

# Westminster College

Undergraduate Catalog  
2019-2020

NEW WILMINGTON, PENNSYLVANIA 16172-0001

Office of Admissions  
(724) 946-7100  
admis@westminster.edu  
www.westminster.edu

VOLUME 109

AUGUST 2019

Westminster College does not discriminate, and will not tolerate discrimination, on the basis of race, color, national origin, ethnic origin, sex, sexual orientation, age, or handicap or disability as those terms are defined under applicable law, in the administration of any of its educational programs, activities, or with respect to admissions and employment. In its employment practices, the College may consider the individual's support of the philosophy and purposes of Westminster as stated in the Undergraduate Catalog. Otherwise, Westminster does not discriminate, and will not tolerate discrimination, on the basis of religion or creed. Inquiries may be directed to the equal opportunity officer, Westminster College, New Wilmington, PA 16172-0001, 724-946-7247. This Undergraduate Catalog is for information only and cannot be considered binding on the College. Westminster College reserves the right and authority to change any and all requirements, regulations, policies, and academic curricula, and it is the student's responsibility to remain informed about these and any changes made thereto. Questions should be directed to the student's adviser.

# Academic Calendar (2019-2020)

## Fall Semester 2019

Classes Begin

Last Day to Add/Drop Classes

1st 7-Weeks Withdraw Deadline

1st 7-Weeks Period Ends

2nd 7-Weeks Period Begins

Midterm Break

Classes Resume

Last Day to Withdraw from Semester Classes

2nd 7-Weeks Withdraw Deadline

Thanksgiving Break

Classes Resume

Last Day of Classes

Final Exam Period

August 26, Monday

September 2, Monday

September 27, Friday

October 11, Friday

October 14, Monday

October 19-22,

Saturday-Tuesday

October 23, Wednesday

November 1, Friday

November 15, Friday

November 27-December 1,

Wednesday-Sunday

December 2, Monday

December 6, Friday

December 9-12,

Monday-Thursday

## Spring Semester 2020

Classes Begin

Martin Luther King Day - NO CLASSES

Last Day to Add/Drop Classes

1st 7-Weeks Withdraw Deadline

1st 7-Weeks Period Ends

2nd 7-Weeks Period Begins

Spring Break

Classes Resume

Last Day to Withdraw from Semester Classes

2nd 7-Weeks Withdraw Deadline

Easter Break

Classes Resume, Monday Classes Meet

Undergraduate Research & Arts Celebration

NO CLASSES

Last Day of Classes

Final Exam Period

Commencement

January 13, Monday

January 20, Monday

January 21, Tuesday

February 14, Friday

March 2, Monday

March 3, Tuesday

March 7-15,

Saturday-Sunday

March 16, Monday

March 27, Friday

April 8, Wednesday

April 9-13,

Thursday-Monday

April 14, Tuesday

April 22, Wednesday

May 1, Friday

May 4-7,

Monday-Thursday

May 9, Saturday

## Summer Session 2020

Classes Begin

Last Day to Add 1st 4-Weeks Classes

Last Day to Add 8-Weeks Classes

1st 4-Weeks Withdraw Deadline

1st 4-Weeks Period Ends

2nd 4-Weeks Add/Drop Deadline

NO CLASSES

2nd 4-Weeks Withdraw Deadline

Summer Session Ends

June 1, Monday

June 2, Tuesday

June 3, Wednesday

June 17, Wednesday

June 26, Friday

June 30, Tuesday,

July 3, Friday

July 15, Wednesday,

July 27, Monday

# Table of Contents

The College	5
Mission Statement	5
Accreditation and Memberships	7
The Campus	8
Admission	11
The Graduate School	14
Expenses	15
Student Life	24
Student Services	30
Academics	32
Academic Policies	38
The Faculty	53
All-College Honors Program	54
Pre-Professional Programs	56
Degree Programs	59
Course Descriptions	146

## The College at a Glance

**WHO WE ARE:** A private, four-year, co-educational liberal arts college located in New Wilmington, Pennsylvania. Founded in 1852 and affiliated with the Presbyterian Church (U.S.A.), the College was among the first institutions in the country to offer the same degrees to all people, regardless of gender, race, or religion.

**STUDENTS:** More than 1,200 undergraduate and graduate students; 46% men and 54% women.

**MAJORS AND PROGRAMS:** 41 majors, 10 pre-professional programs, and 6 graduate programs.

**DEGREES:** 4 undergraduate degrees—Bachelor of Arts, Bachelor of Science, Bachelor of Science in Nursing, and Bachelor of Music—and three graduate degrees—Master of Education, Master of Arts in Clinical Mental Health Counseling, and Master of Business Administration.

**CALENDAR:** The academic year consists of two 16-week semesters (fall and spring). A summer session is also held; and student travel and internships are available during both summer and winter breaks.

