy GE. Req.

## **PHIL 0303 - INTRODUCTION TO ETHICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

An examination of philosophical theories concerning good and evil, right and wrong, and virtue and vice, and their implications for some specific moral issues.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PHIL 0320 - SOCIAL PHILOSOPHY**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to some traditional philosophical perspectives on the nature of society. Philosophers studied might include Plato, Hobbes, Marx, and Twentieth-Century social theorists.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

**Course Attributes:** DSAS Phil. Think or Ethics General Ed. Requirement, Global Studies, SCI Polymathic Contexts: Ethical/Policy GE. Req., West European Studies

## **PHIL 0333 - POLITICAL PHILOSOPHY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This introductory level undergraduate course studies several important views on the nature and justification of government, such as those of Plato, Hobbes, and Marx.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PHIL 0353 - PHILOSOPHY AND PUBLIC ISSUES**

**Minimum Credits:** 3

**Maximum Credits:** 3

The aim of this introductory undergraduate course is to encourage systematic and clear thought about issues of public importance by philosophic reflection which emphasizes the implications of different moral and political theories for these issues.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PHIL 0440 - MINDS AND MACHINES**

**Minimum Credits:** 3

**Maximum Credits:** 3

This introductory level course is devoted to explicating and critically evaluating the thesis that the human mind, or at least its cognitive faculty, can be understood as a computing machine. Readings are primarily from contemporary authors, and include both scientists and philosophers.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

**Course Attributes:** DSAS Phil. Think or Ethics General Ed. Requirement, SCI Polymathic Contexts: Ethical/Policy GE. Req.

## **PHIL 0445 - PHILOSOPHY OF TECHNOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

A course that reviews questions about the nature and value of technology and moves on to issues of intellectual

property rights in digital media and aesthetic analysis of digital media.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **PHIL 0474 - PHILOSOPHY OF RELIGION**

**Minimum Credits:** 3

**Maximum Credits:** 3

A critical examination of the rationality of faith in the existence of god. Traditional arguments both for and against the existence of god are considered, along with pragmatic justifications of faith based upon its beneficial consequences.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PHIL 0501 - INTRODUCTION TO LOGIC**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to the concepts and methods of modern deductive logic. Propositional logic is emphasized, but quantificational logic is touched upon.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0001 or 0031 or Math Placement Score (46 or greater)

## **PHIL 0841 - SCIENCE AND RELIGION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This introductory undergraduate course addresses two questions: does the scientific understanding of the world suffer from a kind of incompleteness that can be remedied by the supernaturalist religions? Or is there even a clash between contemporary science and such religion?

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

## **PHIL 0850 - PHILOSOPHY AND LIBERAL DEMOCRACY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course provides an introduction to several problems common to philosophers and politics and introduces students to the different theories, modes of argument, and techniques of analysis used by the two disciplines to understand them. It is intended to help students deepen their understanding of the dominant political stance of our society.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SNC Elective Basis

## **PHIL 0891 - TOPICS IN PHILOSOPHY (VARIOUS)**

**Minimum Credits:** 3

**Maximum Credits:** 3

This intensive but introductory level seminar is reserved for special philosophical topics that do not fit standard course-catalog categories. Issues discussed vary from year to year, but tend to be narrowly focused and specialized.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

## **PHIL 1157 - PHILOSOPHY OF LANGUAGE**

**Minimum Credits:** 3

**Maximum Credits:** 3

Discussion of various philosophical views of language and the relevance of the study of language to philosophical problems.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PHIL 1201 - HISTORY OF 20TH-CENTURY ANALYTIC PHILOSOPHY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will examine the history of analytic philosophy from its beginnings with Frege and Russell, through the rise and fall of logical positivism, and into its current state today.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **PHIL 1245 - AMERICAN PHILOSOPHY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will survey major themes in American philosophy, with a concentration on pragmatism. It will begin with a study of early thinkers like Thoreau and Emerson, though the majority of course will be dedicated to the pragmatists pierce, James and Dewey. The course will conclude with a look at one or more contemporary pragmatists, like Rorty.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

## **PHIL 1370 - PHILOSOPHY OF ART**

**Minimum Credits:** 3

**Maximum Credits:** 3

This advanced undergraduate course addresses philosophical problems that arise in connection with art, such as the nature of works of art, the comparison and contrast between representational and non-representational art, the definition of beauty, and special obligations concerning art works.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

## **PHIL 1380 - BUSINESS ETHICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This advanced undergraduate course considers a selection of ethical issues that arise in connection with business needs and practices, such as employer-employee relations, truth in advertising, responsibilities to consumers, fair and unfair competitive practices, environmental effects, contractual obligations, liability for damages, and governmental regulation.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

## **PHIL 1440 - PHILOSOPHY OF MIND**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is an advanced undergraduate course in the philosophy of mind, taking up problems of both historical and contemporary interest. Topics vary, but are likely to include many of mind-body dualism, materialist reductionism, phenomenalism, the other-minds problem, philosophical behaviorism, qualia, propositional attitude ascriptions, intentionality, and so on.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

## **PHIL 1461 - EPISTEMOLOGY (THEORY OF KNOWLEDGE)**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will focus on philosophical theories that attempt to answer the questions "what is knowledge?" And "how does one get knowledge?" It will examine how claims to know are justified, and if such claims are even possible within both scientific and nonscientific contexts. We will look at the attempts of classical and modern authors to offer analyses and justification of human knowledge over and against the claims of skepticism.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PHIL 1480 - METAPHYSICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This advanced undergraduate course considers a selection of central problems in metaphysics, such as the problems of realism, essentialism, free will, necessity and possibility, substance and property, persistence through time (including personal identity), the nature of truth, and so on.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

## **PHIL 1501 - SYMBOLIC LOGIC**

**Minimum Credits:** 3

**Maximum Credits:** 3

This advanced undergraduate course develops skills in formal and informal reasoning in predicate-quantifier logic, and covers formal semantics for sentential logic, informal semantics for predicate-quantifier logic, and elementary syntactic metatheory.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0001 or 0031 or Math Placement Score (46 or greater)

## **PHIL 1611 - INTRODUCTION TO PHILOSOPHY OF SCIENCE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is an advanced undergraduate survey of the major problem areas in the philosophy of science. Topics vary somewhat, but generally include many of the following: the nature of explanation, the problem of induction and confirmation, concept formation, scientific methodology, verifiability and falsifiability, the observation theory distinction, scientific realism, law-like form, and theory change.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PHIL 1660 - PARADOX**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course explores paradoxes both for the fun of untangling an intriguing puzzle and for the more serious reason of the easy access they provide to some of the most important foundational issues in philosophy and the sciences.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

**Course Attributes:** Hourly Final

## **PHIL 1891 - ISSUES IN PHILOSOPHY (VARIOUS)**

**Minimum Credits:** 3

**Maximum Credits:** 3

This intensive, advanced-level seminar is reserved for special philosophical topics that do not fit standard course-catalog categories. Issues discussed vary from year to year, but tend to be narrowly focused and specialized.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PHIL 1904 - INDEPENDENT STUDY--UNDERGRADUATE**

**Minimum Credits:** 1

**Maximum Credits:** 9

This course is a way of offering university credit in philosophy for relevant experiences or work undertaken independently, with little or no formal interaction with an instructor.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

## **Physical Education**

### **PEDC 0001 - BEGINNING SWIMMING**

**Minimum Credits:** 1

**Maximum Credits:** 1

For students who are unable to swim or who can swim very little. Opportunities are presented to learn basic functional aquatic skills and basic strokes. Students are permitted to set their own achievement goals. Instruction is on an individual basis.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

## **PEDC 0002 - INTERMEDIATE SWIMMING**

**Minimum Credits:** 1

**Maximum Credits:** 1

For students who have learned the mechanics of basic aquatic strokes and are interested in the development of proper rhythm and timing necessary for good performance in swimming. Students are permitted to set their own achievement goals. Instruction is on an individual basis.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SNC Elective Basis

## **PEDC 0010 - WATER AEROBICS**

**Minimum Credits:** 1

**Maximum Credits:** 1

Improve your fitness in the enjoyable aquatic environment. This program is designed for all ages. Each enrollee will be permitted to participate at their own level gradually improving their muscle tone, cardiac, and respiratory fitness levels. This program will be conducted in shallow water so that the non-swimmer may participate.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SNC Elective Basis

## **PEDC 0018 - DIRECTED STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 2

If a student is interested in developing a program independently, or if a student is interested in a program not offered formally by this department, he or she may develop a contract with an instructor in a specific area and present this contract for approval to the program coordinator.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** Letter Grade

## **PEDC 0022 - AEROBIC DANCE**

**Minimum Credits:** 1

**Maximum Credits:** 1

Improve your fitness levels with this aerobic dance to music course. One of America's most popular ways to exercise. This program is for all ages. Each enrollee will be permitted to participate at his/her own level, gradually improving muscle tone, cardiac, and respiratory fitness.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SNC Elective Basis



## **PEDC 0026 - AQUATIC CONDITIONING**

**Minimum Credits:** 1

**Maximum Credits:** 1

Good swimmers who want to learn how to use swimming to maintain or improve their physical fitness should register for this course. Students may determine their capacity for exercise, and they may learn how to apply this effort in the water.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SNC Elective Basis

## **PEDC 0029 - WEIGHT TRAINING - MEN**

**Minimum Credits:** 1

**Maximum Credits:** 1

Class designed to provide the male student with the opportunity to develop and practice basic weight training techniques. With the guidance of the instructor, the student will be encouraged to develop an individualized self-designed program. The emphasis of this course will be placed on progressive-resistive exercises.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

## **PEDC 0030 - WEIGHT TRAINING - WOMEN**

**Minimum Credits:** 1

**Maximum Credits:** 1

Class designed to provide the female student with the opportunity to develop and practice basic weight training techniques. With the guidance of the instructor, the student will be encouraged to develop an individualized self-designed program. The emphasis of this course will be placed on progressive-resistive exercises.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

## **PEDC 0032 - MODERN DANCE 2**

**Minimum Credits:** 1

**Maximum Credits:** 1

This course is designed for those students who have mastered beginning dance technique and wish to gain more advanced skills. Advanced technique and compositional work is stressed. Course objectives include increased technical skills, awareness and appreciation of modern dance as an art form, ease in phrasing rhythmical movement and skill in improvisational movement.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SNC Elective Basis

## **PEDC 0034 - BALLET 2**

**Minimum Credits:** 1

**Maximum Credits:** 1

An intermediate class, taught as a continuation of ballet 1. Also a class for students who may have some ballet training before coming to college. Audition for class eligibility at the first class session or permission of instructor.