**FACULTY:** 90 full-time faculty members, 90% of whom hold terminal degrees. Westminster has an 11:1 student-faculty ratio.

**CAMPUS:** A 300-acre, tree-lined campus with academic spaces and recreational areas, including a 100-acre outdoor laboratory, several athletic fields, and Brittain Lake. Westminster is 65 miles north of Pittsburgh and 85 miles southeast of Cleveland.

**ATHLETICS:** 22 varsity sports programs; NCAA Division III, Presidents' Athletic Conference, and Eastern Collegiate Athletic Conference.

**STUDENT LIFE:** Over 80 clubs and organizations; 4 national fraternities and 5 national sororities.

**HOUSING:** 8 residential housing options; guaranteed all 4 years.

**FINANCIAL AID:** 98% of students receive financial aid either through merit-based scholarships or need-based resources.

**ACCREDITATION:** Westminster is accredited by the Middle States Commission on Higher Education.

# The College

Westminster College is an independent, coeducational liberal arts college, related to the Presbyterian Church (U.S.A.). For over 165 years, Westminster has been characterized by the excellence of its educational programs and its concern for moral and spiritual ideals and values.

Development of the individual – intellectually, spiritually, and socially – is the primary purpose of Westminster. The College views education as a maturing experience and believes the liberal arts heritage offers exceptional opportunities for development of the individual in today's rapidly changing world. The advancement of Westminster's graduates in a wide variety of careers and professions is evidence of the inherent value and relevance of the liberal arts.

Westminster is a community of learning, small enough to encourage the exchange of different ideas and philosophies yet large enough to provide diversity of knowledge, experiences and values. Its residential atmosphere enhances personal interaction.

Westminster is proud of its heritage. It was originally founded to promote the spirit and values of Christianity. One of earliest coeducational colleges in the nation, Westminster has been dedicated to “the mental and moral training of youth of both sexes” since it opened its doors in 1852. The first catalog (1853) stated that “no person will be refused admission on account of color, caste, or sex,” making Westminster a pioneer in supporting nondiscrimination.

Dedicated to these ideals today, the College admits students of all races, creeds, and national and ethnic origins, and accords all students equal rights and privileges. In the administration of any of its educational programs, activities, or with respect to admissions and employment, Westminster College does not discriminate, and will not tolerate discrimination, on the basis of race, color, national or ethnic origin, religion or creed, sex, sexual orientation, gender, gender identity and expression, age, handicap or disability, marital status, veteran status, genetics or any other protected class as those terms are defined under applicable state or federal law.

## Mission Statement

The mission of Westminster College is to help men and women develop competencies, commitments, and characteristics which have distinguished human beings at their best.

The liberal arts tradition is the foundation of the curriculum continually designed to serve this mission in a rapidly changing world. The College sees the well-educated person as one whose skills are complemented by ever-developing values and ideals identified in the Judeo-Christian tradition.

Westminster's quest for excellence is a recognition that stewardship of life mandates the maximum possible development of each person's capabilities. The College thus realizes its mission in men and women who as students:

- Develop intellectual curiosity and the competencies to reason logically, evaluate critically, communicate effectively, imagine creatively, and appreciate aesthetic and creative expressions of humanity;
- Acquire a knowledge and appreciation of self, society, human cultures, the natural world, and human relationships to God;
- Develop and demonstrate moral and ethical commitments to neighbor, society, and the natural world consistent with an understanding of self;
- Commit themselves to lifelong learning and the acquisition of skills for careers and responsible service as world citizens.

The curricular and co-curricular learning programs are designed as a means by which the College endeavors to fulfill its mission.

## Westminster College Outcomes

The College's mission statement expressed as statements of student ability-based outcomes:

- To reason logically and evaluate critically;
- To communicate effectively;
- To think creatively, and appreciate aesthetic expressions;
- To demonstrate intellectual curiosity;
- To acquire knowledge of self, society, human cultures, the natural world, and human relationships to God;
- To apply knowledge to contemporary issues;
- To demonstrate moral and ethical commitments to neighbor, society, and the natural world;
- To demonstrate commitment to lifelong learning and the acquisition of skills for careers and responsible service as world citizens.

The curricular and co-curricular learning programs are designed as a means by which the College endeavors to fulfill its mission.

## Religious Perspectives

The student at Westminster is enrolled in a college sustained through the decades by what was the United Presbyterian Church in North America and is today related to the Presbyterian Church (U.S.A.). through the Synod of the Trinity. This heritage has at its core those ideals exemplified by Jesus Christ.

Today, the College continually strives creatively to understand and to express the relationship between its religious heritage and the liberal arts ideals and values in ways relevant to a rapidly changing world. Westminster embraces the total Church in its divisions and the human race in its diversity. The College is critically open to the moral and spiritual character of different religious traditions and resolves to be truly ecumenical, ready to participate in interfaith dialogues and endeavors.

Westminster's Board of Trustees, administration, faculty and students develop their policies and practices based on the principles, values and ideals of Christian faith. Every member of the Westminster College community is expected to honor the standards of compassion, justice, and a disciplined life in the pursuit of excellence.

## Accreditation and Memberships

Westminster is accredited by the Middle States Commission on Higher Education, and is a charter member of the Association.

Middle States Commission on Higher Education  
3624 Market Street  
Philadelphia, PA 19104  
Telephone: (267) 284-5000

The teacher preparation programs are approved by the Department of Education of the Commonwealth of Pennsylvania.

Pennsylvania Department of Education  
333 Market Street  
Harrisburg, PA 17126  
Telephone: (717) 783-6788

The program in chemistry is approved by the American Chemical Society.

American Chemical Society  
1155 Sixteenth Street, NW  
Washington, DC 20036  
Telephone: 1-800-333-9511

Westminster College is an accredited institutional member of the National Association of Schools of Music.

National Association for Schools of Music  
11250 Roger Bacon Drive, Suite 21  
Reston, VA 20190-5248  
Telephone: (703) 437-0700

The RN-BSN/ Post-licensure Program at Westminster College is pursuing initial accreditation by the Commission on Collegiate Nursing Education (CCNE), 655 K Street, NW, Suite 750, Washington, DC 20001, 202-887-6791. Applying for accreditation does not guarantee that accreditation will be granted. The onsite CCNE accreditation visit is scheduled for March 16-18, 2020.

The College is a member of the American Council on Education, the National Association of Independent Colleges and Universities, the Association of Presbyterian Colleges and Universities, and other national organizations.

## The Campus

Westminster College is located in New Wilmington, a small, residential town in western Pennsylvania. New Wilmington is surrounded by wooded hills, farmlands, scenic country roads and streams. The town lies near several large cities. It is approximately 60 miles north of Pittsburgh, 80 miles south of Erie, and 85 miles southeast of Cleveland. New Castle is nine miles to the south. The College is within a few miles of I-79, I-80, and the Ohio and Pennsylvania turnpikes. Nearby cities furnish transportation to all points by bus, and air travel is available from the Pittsburgh, Cleveland, Canton/Akron and Youngstown airports. The College has a 300-acre campus with 24 major buildings designed to serve the educational mission. Its attractive and functional buildings and grounds facilitate the indispensable interaction between faculty members and students, thus adding to the quality of the education program. The acreage not claimed by the physical plant includes extensive fields, woodlands and a lake.

### Academic Buildings

**OLD MAIN MEMORIAL**, completed in 1929, is constructed of local sandstone in the collegiate Gothic style. It houses several of the College's administrative offices, Wallace Memorial Chapel (a memorial to Westminster's sixth president, W. Charles Wallace), and facilities for the schools of education and social sciences.

**THOMPSON-CLARK HALL**. Built in two sections in 1893 and 1895, and renovated in 2000, this building houses the schools of business and communication.

**RALPH MCGILL MEMORIAL LIBRARY**, dedicated in 1938 and most recently renovated in 2009, provides access to online and traditional print academic resources that are carefully selected based on Westminster's unique curriculum. In the library, students can find help with everything from how to find an eBook to how to use the latest tech tools. It also provides a variety of student-centered study spaces, from ultra-quiet zones to group study rooms.

**JAMES PATTERSON HALL**. Completed in 1966 and renovated in 2012, this multipurpose academic building was renamed in 1989 in honor of the first president of Westminster College. It contains facilities for the schools of music and arts & humanities. Special facilities include the 1,722-seat Will W. Orr Auditorium (named for Westminster's ninth president), the 300-seat Beeghly Theater, and the Foster Art Gallery.

**OLD 77**, built in 1921 and remodeled in 1979, contains a basketball court, indoor running track, dance studio and stage, offices, and exercise room. The Marjorie A. Walker Recreation Center, including the latest in fitness equipment, was completed in 2003. Prior to 1951-52, the building was the site of varsity basketball games. The final intercollegiate game on this court was the 77th consecutive home victory for the Titans. From this record, Old 77 takes its name.

**MEMORIAL FIELD HOUSE AND NATATORIUM**, a memorial to Westminster men and women who served and died in World Wars I and II, is the College's main physical education building. Originally completed in 1952, it was extensively remodeled and expanded in 1975. The expanded facilities include the varsity gymnasium (named for former coach Charles "Buzz" Ridl '42) with a capacity of 2,300 spectators, a natatorium (containing a collegiate-size swimming pool), faculty offices, classrooms, locker rooms for men and women, a trainer's complex, four basketball courts for recreational and intramural use, and two racquetball courts. Two of the basketball courts have a synthetic floor suitable for tennis, volleyball, badminton, and indoor track practice. In 1994, a new fitness center was added to



the Field House, providing students, faculty and staff expanded opportunities for strength and fitness training. The center includes areas of free weights and machines for strength training, as well as an area with aerobic exercise equipment for cardiovascular training. The Thomas V. Mansell Education Wing was added in 1999 and the James F. Edwards Wing was completed in 2001.