**Academic Career:** Undergraduate  
**Course Component:** Credit Laboratory  
**Grade Component:** Letter Grade

### **PEDC 0041 - JAZZ 1**

**Minimum Credits:** 1

**Maximum Credits:** 1

Fundamentals of jazz dance for beginning dance students. Class includes warm-up, center floor, and cross floor movement combinations, contemporary jazz and pop music is emphasized.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SNC Elective Basis

### **PEDC 0042 - JAZZ 2**

**Minimum Credits:** 1

**Maximum Credits:** 1

A continuation of the basic fundamentals learned in jazz 1. More emphasis is placed on longer routines and more complicated movement sequences. It is an intermediate jazz class.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SNC Elective Basis

### **PEDC 0060 - BASKETBALL 1 - CO-EDUCATIONAL**

**Minimum Credits:** 1

**Maximum Credits:** 1

Supervised competition follows a four-week conditioning period in which individual skills and team strategy are stressed. Opportunity to improve on previously acquired skills and become a team member is provided.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

### **PEDC 0063 - BASKETBALL 2 - CO-EDUCATIONAL**

**Minimum Credits:** 1

**Maximum Credits:** 1

Total team play is discussed and practiced. On court work involves many phases of the 5 on 5 game. Although skill work is not emphasized, it is still covered within the team concept. Strategy and tactics, including game situations, are part of the class. Attendance is required and role is taken at every class. Tests include shooting and a scouting report.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

### **PEDC 0065 - VOLLEYBALL**

**Minimum Credits:** 1

**Maximum Credits:** 1

This course is designed to introduce the beginner to the significant components of volleyball. Basic skills to be taught will include the overhead volley, forearm pass, service, spike, individual block and defensive recovery skills. A 4-2

right-side-setter offensive system will be introduced with a 6-back and a 6-up defensive system. All rules and regulations will be reviewed during the course.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SNC Elective Basis

## **PEDC 0087 - PERSONAL DEFENSE**

**Minimum Credits:** 1

**Maximum Credits:** 1

Offers physical conditioning and self-defense through the application of judo. Emergency self-defense from various attacks will be taught utilizing basic throwing, grappling, and striking techniques. Students develop a deep respect for others, inner security, and self-confidence. The purpose of this course is to defeat an opponent through the most efficient use of mind and body, but doing so on the principle of "giving away" under his attack or effort.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SNC Elective Basis

## **PEDC 0099 - BASIC ROCK CLIMBING**

**Minimum Credits:** 1

**Maximum Credits:** 1

Beginning with bouldering, the course will deal primarily with rope handling and moving on vertical rock planes in a safe manner. Covered in this course are bouldering, friction and balance climbing, 3-point suspension, use of ropes, knot craft, body rappelling, free rigging climbs, mountain safety, basic belaying, use of webbing (slings and harnesses), chimney techniques and natural protection.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SNC Elective Basis

## **PEDC 0100 - LIFE GUARDING**

**Minimum Credits:** 2

**Maximum Credits:** 2

For the intermediate-level or above swimmer who wishes to gain national red cross certification in lifeguard training. This course is specifically designed to prepare the students for lifeguarding at pools and open water, non-surf beaches. This class also provides red cross certification in CPR for the professional rescuer and community first aid.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

## **PEDC 0103 - AEROBIC EXERCISE 1**

**Minimum Credits:** 1

**Maximum Credits:** 1

Aerobic conditioning to music. This overall circuit workout class includes walking, jogging, and stretching, plus stomach, lower body and upper body exercises.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SNC Elective Basis

## **PEDC 0123 - FIRST AID AND CPR**

**Minimum Credits:** 1

**Maximum Credits:** 1

The purpose of the course is to prepare people to care for injuries and to meet emergencies when medical assistance is delayed. The course is taught through lectures, discussion, videos, demonstrations, and mannequin practice.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

## **PEDC 0161 - INDIVIDUAL FITNESS**

**Minimum Credits:** 1

**Maximum Credits:** 1

Fundamental fitness concepts and appropriate physical activities will be introduced to students. Students will be required to implement and complete a 10-week fitness program.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

## **PEDC 0162 - DANCE BASICS**

**Minimum Credits:** 1

**Maximum Credits:** 1

For those people who always had a desire to learn to dance but were intimidated by a formal class. Break your own stereotype! If increasing your flexibility, strength, coordination and rhythmic awareness is a goal, you can do it in an enjoyable atmosphere of sound and movement. Learn dance fundamentals that are used in ballet, jazz, and modern dance. Some social dance and folk dance movements are included. Barre and floor warm-up and movement sequences are contained in each class.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SNC Elective Basis

## **PEDC 0184 - SCUBA 1**

**Minimum Credits:** 2

**Maximum Credits:** 2

Provides naui or padi openwater instruction and certification for the beginning student who wishes to learn safe scuba diving techniques. Pool, classroom, and openwater training are required for certification. The student must provide personal diving gear (mask, fins, snorkel, and boots) by the third class meeting; all other equipment for the pool activities will be provided. The students must also provide all of the equipment necessary for openwater training (which may be rented).

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

## **PEDC 0199 - LIFEGUARD INSTRUCTOR**

**Minimum Credits:** 2

**Maximum Credits:** 2

The purpose of this course is to train instructor candidates to teach red cross lifeguarding and water safety courses. The

course is dedicated to developing the skills needed to plan, conduct, and evaluate red cross courses including lifeguard training, CPR for the professional rescuer, automated external defibrillation essentials, oxygen administration, preventing disease transmission, community water safety, basic water rescue and lifeguard instructor aide. Upon successful completion, students will receive red cross instructor certification in lifeguard training.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

## **PEDC 0200 - WATER SAFETY INSTRUCTOR**

**Minimum Credits:** 2

**Maximum Credits:** 2

The purpose of this course is to train instructor candidates to teach red cross swimming and water safety courses. The course is dedicated to developing the skills needed to plan, conduct, and evaluate red cross courses including learn to swim levels 1 through 6, parent & child aquatics, water safety outreach (includes basic water rescue and presentations on water safety today, general water safety, home pool safety, and parent orientation to swimming lessons). Upon successful completion, students will receive red cross water safety instructor certification.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

## **PEDC 0231 - SOCCER 1**

**Minimum Credits:** 1

**Maximum Credits:** 1

For the beginner who wishes to develop competence in the skills, rules, and strategies required for participation in soccer.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

## **Physics**

### **PHYS 0140 - INTRODUCTION TO PHYSICS 1**

**Minimum Credits:** 4

**Maximum Credits:** 4

First semester of non-calculus-based introductory physics. Topics include mechanics, conservation laws, vibrations, waves, and fluid mechanics. Students must be proficient in college algebra and trigonometry.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **PHYS 0141 - INTRODUCTION TO PHYSICS 1 LAB**

**Minimum Credits:** 1

**Maximum Credits:** 1

A laboratory illustrating basic experimental techniques and concepts from mechanics, vibrations, waves, and fluids.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** CREQ: PHYS 0140

## **PHYS 0142 - INTRODUCTION TO PHYSICS 2**

**Minimum Credits:** 4

**Maximum Credits:** 4

Second semester of non-calculus-based introductory physics. Topics include thermodynamics, electricity, magnetism, optics, and modern physics.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PHYS 0140

## **PHYS 0143 - INTRODUCTION TO PHYSICS 2 LAB**

**Minimum Credits:** 1

**Maximum Credits:** 1

A laboratory illustrating basic concepts from thermodynamics, electricity, magnetism, optics, and modern physics.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PHYS 0141; CREQ: PHYS 0142

## **PHYS 0150 - PHYSICS 1**

**Minimum Credits:** 4

**Maximum Credits:** 4

First semester of calculus-based physics. Topics include mechanics, conservation laws, fluid mechanics, vibrations, waves, and sound.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: MATH 0221 or 0220 or 0140

## **PHYS 0151 - PHYSICS LABORATORY 1**

**Minimum Credits:** 1

**Maximum Credits:** 1

A laboratory illustrating basic experimental techniques and basic concepts from mechanics, waves and fluids.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** CREQ: PHYS 0150

## **PHYS 0152 - PHYSICS 2**

**Minimum Credits:** 4

**Maximum Credits:** 4

Second semester of calculus-based physics. Topics include thermodynamics, electricity, magnetism, wave optics, and an introduction to relativity and quantum concepts.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PHYS 0150; CREQ: MATH 0231 or 0230

## **PHYS 0153 - PHYSICS LABORATORY 2**

**Minimum Credits:** 1

**Maximum Credits:** 1

A laboratory illustrating concepts from electricity, magnetism, thermodynamics, optics, and nuclear physics.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PHYS 0151; CREQ: PHYS 0152

## **PHYS 0225 - OPTICS**

**Minimum Credits:** 1

**Maximum Credits:** 1

A combined lecture/laboratory course in optics. Topics include the following: The laws of reflection and refraction; total internal reflection; dispersion; polarization; image formation by mirrors and lenses; the lens maker's equation; telescopes and microscopes; single and double-slit interference; the diffraction grating; resolving power.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PHYS 0150

## **PHYS 0400 - CLASSICAL MECHANICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Kinematics and dynamics of point masses with various force laws; central forces, including planetary and satellite motion; conservation laws; systems of particles; accelerating coordinate systems; rigid body motions; topics from Lagrange's formulations of mechanics; Einstein's special relativity and how it modifies Newtonian mechanics.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (MATH 0231 or 0230) and PHYS 0152

## **PHYS 0450 - ELECTROMAGNETISM**

**Minimum Credits:** 3

**Maximum Credits:** 3

Begins with a rigorous development of fundamental concepts in electromagnetism, including static electric and magnetic fields, dielectrics and magnetic materials, electric potential, capacitance, charged particle motion, and induced EMF. Then Maxwell's equations are developed and applied to the propagation and emission of electromagnetic waves.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (MATH 0231 or 0230) and PHYS 0152

## **PHYS 0480 - ASTROPHYSICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The application of physics to understanding stars, galaxies, and the universe at large. Topics include the blackbody radiation laws, radiant heat transfer, gravitational statics and dynamics, ionized gasses, and relativistic effects.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (MATH 0231 or 0230) and PHYS 0152

## **PHYS 1111 - SPECIAL TOPICS**

**Minimum Credits:** 1

**Maximum Credits:** 4

Designed to allow students and faculty to pursue areas of special interest not included in the regular course offerings.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

## **PHYS 1300 - QUANTUM PHYSICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Breakdown of classical physics; photons and de Broglie waves Schrodinger's equation; particle in a box; harmonic oscillator; the hydrogen atom; atomic physics; molecular bonding and spectra; concepts of statistical mechanics; blackbody radiation; lasers; solid state physics, with emphasis on semiconductors.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: (MATH 0231 or 0230) and PHYS 0152

## **PHYS 1400 - ADVANCED LAB**

**Minimum Credits:** 1

**Maximum Credits:** 1

Students perform a variety of advanced experiments in physics.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

## **Political Science**

### **PS 0206 - AMERICAN POLITICAL PROCESS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The course is an introduction to the institutions and processes of the national government. Against a background of the constitution and social context of American politics, attention will be given to such topics as voting behavior, public opinion and political attitudes, the party system, the president, the Congress, and the courts.

**Academic Career:** Undergraduate



**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PS 0210 - NATIONAL POLICYMAKING**

**Minimum Credits:** 3

**Maximum Credits:** 3

Examination of the national policymaking process from both political and economic perspectives. Focus on roles played by congress, the president, and the federal bureaucracy in the federal budget process. Current issues such as the federal deficit, controlling spending, and a balanced budget, also discussed.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PS 0302 - COMPARATIVE POLITICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

A study of governments and politics in Europe with emphasis on comparative analysis focusing on the United Kingdom, Germany, Russia, and the European union (EU).