HOYT SCIENCE CENTER, a facility conceived and designed as the base for the total science program at Westminster, is named in honor of Alex Crawford Hoyt. The first section of the center was dedicated in 1974 and the second section opened in 1985. Hoyt houses the schools of life & health sciences and mathematical and physical sciences, the department of psychology, and Information Technology Services.

## Outdoor Resources

The Outdoor Laboratory for Biological and Environmental Science is used for research and courses in many disciplines, especially biology, environmental science, and art. It comprises three distinct areas: Field Station, Brittain Lake and The College Woods. All facilities are open to the community.

FIELD STATION is a 55-acre plot acquired by Westminster in 1964 and appropriated specifically for field studies in 1980. Less than one mile east of the campus, this area connects to the main campus with the Frey Nature Trail, includes a comprehensive Travis weather station, several buildings, including a Nature Center, shed with solar panels, wind turbine, Edmiston Memorial Labyrinth, lowland thicket, micro-forest, arboretum, successional and experimental plots, marsh, spring-fed stream, and Little Neshannock Creek.

BRITTAINE LAKE, on the southeast edge of the campus, encompasses approximately 15 acres. In addition to enhancing the beauty of the campus, it is used for ecology field classes, recreation, canoeing, and, on its perimeter, running. This lake was constructed in 1951, and is named in honor of J. Frank Brittain.

THE COLLEGE WOODS is a beech and maple forested area of 40 acres which lies south of the campus. The habitat is used for ecology field classes which require a mature woodland. A trail in the woods is available for recreational walking.

## Residence Halls

BERLIN VILLAGE, constructed in 2006 and 2011, provides townhouse-style apartment living for 100 upper-class students. Each of the 25 units in the Village houses four students in single rooms, has a full kitchen, two full bathrooms, a living room and dining room.

BROWNE HALL, built in 1928, is named in memory of the College's second president, Robert Audley Browne. It is made of stone and provides rooms for 107 students.

EICHENAUER HALL, completed in 1966, is a building providing suite-style living for 256 students. It is named for John B. Eichenauer, a former trustee and generous benefactor of the College.

FERGUSON HALL, built in 1941, is named in memory of Westminster's fourth president, Robert Gracey Ferguson. It is constructed of stone in Gothic design and accommodates 129 women affiliated with our five national sororities.

GALBREATH HALL, completed in 1957 as a memorial to Westminster's seventh president, Robert F. Galbreath, is a residence housing 152 students and providing food service for on-campus students.

JEFFERS HALL, built in 1940 and named for E. Tupper Jeffers, Westminster's third president, is a gift of the late J.S. Mack. It has rooms for 24 students.

RUSSELL HALL, completed in 1952, is a memorial to the College's fifth president, Robert M. Russell. It contains housing for 127 students.

SHAW HALL, constructed of brick and stone in 1960, was named for Walter C. Shaw, a generous benefactor of the College. It provides rooms for 149 students and contains the Mrs. Walter C. Shaw Student Health Center and the Counseling Center.

THOMPSON HOUSE, built in 1887 by Westminster College physics professor Samuel L. Thompson, is a beautifully restored Victorian home that houses 15 students.

## Service Buildings

The ANDREW J. McKELVEY CAMPUS CENTER was completed in 2003, joining the former WALTON-MAYNE MEMORIAL UNION BUILDING, built in 1958, and CHARLES FREEMAN HALL, built in 1953. Among the amenities included in the three-story, 77,000-square-foot campus center are: the 300-seat Witherspoon Rooms overlooking Brittain Lake for catered dining, banquets or special events; the TUB dining facility; The Club Room, a non-alcoholic student pub; the Professional Development Center; the College Bookstore and Gift Shop; the campus mail room; the campus radio and television broadcasting facilities; the 85-seat Mueller Theater; and meeting rooms and offices for student organizations (i.e., Student Government Association and Campus Programming Council, and student publications The Holcad and Scrawl, public safety, Titan Card office, and student affairs administrative staff.

THE PHYSICAL PLANT SHOPS provide offices for the staff of the physical plant and facilities for the carpentry, electrical, painting, plumbing, and campus grounds equipment workshops.

HENLEY PAVILION, named for I. Miller Henley, longtime resident of New Castle, provides storage for the athletic department. A bequest from the Henley estate enabled the pavilion to be constructed. It is located near Westminster's Brittain Lake.