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PS 0501 - WORLD POLITICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The purpose of this course is two-fold: first, to increase the students' awareness of global issues and problems of major political import, and second, to enhance the students' ability to interpret and analyze the behavior and inter relationships of the actors that deal with these issues and problems.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PS 0601 - POLITICAL IDEOLOGIES**

**Minimum Credits:** 3

**Maximum Credits:** 3

Examination of the origins of theories of various political ideologies, including liberalism, conservatism, communism, fascism, and various liberation ideologies. Special attention given to the liberal tradition in the United States.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PS 1206 - FREE SPEECH IN AMERICA**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will examine the major dimensions of the first amendment protections of free speech and press which have been the subject of supreme court decisions and provoked extensive political and social controversy. Included are

issues of incitement and advocacy, symbolic speech, libel, and obscenity.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

## **PS 1207 - AMERICAN CONSTITUTIONAL LAW**

**Minimum Credits:** 3

**Maximum Credits:** 3

A study of the interpretation of the constitution by the supreme court in the American political system. Topics include the development of judicial review, civil and political rights, federalism, and national versus state power in the regulation of the economy.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

## **PS 1209 - MEDIA, POLITICS, AND THE LAW**

**Minimum Credits:** 3

**Maximum Credits:** 3

Overview of legal issues facing mass media, including press freedom, defamation, libel, and privacy. Discussion of emerging technologies of newsgathering and publication. An extension of first amendment issues raised in PS 1206.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

## **PS 1214 - US CONGRESS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will explore the evolution and current place of the U.S. Congress within the American political system beginning with an examination of the theory and history of electing representatives to government. Students will examine the role and structure of the legislative branch as anticipated in the American constitution. Other areas of focus include the congressional election process, the importance of congressional committees and differences in rules for the house and senate, policy making, and how congress relates to the other two branches of government. A key overarching goal in this course is to assess challenges and changes facing the contemporary U.S. Congress.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PS 1215 - AMERICAN PRESIDENCY**

**Minimum Credits:** 3

**Maximum Credits:** 3

The course examines the controversies surrounding the design of the presidency and situates them within the context of debates over the nature of politics, political power, and the state in the founding period. Attention is also given to the political evolution of American government and the presidency, the development of the welfare state, and dilemmas of the modern presidency.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PS 1237 - POLITICAL PARTIES AND ELECTIONS**

**Minimum Credits:** 3

**Maximum Credits:** 3

A study of the nature of democratic politics and the role and functions of parties and elections in the American political system. Election field research may be included.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PS 1245 - ENVIRONMENTAL POLITICS & POLICY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course studies the politics surrounding U.S. Environmental policies. The history of those policies is examined, as is the role of the president, Congress, courts, and interest groups in the policymaking process. Current issues such as air and water pollution, hazard waste disposal, energy production, and land use policies are addressed.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PS 1317 - POLITICS OF THE EUROPEAN UNION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to introduce students to the European community. It will provide a historical overview of the immediate post-war period and introduce students to the community's four major governing institutions. It also considers the single European act and its significance and explores the role of the "big four" countries within the community.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

## **PS 1356 - THE GOVERNMENT AND POLITICS OF AFRICA**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines African politics from the historical legacy of European imperialism to contemporary issues. Topics of focus will include the role of ethnicity, institutions, and ideologies; patterns of change, social forces, global economics and how they have impacted nation building across the continent.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PS 1507 - INTERNATIONAL ORGANIZATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

The course will focus on nongovernmental as well as intergovernmental organization, and will be concerned with the economic as well as the political aspects of such organization. Throughout the course, international organization will be approached as an arena for both conflict and cooperation. Special emphasis on the United Nations.

**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis

## **PS 1508 - INTERNATIONAL TERRORISM**

**Minimum Credits:** 3

**Maximum Credits:** 3

Terrorism has gone from a relatively marginal security concern to one of the thorniest security issues in international politics. Indeed, today there are few countries that do not suffer from some form of terrorism. And terrorist groups such as the Islamic state in Syria pose significant challenges for the international community. This course aims to introduce students to main debates surrounding terrorism. The course will deal with questions regarding the definition of terrorism, its causes and historical evolution, the relationship between insurgency and terrorism, the organizational structure of terrorist groups and the tactics they use. We will also analyze counter-terrorism and the factors that influence its effectiveness. Throughout the course, we will have a chance to take a closer look at some of the terrorist groups such as Al-Qaeda, Islamic state, Hamas, ETA, Tamil Tigers, among others. In the last part of the course, we will deal with the rise of domestic terrorism in the U.S.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PS 1515 - AMERICAN FOREIGN POLICY**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to U.S. foreign policy since 1945. Examination of foundations, assumptions, objectives, and patterns of American foreign policy. Theories of international relations, the sources of American foreign policy, and current U.S. foreign policy toward major countries and areas of the world are also considered.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PS 1700 - POLITICAL SCIENCE RESEARCH**

**Minimum Credits:** 3

**Maximum Credits:** 3

Focus on design and execution of research projects in political science, including contextual review, question development, data collection and analysis, and presentation of findings.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

## **PS 1800 - DIRECTED READING**

**Minimum Credits:** 1

**Maximum Credits:** 4

Readings on special topics for which courses are not currently offered. Includes tutorial sessions with the instructor and written abstracts of materials assigned.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

## **PS 1810 - SPECIAL TOPICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Detailed analysis of a particular topic not covered by regularly scheduled courses.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PS 1820 - DIRECTED RESEARCH**

**Minimum Credits:** 1

**Maximum Credits:** 3

Research on special topics for which courses are not currently offered, resulting in an extensive written term project completed under the supervision of departmental faculty.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

## **PS 1830 - INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 6

Independent study is normally associated with off-campus educational opportunities, such as internships or special programs.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

# **Psychology**

## **PSY 0200 - INTRODUCTION TO PSYCHOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

A summary of the present knowledge in areas such as scientific research methods, learning, sensation and perception, the biological bases of behavior developmental patterns, motivation, emotion, personality, social influences, psychopathology, and psychotherapies. Prerequisite to all other courses in psychology.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **PSY 0210 - SOCIAL PSYCHOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

The study of behavior in the social environment. Social psychology concerns the manner in which the behavior, feelings, or thoughts of one individual are influenced or determined by the behavior of and/or characteristics of others. Primary emphasis is on current theories and research in social psychology with applications to problems of society also considered.

**Academic Career:** Undergraduate

**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** PREQ: PSY 0200 or 0010

## **PSY 0211 - COMPARATIVE PSYCHOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will examine non-human organism's learning and cognition in comparison to humans, with an emphasis on the adaptive value of behavior and cognition. Topics will include the theory of evolution, classical and operant conditioning, category formation, memory, altruism and cooperation, optimal foraging, language, and intelligence.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: PSY 0200 and BIOL 0110

## **PSY 0230 - CHILD DEVELOPMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

Provides an understanding of the basic principles of change as they apply to the development of infants and children. Topics include the relative influences of environmental, hormonal, and genetic factors on physical, socioemotional, and cognitive development.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PSY 0200 or 0010

## **PSY 0240 - THEORIES OF PERSONALITY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Study of the structure and organization of the normal personality through a survey of basic theoretical viewpoints ranging from psychoanalytic theory to modern social cognitive theories.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PSY 0200 or 0010

## **PSY 0260 - ADOLESCENT DEVELOPMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

Provides an understanding of the basic principles of human development as applied to the adolescent. Theories and research findings are examined with regard to the areas of physical and sexual development, intelligence and cognitive functioning, and social and emotional development.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PSY 0200 or 0010

## **PSY 0270 - INTRODUCTORY STATISTICS**

**Minimum Credits:** 4

**Maximum Credits:** 4

Provides a basic understanding of statistical techniques. Includes introduction to experimental design, descriptive and inferential statistics. Course involves the rationale, logic and statistical computation of parametric hypothesis testing, as well as criticisms of that method and alternatives. The class includes a co-requisite lab (4.0 crs).

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PSY 0200 or 0010 and MATH 0001 or Math Placement Score (46 or greater)

## **PSY 0351 - PSYCHOPHARMACOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will focus on the physiological, psychological, and social aspects of drug use and abuse. Legal, illicit, and drugs for mental disorders will be covered as well as the prevention and treatment of drug dependence.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PSY 0200 or 0010

## **PSY 0384 - ADULT DEVELOPMENT & AGING**

**Minimum Credits:** 3

**Maximum Credits:** 3

This class is intended to educate students about the biological, social and psychological changes that occur in people as they progress through the second half of life. In addition to these topics, the class will review the reasons for the increasing need to study and understand these changes, as well as research designs and research related problems commonly seen in this area.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PSY 0200 or 0010

## **PSY 0470 - INTRODUCTION TO BEHAVIOR MODIFICATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to the use of instrumental and classical training procedures in the modification of human behavior. The course covers the theoretical background (including ethical issues), the principles of instrumental and Pavlovian training, the principles of cognitive change, and applications to psychotherapy, education, and self-modification.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PSY 0200 or 0010

## **PSY 0501 - LIFESPAN DEVELOPMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course follows human development from fetal stages until the end of life. The course includes theory, research and practical applications oriented toward the nursing field. Lecture topics include genetic/environmental influences; prenatal and birth factors; physical, cognitive, social, personality, and cultural variables which influence normal and abnormal development in infancy, childhood, adolescence, early-, middle-, and late adulthood.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PSY 0200 or 0010

## **PSY 1000 - PSYCHOLOGY SEMINAR**

**Minimum Credits:** 0

**Maximum Credits:** 0

One hour per week provides a forum for the discussion of professional issues in psychology along with a dissemination of information related to the Department of Psychology and what happens after a student graduates. Required for all Psychology majors; two terms are needed for graduation.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** H/S/U Basis

## **PSY 1031 - RESEARCH METHODS**

**Minimum Credits:** 4

**Maximum Credits:** 4

The course introduces students to the fundamentals of psychological research, including the nature of psychology as a science, the selection of a research problem, research designs, the nature of research variables, and ethical considerations. Course includes laboratory involving practical experiences in the design of experiments, conducting experiments, analyzing and interpreting data, and writing research papers.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PSY 0200 or 0010 and 0270

## **PSY 1065 - COGNITIVE PSYCHOLOGY**

**Minimum Credits:** 4

**Maximum Credits:** 4

An examination of the mental activities that constitute human cognition. Topics include perception, attention, memory, language, problem-solving and reasoning, artificial intelligence, and consciousness. The course has an accompanying lab where computer, laboratory, and real-world techniques for studying cognitive processes are demonstrated and practiced.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PSY (0200 or 0010) and 0270 and 1031

## **PSY 1121 - TESTS AND MEASUREMENTS**

**Minimum Credits:** 4

**Maximum Credits:** 4



Reviews the rationale and use of many psychological tests. Ethical considerations and current issues in testing are covered. Course includes a laboratory that focuses on the application of psychometric concepts, test development, administration of psychological tests currently used in the field, and development of skills in interpreting testing data and assessment reports.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PSY (0200 or 0010) and 0270 and 1031

## **PSY 1141 - PSYCHOPATHOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

An overview of the etiology and symptomological presentation of abnormal behaviors and psychological disorders, as well as a survey of current therapeutic modalities.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PSY 0200 or 0010

## **PSY 1178 - HUMAN SEXUALITY**

**Minimum Credits:** 3

**Maximum Credits:** 3

A survey of biological, psychological and social aspects of human sexual activity.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PSY 0200 or 0010

## **PSY 1216 - HEALTH PSYCHOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

A multi-disciplinary field concerned with the development and integration of behavioral and bio-medical sciences, knowledge and techniques relevant to health and illness, and the application of this knowledge to diagnosis, prevention, treatment, and rehabilitation.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PSY (0200 or 0010) and 0270 and 1031

## **PSY 1251 - MODELS OF PSYCHOTHERAPY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Examination of various traditional and contemporary modalities of psychotherapy used (clinically) to treat abnormal behaviors and psychological disorders.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PSY (0200 or 0010) and 1141

## **PSY 1440 - PSYCHOLOGY OF LEARNING**

**Minimum Credits:** 4

**Maximum Credits:** 4

This course will give an introduction to the study of learning and behavior, with an emphasis in the findings from experimental studies as well as the importance of looking to the environment to find explanations of behavior. A number of different topics will be covered, including natural selection, classical and operant conditioning, schedules of reinforcement, stimulus control, and observational learning. A laboratory component applies principles learned in lecture to real-world situations.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PSY (0200 or 0010) and 0270 and 1031

## **PSY 1441 - PSYCHOLOGY OF LEARNING LABORATORY**

**Minimum Credits:** 1

**Maximum Credits:** 1

The accompanying laboratory component to psychology of learning allows students to apply the principles learned in lecture, which emphasize the study of behavior. Students will have the opportunity to use single-subject design, classical conditioning, and operant conditioning in small human demonstrations. A computer program will also be used that simulates a rat in an operant chamber to illustrate more complex learning principles. Students will further their analytical and writing skills by conducting experiments, evaluating data and graphs, and writing scientific reports.

**Academic Career:** Undergraduate

**Course Component:** Credit Laboratory

**Grade Component:** Letter Grade

**Course Requirements:** CREQ: PSY 1440

## **PSY 1500 - PHYSIOLOGICAL PSYCHOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Covers the neuroscience perspective of psychology; with emphasis on the structural and functional organization of the central and peripheral nervous systems and the relationship between brain structure and behavior.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PSY (0200 or 0010) and 0270 and 1031

## **PSY 1548 - SENIOR PROJECT 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

Part 1 of individual research supervised by a member of the psychology faculty. This course is restricted to students with Psychology as an area of concentration. Senior status and permission of supervisor required.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: Senior Status

## **PSY 1549 - SENIOR PROJECT 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

Part 2 of individual research supervised by a member of the psychology faculty. This course is restricted to students with Psychology as an area of concentration. Senior status and permission of instructor required.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: Senior Status

## **PSY 1555 - INTERNSHIP**

**Minimum Credits:** 1

**Maximum Credits:** 5

Participation in supervised psychological activities at off-campus agencies. Particular sites selected to fit student career interests. Requires keeping a journal of daily activities, writing a final term paper relating the internship experience to the Psychology, and making a brief presentation about your internship to the Psychology Seminar class.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: Senior Status

## **PSY 1560 - INTERNSHIP**

**Minimum Credits:** 6

**Maximum Credits:** 6

Participation in supervised psychological activities at off campus agencies. Particular sites selected to fit student career interests. Requires keeping a journal of daily activities, writing a final term paper relating the internship experience to the psychology curriculum, and making a brief presentation about your internship to the psychology seminar class. Senior status and permission of department is required.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: Psychology Major and Senior Status

## **PSY 1570 - HISTORY AND SYSTEMS OF PSYCHOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Designed as an interdisciplinary examination of the evolution of the field of psychology. Time is spent on obtaining a solid understanding of the philosophical underpinnings of the discipline of psychology. From the early Greek philosophers on the early emerging discipline of psychology is examined by tracing the development and historical lineage of different schools of thought up to the modern era. Emphasis is on the relationship of psychology to the fields of history and philosophy, and how schools of thought fit into empiricist and rationalist traditions.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PSY (0200 or 0010) and 0270 and 1031

## **PSY 1636 - ORGANIZATIONAL PSYCHOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

An examination of what psychologists have found out about people at work, the ways in which they have studied the workplace, and how psychology is practiced in human resources and other organized settings. There is an emphasis on current perspectives and findings in this applied area of psychology.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PSY 0200 or 0010

## **PSY 1650 - ADVANCED SEMINARS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Intensive study of a specialized area emphasizing current research and theory. Examples of recent seminars taught include psychology of language, intelligence, cross-cultural psychology, memory, neuropsychological testing, and artificial intelligence.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: PSY (0200 or 0010) and 0270 and 1031

## **PSY 1904 - DIRECTED INDIVIDUAL READING**

**Minimum Credits:** 1

**Maximum Credits:** 3

Under special circumstances, psychology majors can design an individual reading course with a member of the department and in consultation with a faculty member. Permission of instructor required.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

## **PSY 1906 - DIRECTED INDIVIDUAL RESEARCH**

**Minimum Credits:** 1

**Maximum Credits:** 3

This course involves student participation in individual experimental research supervised by a member of the department faculty.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

## **Religious Studies**

### **RELGST 0116 - BIBLE AS LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **RELGST 1460 - SPECIAL TOPICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Detailed analysis of a particular topic not covered by regularly scheduled courses.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **RELGST 1602 - RELIGIONS OF THE WORLD**

**Minimum Credits:** 3

**Maximum Credits:** 3

A seminar that examines the origins, identities, and theological conceptions of the major non-Judeo/Christian religious traditions. The course of study includes the scriptures, cultural contexts and worship practices of these religions as well as the intimate relationship of religion to other aspects of human behavior.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **RELGST 1603 - JUDAISM, CHRISTIANITY AND ISLAM**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is a study of the beliefs and practices of the three major monotheistic religions. The course examines the historical origins, development, theological concepts and worship practices of what are sometimes called 'the Abrahamic faiths.' It emphasizes the distinct character of each religion as well as variations within each, and seeks to discern continuity and differences among the three. This course is designed to be a companion to History/RELGST 1602, 'Religions of the World' to provide a more searching treatment of the Western religious traditions. The approach combines elements of a seminar, in which student preparation and participation are important, with lecture segments and also makes significant use of video and web-based resources.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **RELGST 1774 - HISTORY OF CHRISTIANITY**

**Minimum Credits:** 3

**Maximum Credits:** 3

An examination of the foundations of Christianity in roman times and its worldwide diffusion up to the present. The emergence of differing Christian identities, the experiences of Christians in various societies, and the role of Christianity in significant social and political developments in the West are emphasized.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **Respiratory Care**

### **RESCA 0020 - RESPIRATORY CARE TECHNIQUES 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces the student to medical terminology, basic patient care, vital signs assessment, and patient

communication. An introductory clinical tour is included during this course. In addition, gas laws as they apply to pulmonary physiology and medical gas therapy will be covered.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Attributes:** Hourly Final

## **RESCA 1022 - RESPIRATORY PHARMACOLOGY**

**Minimum Credits:** 2

**Maximum Credits:** 2

This course reviews drug classification and autonomic responses to medications. Emphasis is placed on drugs delivered by the respiratory care practitioner with consideration given to analgesics, antibiotics, steroids, cardiovascular drugs and drugs used in anesthesia.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: BIOL 0950 and CHEM 0190 and RESCA 0020

## **RESCA 1024 - RESPIRATORY CARE TECHNIQUES 2**

**Minimum Credits:** 4

**Maximum Credits:** 4

Introduces the student to medical gas administration and the modalities of therapy, including aerosol and humidity therapy, chest physiotherapy, incentive spirometry, IPPB, techniques, and sterilization of equipment.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: RESCA 0020 and 1022 and 1026 and 1028 and 1041

## **RESCA 1026 - RESPIRATORY PHYSIOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course elaborates on the function of the pulmonary system and its interrelationship with cardiovascular function. Topics include ventilatory mechanics, gas diffusion, oxygen/carbon dioxide transport, pulmonary circulation, fetal pulmonary development, and arterial blood gas relationships.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: BIO 0950 and CHEM 0190 and RESCA 0020

## **RESCA 1028 - RESPIRATORY PATHOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Examines the etiology and treatment of specific pulmonary diseases and other disease conditions which adversely affect the cardiopulmonary system. Topics include restrictive and obstructive pulmonary diseases, pulmonary infections, neoplasms, emboli, pediatric and neonatal pulmonary conditions, chest wall diseases and thoracic trauma, and ARDS. Also included are basic chest x-ray interpretation, radiation safety, and physical examination and assessment of the chest.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: BIOL 0950 and CHEM 0190 and RESCA 0020

**Course Attributes:** Hourly Final

## **RESCA 1030 - CLINICAL PRACTICUM 1**

**Minimum Credits:** 6

**Maximum Credits:** 6

This hospital-based activity allows for supervised student practice of basic respiratory care therapeutics, electrocardiography, arterial blood gases, and home care.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: RESCA 0020 and 1022 and 1026 and 1028 and 1041

## **RESCA 1031 - EKG/ABG**

**Minimum Credits:** 5

**Maximum Credits:** 5

This course introduces the student to drawing arterial blood gases, the collection and interpretation of data, and correlation to disease states. Techniques for obtaining electrocardiograms and their interpretation are covered.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **RESCA 1032 - RESPIRATORY CARE TECHNIQUES 3**

**Minimum Credits:** 6

**Maximum Credits:** 6

Introduces the equipment and techniques used in continuous mechanical ventilation, hemodynamic monitoring, quality control, and advanced airway management.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: RESCA 1024 and 1030 and 1031

## **RESCA 1034 - CLINICAL PRACTICUM 2**

**Minimum Credits:** 6

**Maximum Credits:** 6

This hospital-based activity allows for supervised student practice of continuous mechanical ventilation, critical care and airway management in an ICU setting, as well as emergency medicine, skilled nursing facilities, and physician's office exposure.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: RESCA 1024 and 1030 and 1031

## **RESCA 1038 - Respiratory Care Clinical Practicum 3**

**Minimum Credits:** 6

**Maximum Credits:** 6

A continuation of RESCA 1034, with expansion into specialty areas.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: RESCA 1032 and 1034

## **RESCA 1039 - Respiratory Care Advanced Techniques**

**Minimum Credits:** 6

**Maximum Credits:** 6

This hospital-based and didactic activity allows the student to pursue advanced study and practice in a variety of aspects in respiratory care. This will allow for further advancements, discussions and projects in respiratory care.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: RESCA 1032 and 1034

## **RESCA 1041 - SELECTED TOPICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The purpose of this course is to provide a variety of respiratory care and related topics for the first year student to better prepare them for their clinical exposure. Topics included, but not limited to the following: infection control, medical gases, oxygen therapy basics, the hospital culture, scope of practice, pulmonary rehabilitation, clinical tour, CPR, home care/skilled nursing facilities, hospice, and organ donation.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: BIOL 0950 and CHEM 0190 and RESCA 0020

## **Secondary Education**

### **SCED 0010 - DIRECTED TUTORING IN SCED**

**Minimum Credits:** 1

**Maximum Credits:** 3

Provides secondary education and pre-education majors with tutoring experiences in area school districts or other field settings.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** H/S/U Basis

### **SCED 0011 - DIRECTED FIELD PRACTICUM IN SECONDARY EDUCATION**

**Minimum Credits:** 1

**Maximum Credits:** 3

Provides individual secondary education and pre-education majors the opportunity to actively assist a faculty member on teaching or curriculum projects, or the opportunity to work with a teacher in the field as part of, or continuation of, pre-student teaching experiences.



**Academic Career:** Undergraduate  
**Course Component:** Directed Studies  
**Grade Component:** H/S/U Basis

## **SCED 0012 - DIRECTED STUDY IN SCED**

**Minimum Credits:** 1

**Maximum Credits:** 3

Provides individual secondary education and pre-education majors the opportunity to explore in-depth specific topics in education.