REMICK ADMISSIONS HOUSE, completed in 1999, is named in honor of Oscar E. Remick, Westminster's 12th president and chancellor who served the College from 1987-97. The two-story, 5,100-square-foot facility houses the admissions and financial aid departments.

WILEY ALUMNI HOUSE, named in honor of former trustee S. Donald Wiley '50 and his wife, Josephine Hartman Wiley '49, was acquired by the College in 2005. This renovated 19th century home houses the Office of Alumni Relations.

ATHLETIC FIELDS. Along with four tennis courts on the west side of the athletic area and six courts on the east side, the College has a number of athletic fields and an eight-lane, rubberized all-weather track, completed in 2001. There are fields for lacrosse, softball, baseball, and soccer, and Burry Stadium for football and track & field. In addition, there are football and soccer practice fields and a sand volleyball court.

# Admission

Westminster seeks students who possess the educational background, academic ability and motivation that indicate potential for success in college. The College makes every effort, through careful admission procedures, to insure that its programs and traditions, and student capabilities, interests and needs are well matched.

Application forms for admission to Westminster may be obtained from the admissions office at [www.westminster.edu](http://www.westminster.edu) or by using the Common Application online at [www.commonapp.org](http://www.commonapp.org). Applicants for admission may apply after the end of the junior or during the senior year of high school. Students with excellent qualifications may be accepted on the basis of a three-year secondary school record and satisfactory junior year SAT or ACT examination scores. In certain cases, final decisions concerning admission will be withheld until additional academic information is received. Westminster reserves the right to rescind any offer of admission. Westminster is authorized under federal law to enroll non-immigrant alien students who meet the admission standards.

## Requirements for Admission

The Office of Admissions will consider both the nature of the courses and the quality of work indicated on the secondary school transcript submitted by the applicant. Accelerated or "honors" courses are encouraged, and students are strongly discouraged from taking a less challenging selection of courses in the senior year.

In general, students admitted to the College must have completed a secondary school course of 16 units (12 units in grades 10, 11, and 12) and have received a high school diploma. Each new student is required to take the SAT of the College Board or the ACT examination, preferably during the junior year in high school or early in the senior year. These assessment tests should be taken by the time the student graduates from high school.

Applicants for admission to all degree programs must present at least 16 units for entrance, including:

<i>Course</i>	<i>Units</i>
English	4
Foreign Language	2
Social Studies	2
College Preparatory Mathematics	3
Laboratory Science	2

The remaining units should be within the academic areas above. Most applicants offer more than the minimal requirements. For chemistry, physics and mathematics majors, four units of mathematics, which must include plane geometry, are preferable to the minimum of three. The two units offered to meet the foreign language admission requirement must be in the same language.

## Application Fee and Reservation Deposit

A non-refundable application fee of \$35 should accompany the application for admission. The fee is waived for online applicants and for students who come for an admissions visit.

When an applicant is accepted for admission, a non-refundable reservation deposit of \$200 is required to hold the applicant's place on the incoming student roster. This deposit is due by the candidate's reply date of May 1. A student granted admission after May 1 must submit the \$200 non-refundable deposit within 30 days of the date of the acceptance letter. This deposit is non-refundable even if the applicant

cancels. For applicants who matriculate at Westminster, this \$200 deposit will be retained until the student graduates or withdraws, at which time this amount may then be returned.

Veterans follow the same general procedure as outlined above. The College cooperates with veterans in regard to benefits by providing essential information, providing and receiving applications, and forwarding these to the Veterans Administration. Evidence of honorable discharge will be required by the College.

## Transfer Students

A student who has attended another college must present an official transcript from all colleges attended as well as all the credentials required of those who enter directly from high school. A transfer student's total college-level record should average a 2.0 or better. No single grade lower than C- may be accepted for Westminster credit. Courses which are graded on a pass/fail or satisfactory/unsatisfactory basis will not be accepted in transfer. Westminster only accepts credits taken at regionally accredited colleges and universities.

Courses are accepted and evaluated on a course-by-course basis to determine course equivalency based on academic program standards. Credit for transfer work is awarded according to the semester or credit hour values from the institution of record, e.g., a 3 semester or credit hour course will be credited as 3 semester hours on your Westminster College transcript. Courses earning credit other than semester hours (quarter hours, units, etc.) will be converted to semester hours. Grades and points earned for transfer work will not be included in the Westminster College grade point average (GPA). Academic standing (i.e., probation and suspension) at Westminster College is calculated and determined using only grades earned at Westminster College.

An applicant whose transcript shows that the student has been honorably dismissed and is eligible to re-enter in good standing the institution last attended may be admitted to Westminster and granted such advanced standing as the credits warrant. Evaluations of credits from other institutions are conditional, depending upon the satisfactory completion of one semester at Westminster. After the first semester of attendance, athletic eligibility for intercollegiate athletics is determined only on the basis of grades earned at Westminster College and number of semesters (including transfer semesters) the student has attended college.

Westminster has articulation agreements with Butler County Community College, Community College of Allegheny County, and the Pennsylvania State University-Shenango Campus to facilitate transfer students. Interested students should contact their home campus for more information.

## International Student Admission

Students seeking admission to Westminster College who are citizens of a country other than the United States will be considered international students and will, therefore, be subject to specific admission requirements not applicable to naturalized citizens of the United States.

An international student applying for admission to Westminster College must submit an application form. This form should be completed and returned with the student's academic record indicating completion of at least elementary/secondary school program or equivalent of a U.S. high school diploma. The student's level of academic achievement should meet or exceed a grade point average of 3.000 (B) on a 4.000 scale.

The Test of English as a Foreign Language (TOEFL) is required of all international applicants. The TOEFL score required for admission is 550 or above (paper-based), 213 or above (computer-based) or 80 or above (Internet-based). International students may submit the SAT as a substitute for the TOEFL. Students may also submit the IELTS score of 6 for admission.

Westminster seeks to enroll academically qualified international students from a variety of countries. All incoming international students must be prepared to meet the full cost of attendance—tuition, fees, room, board, books, supplies, and personal expenses for the calendar year—from personal or family resources, along with any Westminster scholarship money received. Applicants must provide certified documentation that sufficient financial resources exist to underwrite their educational expenses during the academic year and through their anticipated semester of study. This documentation must be submitted to the College in the form of a certified letter from the family bank, sponsor, government, etc. In addition, international students must purchase health insurance from the College.

The I-20, or student visa, required for entry into the United States as an international student will be issued by the Office of Admissions after the applicant has been granted admission, has paid the \$200 matriculation fee, and has submitted a certified document proving adequate financial resources. Any questions or concerns regarding the admission of international students should be addressed to the vice president of enrollment.

## The Westminster Early College Program

The Westminster Early College Program offers qualifying high school and home-schooled students the opportunity to prepare for the future by taking college classes while still in high school. Interested students should contact their high school guidance counselor or call the Office of Admissions at (724) 946-7100.

## Credit by Examination

The College participates in the Advanced Placement (AP) program of the College Entrance Examination Board. Students who have taken and satisfactorily passed college-level courses in high school and who have taken the Advanced Placement Examination of the Educational Testing Service may apply to the College for credit or advanced placement in these subjects.

Credit may also be earned through the CLEP and International Baccalaureate (IB) programs. Programs may also give advanced placement, on the basis of other evidence or proficiency, with or without credit, as circumstances warrant.

Westminster College will accept Cambridge International Examinations A Level for matriculation purposes. Credit or advanced placement will be awarded for qualified A Levels with results of A or B. Up to 16 credit hours can be earned through A Levels. To receive transfer credit, an original grade report must be sent from the A-Level Examination Board directly to Westminster College.

Westminster grade equivalents for A Levels will be assigned accordingly:

<i>Cambridge Grade</i>	<i>Westminster Grade</i>
A	A
B	B

Note: Faculty members identify which A Level examinations are accepted and their course equivalencies at Westminster.

# The Graduate School

The Graduate School at Westminster College offers curricula leading to the Master of Arts, Master of Business Administration, and Master of Education degrees in the following programs:

## ***Master of Arts***

- Clinical Mental Health Counseling Adult
- Clinical Mental Health Counseling School
- Clinical Mental Health Counseling Youth

## ***Master of Business Administration***

## ***Master of Education***

- School Counselor Education
- School Counselor Education with Certification
- Special Education with Certification
- Special Education with Reading Specialist with Certification
- Reading Specialist with Certification

The Graduate School also offers non-degree programs of student leading to certification in the following areas:

- K-12 Principal
- Superintendent/IU Director
- Special Education
- Reading Specialist

A Graduate Catalog and all information concerning the graduate program at Westminster are available at the Office of Graduate School and on the graduate school website. An application can be found online at [www.westminster.edu/apply](http://www.westminster.edu/apply).

Specific questions may be addressed to the director of the Graduate School program by calling 724-946-7353 or via email at [graduate\\_studies@westminster.edu](mailto:graduate_studies@westminster.edu).

*For Current Westminster Undergraduate Students:* Any Westminster undergraduate who, at the beginning of the final semester of undergraduate study, needs 12 or fewer semester hours to fulfill the requirements for the bachelor's degree may, with the permission of the adviser and the director of the Graduate Program, take graduate courses. To take this option, students must apply for admission to graduate study through the Office of Graduate School. Courses completed at the graduate level may be credited toward a graduate degree and toward post-graduate teacher certification requirements, but no course may be counted for credit toward more than one degree. Applications are available from and should be submitted to the director of Graduate School.