**Academic Career:** Undergraduate  
**Course Component:** Directed Studies  
**Grade Component:** H/S/U Basis

## **SCED 0013 - DIRECTED STUDY IN SCED**

**Minimum Credits:** 1

**Maximum Credits:** 3

Provides individual secondary education and pre-education majors the opportunity to actively assist a faculty member on research projects.

**Academic Career:** Undergraduate  
**Course Component:** Directed Studies  
**Grade Component:** H/S/U Basis

## **SCED 1120 - SECONDARY MATHEMATICS METHODS 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduces students to mathematics teaching-learning theories, strategies, experiences, and issues in mathematics education. Principles and techniques of lesson planning, mathematical content and curricula, academic standards, teaching methods, classroom management, and assessment will be explored and analyzed. Students will also be assigned to an area school for a practicum component which will provide opportunities for observation/analysis of teaching-learning behavior, assessment of learning difficulties, and activities in a typical secondary mathematics classroom.

**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** Letter Grade

## **SCED 1121 - SECONDARY MATHEMATICS METHODS 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

Continues to familiarize students to mathematics teaching-learning theories, strategies, experiences, and issues in mathematics education. Varied activities of the secondary school mathematics teacher, mathematics curricula, academic standards, resources and materials, differentiated instruction techniques, student-centered approaches, assessment of learning difficulties, and professional growth will be explored and analyzed. Students will concurrently participate in pre-student teaching field experience.

**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** Letter Grade  
**Course Requirements:** PREQ: SCED 1120; CREQ: SCED 1172

## **SCED 1122 - PRE-STUDENT TEACHING FIELD PRACTICUM: MATHEMATICS**

**Minimum Credits:** 1

**Maximum Credits:** 1

Secondary education mathematics students will be assigned to a cooperating teacher for a minimum of two hours per week for eight weeks for observation and practice teaching in a secondary classroom. Several preparatory, discussion, and debriefing sessions will be held on campus with the university instructor. The course emphasis is on active participation in pre-student teaching activities and designed to prepare pre-service teachers to become reflective secondary mathematics teachers.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: SCED 1120; CREQ: SCED 1121

## **SCED 1144 - SECONDARY ENGLISH/LANGUAGE ARTS METHODS 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduces students to English/language arts teaching-learning theories, strategies, experiences, and issues in English education. Principles and techniques of lesson planning, mathematical content and curricula, academic standards, teaching methods classroom management, and assessment will be explored and analyzed. Students will also be assigned to an area school for a practicum component which will provide opportunities for observation/analysis of teaching-learning behavior, assessment of learning difficulties, and activities in a typical secondary English/language arts classroom.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **SCED 1145 - SECONDARY ENGLISH/LANGUAGE ARTS METHODS 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

Continues to familiarize students to English/language arts teaching-learning theories, strategies, experiences, and issues in English education. Varied activities of the secondary school English/language arts teacher, English/language arts curricula, academic standards, resources and materials, differentiated instruction techniques, student-centered approaches, assessment of learning difficulties, and professional growth will be explored and analyzed. Students will concurrently participate in pre-student teaching field experience.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: SCED 1144; CREQ: SCED 1146

## **SCED 1146 - PRE-STUDENT TEACHING FIELD PRACTICUM: ENGLISH**

**Minimum Credits:** 1

**Maximum Credits:** 1

Secondary education English/language arts students will be assigned to a cooperating teacher for minimum of two hours per week for eight weeks for observation and practice teaching in a secondary classroom. Several preparatory, discussion, and debriefing sessions will be held on campus with the university instructor. The course emphasis is on active participation in pre-student teaching activities and designed to prepare pre-service teachers to become reflective secondary English/language arts teachers.

**Academic Career:** Undergraduate

**Course Component:** Practicum  
**Grade Component:** Letter Grade  
**Course Requirements:** PREQ: SCED 1144; CREQ: SCED 1145

## **SCED 1160 - SECONDARY SOCIAL STUDIES METHODS 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduces students to social studies teaching-learning theories, strategies, experiences, and issues in social studies education. Principles and techniques of lesson planning, social studies content and curricula, academic standards, teaching methods, classroom management, and assessment will be explored and analyzed. Students will also be assigned to an area school for a practicum component which will provide opportunities for observation/analysis of teaching-learning behavior, assessment of learning difficulties, and activities in a typical secondary social studies classroom.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **SCED 1161 - SECONDARY SOCIAL STUDIES METHODS 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

Continues to familiarize students to social studies teaching-learning theories, strategies, experiences, and issues in social studies education. Varied activities of the secondary school social studies teacher, social studies curricula, academic standards, resources and materials, differentiated instruction techniques, student-centered approaches, assessment of learning difficulties, and professional growth will be explored and analyzed. Students will concurrently participate in pre-student teaching field experience.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: SCED 1160; CREQ: SCED 1162

## **SCED 1162 - PRE-STUDENT TEACHING FIELD PRACTICUM: SOCIAL STUDIES**

**Minimum Credits:** 1

**Maximum Credits:** 1

Secondary education social studies students will be assigned to a cooperating teacher for a minimum of two hours per week for eight weeks for observation and practice teaching in a secondary classroom. Several preparatory, discussion, and debriefing sessions will be held on campus with the university instructor. The course emphasis is on an active participation in pre-student teaching activities and designed to prepare pre-service teachers to become reflective secondary social studies teachers.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: SCED 1160; CREQ: SCED 1161

## **SCED 1164 - SECONDARY SCIENCE METHODS 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduces students to science teaching-learning theories, strategies, experiences, and issues in science education. Principles and techniques of lesson planning, mathematical content and curricula, academic standards, teaching

methods, classroom management, and assessment will be explored and analyzed. Students will also be assigned to an area school for a practicum component which will provide opportunities for observation/analysis of teaching-learning behavior, assessment of learning difficulties, and activities in a typical secondary science classroom.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **SCED 1165 - SECONDARY SCIENCE METHODS 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

Continues to familiarize students to science teaching-learning theories, strategies, experiences, and issues in science education. Varied activities of the secondary school science teacher, science curricula, academic standards, resources and materials, differentiated instruction techniques, student-centered approaches, assessment of learning difficulties, and professional growth will be explored and analyzed. Students will concurrently participate in pre-student teaching field experience.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: SCED 1164; CREQ: SCED 1166

## **SCED 1166 - PRE-STUDENT TEACHING FIELD PRACTICUM: SCIENCE**

**Minimum Credits:** 1

**Maximum Credits:** 1

Secondary education science students will be assigned to a cooperating teacher for a minimum of two hours per week for eight weeks for observation and practice teaching in a secondary classroom. Several preparatory, discussion, and debriefing session will be held on campus with the university instructor. The course emphasis is on active participation in pre-student teaching activities and designed to prepare pre-service teachers to become reflective secondary science teachers.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: SCED 1164; CREQ: SCED 1165

## **SCED 1170 - LITERACY IN THE CONTENT AREAS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Emphasizes reading and writing as cognitive processes. Vocabulary development in content areas, reading comprehension and current reading assessment practices are examined. Incorporates unit and lesson planning focusing on pre reading, guided readings, and post readings literacy strategies.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **SCED 1191 - STDNT TEACHING IN THE SEC SCHL**

**Minimum Credits:** 14

**Maximum Credits:** 14

Full-time experience for teacher certification candidates in a student teaching center at an area high school or middle school. Provides opportunities to observe, plan, conduct, and assess instruction in the school setting with professional

feedback from university supervisors and experienced master teachers. School sites are located within 15-20 miles of the college. Students are placed in established sites only.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** Letter Grade

## **SCED 1192 - SECONDARY STUDENT TEACHING - US**

**Minimum Credits:** 7

**Maximum Credits:** 7

Seven weeks in duration, this full-time experience is designed for teacher certification candidates in a student teaching center at an area high school or middle school. Provides opportunities to observe, plan, conduct, and assess instruction in the school setting with professional feedback from university supervisors and experienced master teachers. School sites are within 15-20 miles of UPJ; students are placed in established sites only. Open only to secondary education students approved for student teaching.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** Letter Grade

## **SCED 1195 - SECNDRY EDUC STUDNT TCHNG SEMINR**

**Minimum Credits:** 2

**Maximum Credits:** 2

Designed to provide the student teacher with the basic elements of professional development and career opportunities. Emphasis is on professionalism, interviewing, resumes, professional meetings and other appropriate topics. Must be taken during student teaching term.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

## **SCED 1196 - SECONDARY EDUCATION STUDENT TEACHING SEMINAR - US**

**Minimum Credits:** 1

**Maximum Credits:** 1

Designed to provide the student teacher with the basic elements of professional development and career opportunities. Emphasis is on professionalism, interviewing, resumes, portfolios, professional meetings, and other appropriate topics. To be taken by secondary education students during their student teaching term.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

## **SCED 1197 - SECONDARY EDUCATION STUDENT TEACHING SEMINAR ABROAD**

**Minimum Credits:** 1

**Maximum Credits:** 1

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

## **Social Sciences**

## **SOCSCI 1910 - INTERNSHIP**

**Minimum Credits:** 3

**Maximum Credits:** 12

Students majoring in any of the social sciences may earn up to 12 credits for a full term's experience in a position in some public or private organization or agency appropriate to their fields of interest. Supervision by the contracting agency and faculty sponsor. Students earning internships must write an extensive summarization and analysis of their field experiences.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** H/S/U Basis

## **Sociology**

### **SOC 0070 - SOCIAL PROBLEMS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The major aims of this course are to understand the nature of important social problems in American society and analyze their causes and consequences. The two competing perspectives, one, that social problems are created when individuals fail to conform to societal norms, and two, that social problems are caused when institutions fail to meet changing needs and aspirations of individuals will be used in our analysis. Future trends and policy alternatives toward amelioration will be examined.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **SOC 0100 - INTRODUCTION TO SOCIOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course introduces the student to the discipline of sociology, its development, theories, major findings, and to the sociological interpretation of modern society. Emphasis will be given to the importance of careful empirical investigation for the understanding of recent social and cultural changes. Students should be prepared to encounter basic issues in sociological method and in theory; an inclination toward systematic and abstract reasoning will help.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **SOC 0202 - SOCIOLOGY OF SPORT**

**Minimum Credits:** 3

**Maximum Credits:** 3

For the athlete or spectator, sport is a social behavior that can be investigated using the theories and tools of sociology. Topics include the relationships between sport and culture, racism, sexism, education, religion, and politics.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

### **SOC 0221 - SOCIAL PSYCHOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is an introductory course in sociological social psychology. The emphasis is on such sociological concepts and processes as: culture and society, language, role playing, definition of the situation, presentation of self, expressed values and opinions, and the performance of role(s). The social order is conceived as being composed of three integrated, interactive components: culture, society, and the individual.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SOC 0100 or 0010

## **SOC 0265 - INEQUALITY, CRIME, & JUSTICE**

**Minimum Credits:** 3

**Maximum Credits:** 3

Issues of crime and justice with respect to race, ethnicity, gender, and class will be examined from the perspectives of law enforcement, corrections, the legal process, and different socio-demographic groups in society. This course will explore the challenges of addressing crime in a society stratified by race, ethnicity, gender, and class, specifically looking at the experiences of socially disadvantaged groups (as both victims and perpetrators), the applicability of criminological theories to minority criminality, and the impact of inequality on the law-making process, the content of the law, the administration and enforcement of the law, and the quality of justice afforded socially disadvantaged groups.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SOC 0100 or JAC 0715 or SOC 0715