## Expenses

Westminster College is a nonprofit institution. The basic charges that students pay (tuition, fees, room and board) do not cover the full cost of a Westminster education. The remaining funds come primarily from gifts and grants, including alumni and corporate contributions, and income from the College's endowment. The investment in a college education is one of the major financial decisions facing students and their families.

### General Information

The charges in this section, Admission and Financial Information, represent the rates in effect at the date of publication, August 2019. The College reserves the right to change any of its fees whenever such changes are deemed advisable. The new rates apply to all students. Students and parents will be notified in advance of the rates for each academic year. Undergraduate students and resident degree-seeking special students will be charged the Activity Fee of \$300 per semester. This pays for admission to athletic events and theatre productions, student health services, accident insurance, and contributes toward experiential learning activities. The Activity Fee also includes an allocation authorized by the Board of Trustees for the support of student publications and the Student Government Association. An additional fee of \$185 is charged for the new student orientation program for entering first-year and transfer students.

### Basic Fees and Charges

The College's Board of Trustees sets rates for tuition and fees annually, usually by late February for the following year. Rates are subject to review and change. The cost of a normal academic program is as follows (2019-2020):

	<i>Semester</i>	<i>Year</i>
Tuition	\$18,350	\$36,700
Room & Board*	\$5,725	\$11,450
Student Activity Fee	\$300	\$600
<b>TOTAL</b>	<b>\$24,375</b>	<b>\$48,750</b>

*\*Double occupancy/Tier I Dining Plan*

#### *Other Room & Board Charges*

Double Occupancy/Tier II	\$5,580	\$11,160
Double Occupancy/Tier III	\$5,425	\$10,850
Berlin Village	\$6,155	\$12,310

Single rooms are available on a limited basis at an additional cost.

The full-time tuition charge for one semester allows students to enroll in 12-19 semester hours of course work. Students who enroll in more than 19 semester hours of tuition-incurring courses will be billed at the semester-hour rate for each tuition-incurring semester hour above 19.

Some courses are designated tuition-exempt in overload situations only. Such tuition-exempt courses include physical education activity courses and Westminster 101 (WST 101), music ensembles, music lessons, and certain other designated courses. These courses are marked in the official course schedule published each semester.

(Please note that an academic load above 19 hours must be approved by the Dean of the College). Please note certain music courses require additional fees varying in amount.

## Special Fees

Tuition per Semester Hour (part-time or overload)	\$1,165
Audit Fee per Course	\$415
Damage and Loss Deposit (Reservation Deposit)	\$200
Late Fee for Missed Deadlines	\$100
Student Teaching Fee	\$260
Summer Internship Fee	\$400
Parking Pass	\$100
Elective Music Lessons Per Course	\$310
Coaching & Instrument Maintenance Fee (music major)	\$235
Coaching & Instrument Maintenance Fee (music minor)	\$50

Late Payment Fee	\$100 or 1% per month on the unpaid balance
Photocopier Charges	\$.07 per black & white page and \$.12 per color page after allotment of \$26.25 per semester

## Tuition for Internship

*Traditional Undergraduate Students:* Internship fees for summer are \$400. During the fall or spring semesters internships are part of regular tuition charges. In the case of an academic overload, normal overload charges apply.

*Graduate Students:* Tuition per credit for an internship taken through the graduate program will be equal to the cost per graduate credit. Please consult the appropriate catalog for information regarding fees. For further information, contact the Professional Development Center at 724-946-7339.

## Room Reservation Deposit

All full-time undergraduate students are required to live in a College residence hall unless a student has received permission from the College to live off campus, in a fraternity house, or to commute from home. Students wishing to reserve a particular room on campus must participate in the College housing selection process. Cancellation of on-campus housing accommodations after June 1 will result in an administrative fee of \$125.

## All-College Honors Program

*Travel:* All students in the All-College Honors Program are required to participate in an international travel experience in the first year of the program. The cost of the travel will be billed one half in the fall semester and the other half in the spring semester.



## Terms Of Payment

**Statements And Payment Due Dates:** Monthly statements are available to students online through CASHNet. Students are able to provide online access to student account information for parents and others through this service. CASHNet may also be used to make payments on a student account as described below. Information about CASHNet can be obtained from the Business Office.

Payment due dates on student account billings are as follows:

Fall Semester Bill:	July 20
Spring Semester Bill:	January 10
Summer Semester Bill:	June 14

**Late Fees/Interest:** The College acknowledges that certain loan proceeds and scholarships will not be posted to a student account until after the due date for the bill. When assessing late fees, the College takes this into consideration, as long as the information regarding these items is communicated to the Financial Aid or Business Office prior to the assessment date for late fees. Summer late fees are assessed immediately after the due date.