## **SOC 0300 - SOCIAL RESEARCH METHODS**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to qualitative and quantitative methods used in the social sciences. The first third of the course covers ethical issues in social research, defining a topic, developing theory, conceptualization and operationalization. The second third of the course covers specific methods: survey, experiment, observation, the use of existing data and program evaluation. The final third of the course covers the logic of analysis as well as writing up and presenting research results. Examples drawn from various social science disciplines.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **SOC 0320 - WEALTH AND POWER**

**Minimum Credits:** 3

**Maximum Credits:** 3

The interdependence of these two key sociological concepts is discussed in the context of American society. The role of the multi-national corporation and the global economy are examined. The pervasive power of some is contrasted with the generalized powerlessness of the majority.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SOC 0100 or 0010

## **SOC 0340 - POLITICAL SOCIOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course examines the relationship between political institutions, such as states, and processes of stratification. With a major focus on American society, these relationships are studied in historical and cross-societal comparative perspective as well as in terms of a society's location in the system of international relations.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SOC 0100 or 0010

## **SOC 0400 - CLASSICAL SOCIOLOGICAL THEORIES**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will deal with the foundations of modern socio logical theory through a study of major social theorists of the 19th and early 20th centuries.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SOC 0100 or 0010

## **SOC 0440 - URBAN SOCIOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

The modern city is simultaneously many different things. It is an assortment of neighborhoods, it is a workshop with factories and offices, it is a crisscross of transportation arteries, it is a marketplace for the interplay of economic interests, it is an object which several different governments try to understand and control, and it is an astonishing mixture of religious, racial, ethnic, recreational, avocational, professional, educational, medical, political, social, and deviant communities. This urban complex will be studied with a sociological approach.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SOC 0100 or 0010

## **SOC 0461 - SOCIOLOGY OF GENDER**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will analyze the various processes and institutions through which gender roles are defined and shaped in our society. It will analyze the interaction between individual conceptions of gender and larger social institutions such as the family, the workforce, the media, religion, etc. The current changes in these roles will be related to changes in other social institutions. We will also examine the multiple forms of inequality in our society--based on sex, race, class, and sexual preference- and see how they interact.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SOC 0100 or 0010

## **SOC 0520 - SOCIAL MOVEMENTS**



**Minimum Credits:** 3

**Maximum Credits:** 3

This course offers ideological, structural, and functional treatment of dominant American movements for social and cultural change in our contemporary world.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SOC 0100 or 0010

## **SOC 0600 - RACE AND ETHNIC RELATIONS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is a course presenting the central sociological interpretations of majority/minority relations. The course includes consideration of selected racial, ethnic, sexual, political, economic, and religious minorities in the United States and around the world.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SOC 0100 or 0010

## **SOC 0720 - CRIMINOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Criminology refers to the scientific study of crime, its causes, and social responses to it. This course provides a broad overview of the study of crime. It examines the legal definitions and elements of crime; surveys the major categories of crime, i.e. predatory and non-predatory acts; reviews the major measures of crime; identifies the major correlates of crime, reviews and assesses the major theories of crime; differentiates types of offenders and explores various dimensions of their offending; and examines and evaluates the working of the criminal justice system.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SOC 0100 or 0010 or SOC 0715 or JAC 0715

## **SOC 1113 - ENVIRONMENTAL SOCIOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Addresses the relationship between human beings, their social organization, and the environment, both "natural" and "built." Of special concern in this course will be issues related to social stratification, power, and environmental/ecological issues.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SOC 0100 or 0010

## **SOC 1150 - SOCIOLOGY OF LAW**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to introduce students to the sociological study of the law and legal institutions through an

exploration of legal culture and the rule of law. The purpose of the course is to gain an understanding of how scholars have examined law-related phenomena to increase the understanding of broader social and cultural issues that influence the law and are influenced by the law. Students will be expected to gain an appreciation of the law as a complex, dynamic process that is part of the culture and society in which it exists.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **SOC 1433 - JUVENILE DELINQUENCY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Course provides an overview to the field of juvenile delinquency. Topics covered include theories and research on causes of juvenile delinquency; juvenile treatment under law; correctional philosophy and practices in juvenile justice; and impacts of juvenile criminality upon the rest of society. Students emerge from the course with knowledge of causes, prevention, treatment, and control of juvenile delinquency and should be prepared to move into more detailed study of this subject.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SOC 0100

## **SOC 1670 - IDENTITY AND CULTURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

A study of social, scientific and humanistic conceptions of cultural movements and individual identity in modern societies.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SOC 0100 or 0010

## **SOC 1700 - SENIOR SEMINAR IN SOCIOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This required course begins with an overview of the discipline, examining the basic theoretical perspectives and how those affect the issues, methods, and uses of sociology. The rest of the course emphasizes the student's own relationship to sociology, and the work and educational opportunities available to those with sociological training.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SOC 0100 or 0010

## **SOC 1801 - INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 6

The student undertakes, under specific conditions, an independent program of study, research, or creative activity, usually off-campus and with less immediate and frequent guidance from the sponsoring faculty member than is typically provided in directed reading and directed research courses.

**Academic Career:** Undergraduate  
**Course Component:** Independent Study  
**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** PREQ: SOC 0100 or 0010

## **SOC 1802 - DIRECTED READING**

**Minimum Credits:** 1

**Maximum Credits:** 6

The student undertakes a specified course of study, comparable in character to a regular course, under the direct supervision of a faculty member.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SOC 0100 or 0010

## **SOC 1803 - DIRECTED RESEARCH**

**Minimum Credits:** 1

**Maximum Credits:** 6

The student undertakes a defined task of research on campus under the supervision of a faculty member of an appropriate department, and in which the fruits of the research are embodied in a thesis, extended paper, laboratory report, or other appropriate form.

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SOC 0100 or 0010

## **SOC 1804 - SPECIAL TOPICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Detailed analysis of a particular topic not covered by regularly scheduled courses.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **Spanish**

### **SPAN 0082 - LATIN AMERICA TODAY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is an overview of contemporary Latin America and its people and is designed to be an introduction for students who have no previous knowledge of the area. Students will be exposed to several aspects of Latin America. A special attempt will be made to show contemporary social reality as interpreted by some of the region's most gifted writers. In English.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

**Course Attributes:** DSAS Geographic Region General Ed. Requirement, Latin American Studies, SCI Polymathic Contexts: Global&Cross Cul GE. Req.

## **SPAN 0101 - ELEMENTARY SPANISH 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to develop the student's communicative proficiency through an integrated approach to the teaching of all four language skills: listening, speaking, reading and writing. Grammatical structures; vocabulary and readings are presented as tools for developing good communication skills. The course also aims to foster cultural awareness of the Spanish-speaking world.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

## **SPAN 0102 - ELEMENTARY SPANISH 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

A continuation of Elementary Spanish 1, training in spoken and written Spanish.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

**Course Requirements:** PREQ: SPAN 0101 or 0111

**Course Attributes:** DSAS Second Language General Ed. Requirement

## **SPAN 0106 - SPANISH FOR SCIENCE AND ENGINEERING**

**Minimum Credits:** 3

**Maximum Credits:** 3

An intensive reading course in Spanish designed to science and engineering students who want to study Spanish for reading and communication knowledge. The course stresses language skills useful for the science and engineering profession. Provides training in basic reading, writing and conversation with emphasis on the use of language in a professional context.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **SPAN 0107 - DIGITAL SPANISH**

**Minimum Credits:** 3

**Maximum Credits:** 3

Introduction to Spanish language and culture on the web: social networking sites, trends in digital culture, including video and music. The student will learn blogging, text messaging, and digital basic skills in Spanish. The course is aimed at facilitating the acquisition of the necessary abilities and intercultural competence to manage multimedia tasks in Spanish at a basic level.

**Academic Career:** Undergraduate

**Course Component:** Workshop

**Grade Component:** Letter Grade

## **SPAN 0108 - SPANISH FOR READING AND TRANSLATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

An intensive basic reading course in Spanish designed to all students who want to study Spanish for reading knowledge and translation. No prior knowledge of Spanish is required. Readings are drawn from many areas, including the Spanish language press, the natural sciences, the social sciences, and the humanities. A great course for students headed for graduate school.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **SPAN 0109 - SPANISH FOR BUSINESS PROFESSIONALS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed as a practical elementary Spanish course that will include technical vocabulary and idiomatic expressions needed by business professionals who must communicate in both oral and written ways with Spanish-speaking companies and bilingual colleagues as well. The course will offer an essential foundation in grammar, vocabulary and speech related to functional business areas, and practice in carrying out simple business transactions in Spanish.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** Letter Grade

## **SPAN 0110 - SPANISH FOR HEALTHCARE PROFESSIONALS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed as a practical introductory Spanish course that will include technical vocabulary and idiomatic expressions needed by healthcare professionals who must communicate orally with Spanish-speaking patients. We will emphasize grammar, speaking and pronunciation skills. Students will learn and practice useful phrases within a medical context as well as acquire vocabulary and basic grammatical knowledge.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **SPAN 0211 - INTERMEDIATE SPANISH 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is a continuation of the first-year sequence and includes a functional review of language structure and vocabulary. Primary emphasis is development of conversational skills, with topical reading and some writing.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SPAN 0102 or 0112

## **SPAN 0212 - INTERMEDIATE SPANISH 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students continue a functional review of language structure and build vocabulary. Emphasis is on conversational, reading and writing skills.

**Academic Career:** Undergraduate  
**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** PREQ: SPAN 0211

## **SPAN 0320 - CONVERSATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

The aims of this course are to improve the learner's ability to understand and speak fluent Spanish. A native speaker instructor guides the student, but the learner does most of the talking. Emphasis in small classes is on vocabulary building and some basic structures. Daily participation is necessary.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SPAN 0212

## **SPAN 0325 - GRAMMAR AND COMPOSITION**

**Minimum Credits:** 3

**Maximum Credits:** 3

A review of Spanish grammar, designed to aid the student in building vocabulary, translating from English to Spanish, and writing compositions.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SPAN 0212

## **SPAN 0351 - LATIN AMERICAN CIVILIZATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

Readings, lectures, films and class discussions in Spanish on the historical development of Latin American civilization and its major social, economic and cultural features.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SPAN 0212

## **SPAN 0355 - INTRODUCTION HISPANIC LITERATURE 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

Aims to acquaint students with major genres and trends of Spanish literature from the 16th century to the present, to equip them with essential techniques of literary criticism, and to develop their ability to speak and write in the foreign language.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SPAN 0212

## **SPAN 0356 - INTRODUCTION TO HISPANIC LITERATURE 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

Aims to acquaint students with major genres and trends of Latin American literature from the 16th century to the present, to equip them with essential techniques of literary criticism, and to develop their ability to speak and write in the foreign language

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SPAN 0212

## **SPAN 0451 - SEMINAR IN CERVANTES**

**Minimum Credits:** 3

**Maximum Credits:** 3

A seminar for Spanish majors and others which focuses on Don Quixote and various minor works. Quixote is read closely in Spanish and analyzed in class for content, narrative technique, structure and style.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SPAN 0212

## **SPAN 1021 - ADVANCED CONVERSATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course develops advanced oral skills in small class groups. Students work to build vocabulary and gain a control of the essential structures. Both Spanish majors and non-majors who wish to improve their fluency enroll in this course.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SPAN 0212

## **SPAN 1026 - ADVANCED GRAMMAR**

**Minimum Credits:** 3

**Maximum Credits:** 3

An advanced study of Spanish grammar designed for students who have already taken grammar and composition or have equivalent knowledge. While the emphasis is on practical usage, theoretical aspects of the finer points of syntax will be also considered.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SPAN 0325

## **SPAN 1193 - LITERARY AND NON-LITERARY TRANSLATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is intended to develop translating skills in other than legal, business or industrial uses of Spanish, namely

the language of literary (including scholarly and critical), journalistic and advertising texts. It involves the discussion of translation problems and the ways to solve (or circumvent) them through the actual task of translating selected passages from fiction, poetry, plays, and articles.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SPAN 0212

## **SPAN 1308 - ADVANCED SPANISH**

**Minimum Credits:** 3

**Maximum Credits:** 3

This is a course in advanced Spanish that allows students to acquire a broader and deeper knowledge of Spanish structure, vocabulary, and idiomatic usage. In addition, students will be able to progress in their reading and aural comprehension skills as well as in their command of the spoken language and their familiarity with aspects of the various cultures of the hispanophone world.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

## **SPAN 1331 - STRUCTURE OF MODERN SPANISH**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course teaches the structure of the Spanish language, including components which address Spanish phonology, morphology and syntax.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SPAN 0212

## **SPAN 1443 - LATIN AMERICAN NARRATIVE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course deals with the development of Latin American prose narrative as it moves from 19th century realism and naturalism in the direction of modernista and vanguardista innovations, culminating in the narrative of the boom and the post-boom. Taught in Spanish.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SPAN 0212

## **SPAN 1444 - LATIN AMERICAN TOPICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course deals with literary, linguistics or cultural topics, or a combination of these. Its primary emphasis is on developing an understanding of contemporary cultures in Latin America. Taught in Spanish.

**Academic Career:** Undergraduate

**Course Component:** Lecture



**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SPAN 0212

## **SPAN 1640 - SURVEY OF SPANISH LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course surveys the development of Spanish literature from the twelfth century to the present. Taught in Spanish.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SPAN 0212 and 0355

## **SPAN 1805 - CONTEMPORARY HISPANIC LITERATURE AND SOCIETY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course deals with contemporary Spanish and Latin American societies as revealed in short stories, novels and poetry in an effort to ascertain the cultural values and concepts of these societies. Taught in English.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SNC Elective Basis

## **SPAN 1841 - DON QUIXOTE AND THE NOVEL**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course deals in depth with Cervantes' Don Quixote as the first modern novel and its profound influence on European literatures. Taught in English.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **SPAN 1844 - CONTEMP LATIN AMER LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course deals with contemporary Latin American literature, showing its literary development up to and including the so-called boom, as well as post-boom developments. The course also will deal with the cultural values and concepts of the works read. Taught in English.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **SPAN 1847 - HISPANIC SPECIAL TOPICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course deals in depth with such topics as mass media, sexual roles, social structures and political institutions in Hispanic society as revealed in various literary works, films, documents and other sources. Taught in English.

**Academic Career:** Undergraduate

**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis

## **SPAN 1941 - INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 6

This course allows students to work in-depth in areas of their choice.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SU3 Elective Basis

## **SPAN 1942 - DIRECTED STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 6

This course allows students to work in depth in areas of their choice, with the approval and supervision of a faculty member, who meets regularly with the student

**Academic Career:** Undergraduate

**Course Component:** Directed Studies

**Grade Component:** LG/SU3 Elective Basis

## **Special Education**

### **SPLED 1030 - METHODS AND MANAGEMENT IN SPECIAL EDUCATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course builds on prior knowledge, preparing candidates to effectively design, implement, and manage the learning process for students with special needs. Particular attention is paid to assessments, curricular and program development and evidence based classroom instruction.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

### **SPLED 1031 - ASSESSMENT AND INSTRUCTION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to provide knowledge of assessment procedures for designing curricula for students with specific learning disabilities in the content areas. There is a focus on the teaching of reading, written language, and mathematics. Course content entails in-depth analysis of eligibility for special education and ongoing curriculum based assessments to implement appropriate instructional accommodations and adaptations.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

### **SPLED 1032 - APPLIED BEHAVIORAL ANALYSIS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course focuses on the principles of applied behavior analysis (ABA) to be applied in special needs classrooms. This course emphasizes acquisition, fluency, maintenance, and the generalization of skills while providing positive behavior supports for the development of students with social and emotional disabilities. The development of supportive learning communities, including families and professional service providers, is addressed to foster environments that encourage self-motivation, self-direction, and self-empowerment.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **SPLED 1033 - CURRICULUM AND PROGRAM DEVELOPMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course addresses curriculum development approaches for students with significant disabilities with an emphasis on age-appropriate functional education in school and community based programs. Students will apply a systematic approach to modification/adaptation planning for instruction and material use which includes person centered planning and general case study instruction. Topics include the development of assessments, and instruction for students with significant disabilities (e.g. Personal management, social interaction, language communication, leisure, community, vocational, and functional academics, etc.)

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: Admission to upper level

## **SPLED 1040 - AUTISM SPECTRUM**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course addresses information on the characteristics and intervention approaches for students diagnosed with autism spectrum disorders. Candidates will explore and analyze current research on the theories of causes, diagnoses, and treatments. Candidates will implement appropriate screening tools for diagnosis and evidence based interventions.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **SPLED 1041 - INSTRUCTIONAL METHODS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course explores the methods and procedures for developing literacy, reading, and mathematics for students with high incidence disabilities. This course addresses instructional strategies to meet the unique learning needs of individual students within a class. Lesson planning, unit planning and IEP implementation are key elements developed in this course with an emphasis on collaboration with other teaching and non-teaching staff members in appropriate service delivery settings.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **SPLED 1042 - EDUCATION OF STUDENTS WITH EMOTIONAL AND SOCIAL DISORDERS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Drawing on previously learned principles (e.g. ABA and positive behavior supports), this course addresses elements of effective classroom management that emphasize behavior reduction strategies. Candidates will acquire knowledge of curriculum content, teaching techniques, and instructional materials particularly for students with social/emotional, and/or behavioral disorders. In this course, candidates will implement a functional behavior assessment for developing a behavioral support plan in school and/ or employment settings.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

**Course Requirements:** PREQ: Admission to upper level

## **SPLED 1043 - TECHNOLOGY FOR THE INCLUSIVE CLASSROOM**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course prepares candidates to effectively implement instructional technologies for the inclusive classroom. The concept of technology is applied broadly, including assistive technologies to foster student independence, instructional technologies to enhance student learning, and the understanding of innovations (e.g. universal design, augmentative and alternative communication, smart boards, etc.) that support the learning experience for the inclusive classroom across the content areas.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **SPLED 1174 - SPECIAL EDUCATION STUDENT TEACHING EARLY CHILDHOOD**

**Minimum Credits:** 5

**Maximum Credits:** 14

Special education student teaching early childhood

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** Letter Grade

## **SPLED 1191 - SPECIAL EDUCATION STUDENT TEACHING MIDDLE**

**Minimum Credits:** 7

**Maximum Credits:** 7

Special education student teaching middle

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** Letter Grade

## **SPLED 1230 - METHODS FOR TEACHERS IN SPECIAL EDUCATION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course builds on prior knowledge of the curriculum teacher's use in the classroom, preparing teachers to effectively design, implement, and manage the learning process for students with special needs. Particular attention is paid to assessments, curricular and program development and evidence based classroom instruction.

**Academic Career:** Undergraduate

**Course Component:** Lecture  
**Grade Component:** Letter Grade

## **SPLED 1231 - TEACHERS ASSESSMENT AND INSTRUCTION**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed to provide knowledge of data based decision making for students with specific learning disabilities in the content areas. There is a focus on the teaching and intervention practices for reading, written language, and mathematics. Course content entails in-depth analysis of eligibility for special education and ongoing curriculum based assessments to implement appropriate instructional accommodations and adaptations.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **SPLED 1232 - TEACHERS APPLIED BEHAVIORAL ANALYSIS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course focuses on the principles of Applied Behavior Analysis (ABA) to be applied in inclusive classrooms as a foundational element to existing classroom management. This course emphasizes acquisition, fluency, maintenance, and the generalization of skills while providing positive behavior supports for the development of students with social and emotional disabilities. The development of supportive learning communities, including families and professional service providers, is addressed to foster environments that encourage self-motivation, self-direction, and self-empowerment.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **SPLED 1233 - TEACHERS DEVELOPMENT CURRICULUM AND PROGRAM**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course addresses curriculum development approaches for students with significant disabilities with an emphasis on age-appropriate functional education in school and community based programs. Teachers will apply a systematic approach to modification/adaptation planning for existing curriculum and material use which includes person centered planning and general case study instruction. Topics include the development of assessments, and instruction for students with significant disabilities (e.g. personal management, social interaction, language communication, leisure, community, vocational, and functional academics, etc.)

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **SPLED 1240 - TEACHING STUDENTS WITH AUTISM**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course addresses information on the characteristics and intervention approaches for students diagnosed with autism spectrum disorders. Teachers will have opportunities to share their experiences and question misunderstandings of the diagnosis. Teachers will explore and analyze current research on the theories of causes, diagnoses, and treatments. Teachers will implement appropriate screening tools for diagnosis and evidence based interventions.

**Academic Career:** Undergraduate

**Course Component:** Lecture  
**Grade Component:** Letter Grade

## **SPLED 1241 - INTERVENTION METHODS FOR TEACHERS**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course explores the methods and procedures for developing literacy, reading, and mathematics for students with high incidence disabilities. This course addresses instructional strategies to meet the unique learning needs of individual students within a class. Lesson planning, unit planning and I.E.P. Implementation are key elements developed in this course with an emphasis on collaboration with other teaching and non-teaching staff members in appropriate service delivery settings. This course will allow teachers to reflect on existing practices and discuss new modifications needed to meet the needs of all students in the classroom.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **SPLED 1242 - TEACHER EDUCATION STUDENTS WITH SOCIAL AND EMOTIONAL DISORDERS**

**Minimum Credits:** 3

**Maximum Credits:** 3

Drawing on previously learned principles (e.g. ABA and positive behavior supports), this course addresses elements of effective classroom management that emphasize behavior reduction strategies. Teachers will acquire knowledge of curriculum content, teaching techniques, and instructional materials particularly for students with social/emotional, and/or behavioral disorders. In this course, teachers will implement a functional behavior assessment for developing a behavioral support plan in school and/ or employment settings. This course will allow teachers to reflect on existing management plans and discuss new modifications needed to meet the needs of all students in the classroom.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **SPLED 1243 - TEACHING TECHNOLOGY FOR THE INCLUSIVE CLASSROOM**

**Minimum Credits:** 3

**Maximum Credits:** 3

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **SPLED 1244 - DIRECTED STUDY IN SPECIAL EDUCATION**

**Minimum Credits:** 1

**Maximum Credits:** 3

This course addresses information on the characteristics and intervention approaches for students diagnosed with Autism Spectrum Disorders. In order to apply learned teaching and behavioral strategies for their field placements, candidates will utilize current research on the theories of causes, diagnoses, and treatments. In addition, candidates will implement appropriate screening tools for diagnosis and evidence based interventions. Assignments will be completed in the field, and reflective upon current field placements.

**Academic Career:** Undergraduate

**Course Component:** Clinical

**Grade Component:** H/S/U Basis

## Statistics

### STAT 1020 - SOCIAL STATISTICS

**Minimum Credits:** 3

**Maximum Credits:** 3

An introductory course in statistical analysis. Emphasis on concepts and techniques of statistical description and theory and practice of statistical inference. Practical application of concepts will be explored in a lab component. Topics include descriptive statistics, probability sampling, hypothesis testing, correlation and regression, and SPSS syntax.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0001 or Math Placement Score (46 or greater)

### STAT 1040 - STATISTICS FOR BUSINESS/ECONOMICS

**Minimum Credits:** 3

**Maximum Credits:** 3

An introductory course in probability, probability distributions, functions of random variables, concepts of relationships between and among random variables. Statistical inference about population parameters. Introduction to least squares regression analysis. Applications in finance, business, and economics.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: MATH 0001 or Math Placement Score (46 or greater)

## Surgical Technology

### SURTEC 1010 - OR TECHNIQUES 1

**Minimum Credits:** 6

**Maximum Credits:** 6

This course will introduce the student to the components of effective communication in the operating room. It will include ethical, legal and moral responsibilities of operating room personnel, terminology and the history of surgery. The student will be introduced to the principles of sterilization, equipment used in the operating room and the basics of safe patient care. Students will learn how to perform the surgical scrub, gown and glove procedures. Surgical instrumentation, sutures and procedures will be introduced.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: BIOL 0970 and 0980 and PSY 0200

### SURTEC 1020 - OR TECHNIQUES 1-CLNCL COMPONENT

**Minimum Credits:** 8

**Maximum Credits:** 8

Students will be introduced to disinfection and sterilization procedures and practice such procedures in the operating room and central sterile supply areas. Students will be assigned to the OR's patient holding area and assist in the preoperative preparation of the surgical patient. Students will transport and position patients for surgery, assist with circulating duties, scrub, gown and glove and participate in surgical intervention.

**Academic Career:** Undergraduate  
**Course Component:** Practicum  
**Grade Component:** LG/SU3 Elective Basis  
**Course Requirements:** PREQ: BIOL 0970 and 0980 and PSY 0200  
**Course Attributes:** Hourly Final

## **SURTEC 1030 - PHARMACOLOGY**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will introduce the student to the basic principles of pharmacology. Students will identify basic drugs used by the surgical patient, their side effects and common dosage. The student will be exposed to the proper response to drug reactions and demonstrate safe practice when using drugs on the sterile field. The student will also be instructed in the legal responsibilities of the surgical technologist in handling drugs and solutions.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: BIOL 0970 and 0980 and PSY 0200

## **SURTEC 1040 - OR TECHNIQUES 2**

**Minimum Credits:** 9

**Maximum Credits:** 9

This course is a continuation of OR Techniques 1 and will emphasize advanced procedures.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SURTEC 1010 and 1020 and 1030

## **SURTEC 1050 - OR TECHNIQUES 2-CLNCL COMPONENT**

**Minimum Credits:** 8

**Maximum Credits:** 8

A continuation of the clinical component of OR Techniques 1, with more intensive clinical procedures.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SURTEC 1010 and 1020 and 1030

## **SURTEC 1060 - OR TECHNIQUES 3**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is a continuation of OR Techniques 2 and will emphasize additional advanced procedures along with review of procedures contained within OR Techniques 1 and 2.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SURTEC 1040 and 1050

## **SURTEC 1070 - OR TECHNIQUES 3-CLNCL COMPONENT**



**Minimum Credits:** 7

**Maximum Credits:** 7

This course represents the final clinical component for the surgical technologist program. Proficiency in all clinical procedures will be reinforced and individual competencies assessed.

**Academic Career:** Undergraduate

**Course Component:** Practicum

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: SURTEC 1040 and 1050

**Course Attributes:** Hourly Final

## **Theatre Arts**

### **THEA 0027 - STAGECRAFT 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will entail a study of the construction and rigging of scenic units for stage settings.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **THEA 0028 - STAGE LIGHTING 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will entail a study of stage lighting equipment and related technologies that are used in the typical proscenium and arena style theatres.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

### **THEA 0040 - STAGE MANAGEMENT**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will examine in detail the backstage activities necessary to support a professional theatrical, music theatre, or concert production, from sound and lighting cue placement to properties and running crew. Students anticipating careers in the entertainment industry will benefit from this background in communication, safety, proper terminology, and technical support.

**Academic Career:** Undergraduate

**Course Component:** Workshop

**Grade Component:** Letter Grade

### **THEA 0053 - ORAL INTERPRETATION OF LITERATURE**

**Minimum Credits:** 3

**Maximum Credits:** 3

An investigation of the process of rendering literature aloud, with attention to problems of impersonation, consideration of style, and application of specific vocal techniques.

**Academic Career:** Undergraduate

**Course Component:** Lecture  
**Grade Component:** LG/SU3 Elective Basis

## **THEA 0630 - PUPPETRY IN THEATRE**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will explore a variety of puppetry forms and will cover their historical context as well as practical design issues, performance aesthetic and techniques, and the influence that each form exerts on theatre today. Students will then translate several children's tales from page to stage, culminating in a performance.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **THEA 0841 - INTRODUCTION TO THEATRE DESIGN**

**Minimum Credits:** 3

**Maximum Credits:** 3

An introduction to the process of designing scenery, lighting, properties and costumes for live theatre.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **THEA 1027 - STAGECRAFT 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is designed for students who want to employ creative engineering skills to learn more about what is needed to produce technical elements (scenery, properties, etc.) For entertainment productions. Intermediate and advanced Stagecraft skills will be taught hands-on with tools and materials. The topics to be taught may include: Rigging and Mechanical Advantage, Welding (Steel and Aluminum MIG), Scenic Sculpting, Casting and Mold-making, Production Budgeting, and Automation.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **THEA 1500 - VOICE AND MOVEMENT 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course stresses principles of effective, safe vocal production, maximizing sound and expressivity. The international phonetic alphabet is taught as a tool for the second objective of the course, precise articulation with a minimizing of regional sound.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **THEA 1502 - ACTING 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will entail a study of beginning skills such as movement for the stage, relaxation, beginning acting tasks: observations, emotional recall, use of space, concentration. Beginning scene work will be included.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **THEA 1503 - ACTING 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

A continuation of the prerequisite acting 1, with advanced scene work drawn largely from the theatre of realism.

Required participation in the UPJ mainstage productions.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: THEA 1502

## **THEA 1506 - MODERN ACTING THEORY**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students will first learn some of the major acting theories and perspectives of character development from the 20th century. Then students will apply these theories through scene work, monologues, and original projects.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** Letter Grade

## **THEA 1507 - SHAKESPEARE IN PERFORMANCE**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students will improve their acting technique, vocalization, and physicality through the basics of performing Shakespeare. Students will perform monologues, soliloquies, and scenes and will study Shakespeare's use of language to create character and setting.

**Academic Career:** Undergraduate

**Course Component:** Workshop

**Grade Component:** Letter Grade

## **THEA 1510 - DIRECTING 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course is an introduction to basic technical and conceptual skills in directing, including script analysis ground plan, stage movement and composition.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: THEA 1502

## **THEA 1511 - DIRECTING 2**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will entail a study of scene analysis and directing projects from plays of 1860-1980. Will deal with the special demands of different playwrights.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: THEA 1510

## **THEA 1541 - THEATRE REPERTORY 1**

**Minimum Credits:** 1

**Maximum Credits:** 6

Active participation in the staging of a university dramatic production and/or dance. Students study various backstage processes and performance techniques according to their individual needs and interests.

**Academic Career:** Undergraduate

**Course Component:** Workshop

**Grade Component:** LG/SU3 Elective Basis

## **THEA 1542 - THEATRE REPERTORY 2**

**Minimum Credits:** 1

**Maximum Credits:** 6

Advanced students are assigned to positions that enable them to take primary responsibility for one aspect of a dramatic production. Beginning students study basic backstage and performance techniques.

**Academic Career:** Undergraduate

**Course Component:** Workshop

**Grade Component:** LG/SU3 Elective Basis

## **THEA 1551 - CLASSICAL THEATRE**

**Minimum Credits:** 3

**Maximum Credits:** 3

A history of the theatre in performance during its great periods. Emphasis on the relation of the written drama to the physical theatre, the actor, and the audience.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **THEA 1553 - MODERN THEATRE**

**Minimum Credits:** 3

**Maximum Credits:** 3

The stage and theatre from Ibsen to the present.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **THEA 1627 - RENDERING AND PAINTING**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will include study of the small size and large scale painting techniques used for proscenium-style theatres.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **THEA 1635 - SCENE DESIGN 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course will provide a study of the elements of scenery design, with preliminary investigation of historical developments as well as modern currents of design.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **THEA 1646 - COSTUME DESIGN 1**

**Minimum Credits:** 3

**Maximum Credits:** 3

This course entails a study of the basics of costume design and the psychology of clothing for the stage. Theories of design and color as well as an overview of the professional design business.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **THEA 1650 - VISUALLY-BASED DESIGN AND MULTIMEDIA FOR THEATRE**

**Minimum Credits:** 3

**Maximum Credits:** 3

Students will examine differences in methodology between visually-based (concept-based) and traditional (script-based) design, with special attention to the use of multimedia. Students will create theoretical designs using the techniques learned in class.

**Academic Career:** Undergraduate

**Course Component:** Seminar

**Grade Component:** Letter Grade

## **THEA 1733 - SPECIAL TOPICS**

**Minimum Credits:** 3

**Maximum Credits:** 3

The study of a special topic in theatre arts.

**Academic Career:** Undergraduate

**Course Component:** Lecture

**Grade Component:** LG/SU3 Elective Basis

## **THEA 1765 - PLAYWRITING**

**Minimum Credits:** 3

**Maximum Credits:** 3

A beginning course in writing for the stage. Starting with short scenes, students will work towards understanding the craft and art of constructing theatre stories to be performed by actors. The final project will be a one-act play. Throughout there will be emphasis on the stage effectiveness of the writing and opportunity for informal performance of student scripts.

**Academic Career:** Undergraduate

**Course Component:** Workshop

**Grade Component:** LG/SU3 Elective Basis

**Course Requirements:** PREQ: ENGCOMP 0004 or 0006

## **THEA 1900 - INDEPENDENT STUDY**

**Minimum Credits:** 1

**Maximum Credits:** 6

The terms of the student's independent study will be agreed upon by the instructor and the student.

**Academic Career:** Undergraduate

**Course Component:** Independent Study

**Grade Component:** LG/SNC Elective Basis

**Course Attributes:** Capstone Course

## **THEA 1902 - INTERNSHIP**

**Minimum Credits:** 1

**Maximum Credits:** 9

Course content to be decided between teacher and student.

**Academic Career:** Undergraduate

**Course Component:** Internship

**Grade Component:** LG/SU3 Elective Basis

## **THEA 1971 - CAPSTONE IN THEATRE**

**Minimum Credits:** 3

**Maximum Credits:** 3

**Academic Career:** Undergraduate

**Course Component:** Workshop

**Grade Component:** Letter Grade