The application of the \$100 late fee is assessed based on the following criteria:

Balance > \$0	as of September 15th for fall
Balance > \$0	as of February 1 for spring
Balance > \$0	as of June 15 for summer

A late fee will not be assessed when there are scheduled travel course payments due after the “as of” date that determines assessment of late fees. However, a \$100 late fee will be assessed if the payments are not made according to the payment schedule for the trip.

Interest at a rate of 12% per annum (1% per month) will be assessed on account balances outstanding at the end of the finals period, or upon the student’s separation from the College (graduation, withdrawal, leave of absence, suspension, expulsion, etc.), whichever is applicable. A courtesy letter will be sent approximately one week after the Business Office receiving notification of the separating event. Interest will then be assessed on the outstanding balance in the next billing period, approximately one month after the courtesy notification.

## Students Receiving Military Benefits

Any student receiving Chapter 33 Post 9/11 GI Bill <sup>TM</sup> or Chapter 31 Voc-Rehab benefits that has filed all necessary paperwork to the Financial Aid Office and paid their balance not covered by these funds is subject to the following:

No late fee or finance charges on balance to be covered by approved military funding;

No hold will be added to the student account that would prevent them from participating in classes, libraries, or other institution facilities, or the requirement that a covered individual borrow additional funds, on any covered individual because of the individual’s inability to meet his or her financial obligations to the institution due to the delayed disbursement funding from VA under chapter 31 or 33.

Ability to participate in the course of education during the period beginning on the date on which the individual provides to the Financial Aid Office a certificate of eligibility for entitlement to educational assistance under chapter 31 or 33 (a “certificate of eligibility” can also include a “Statement of Benefits” obtained from the

Department of Veterans Affairs' (VA) website e-Benefits, or a VAF 28-1905 form for chapter 31 authorization purposes) and ending on the earlier of the following dates:

The date on which payment from VA is made to the institution.

90 days after the date the institution certified tuition and fees following the receipt of the certificate of eligibility.

**Payment Methods:** The Business Office accepts payments via cash, check, money order, and bank check at the window. All checks or money orders should be made payable to Westminster College. Credit card and ACH payments are accepted through CASHNet only. A teleprocessing fee will be charged on all credit card payments based on the amount charged. Wire transfer payments will be accepted on a limited basis on student accounts as approved by the Director of Student Financial Services.

For those who wish to pay their accounts in installments, arrangements are available through CASHNet.

The Business Office reserves the right to require payment on certain student accounts via cash, bank check or money order only.

**Authorization To Use Credit Balance For Charges Other Than Tuition, Fees, Room And Board:** The student agrees to allow the College to apply all types of Federal Student Aid (FSA) and/or any other funds to pay allowable charges other than tuition, fees, room and board that are on the student billing statement. This agreement is in place until the student formally separates from the college.

Students who would like to cancel or modify this authorization should contact the Business Office at 724-946-7140 and fill out the appropriate form. A cancellation is not retroactive – it takes effect on the date the college receives the notification. If a student cancels an authorization to use FSA funds and/or other funds to pay for other allowable charges, the school may use FSA funds and/or other funds to pay any authorized charges incurred by the student before the notice was received by the school.

The types of charges that may be applied to student accounts include, but are not limited to, the following: parking fines, library fines, student affairs fines, health insurance, printing fees, equipment purchases made by the student, etc. before a refund is created.

**Pre-Registration/Registration:** Student account balances that are not paid in full by the late fee date, or throughout the semester as additional charges are incurred, will be placed on financial hold. While on hold, the student will not be permitted to register.

The Business Office will notify those students whose balance is greater than \$100 of the consequences with respect to pre-registration. This notification will be sent via U.S. mail, e-mail and/or another method deemed appropriate.

Check payments >\$1,000 that are presented within two weeks prior to a pre-registration or registration period may be subject to verification with the bank for sufficiency of funds. Payments on accounts where there have been previous returned items will be verified for sufficiency of funds. Holds will not be released on the latter accounts until such verification takes place.

The Business Office will make every effort to release students from financial hold in a timely manner once payment in full is received on an account and verified when applicable. The student, once released from hold, would be able to register at times

determined by the Registrar's Office.

***Registered Students Attending Summer Classes:*** A student who was permitted to register for the fall semester may choose to attend summer classes at Westminster. The due date to pay summer charges is June 14. If the summer charges (along with any other charges related to previous semester(s) are not paid in full on or before June 30, the fall registration will be cancelled and the student will be unable to return to the College until the account balance is paid in full.

The Business Office will notify those students whose balance is greater than \$100 at June 30 of the consequences of non-payment for the summer (and/or previous) term. This notification will be sent via U.S. mail, e-mail and/or another method deemed appropriate.

***Registered Students With Balances After Payment Due Date:*** A student who was permitted to register for the fall semester and has a balance greater than \$100 on their student account as of August 1 will not be permitted to return to campus until the balance is paid in full and/or adequate payment arrangements are made with the Business Office. The Business Office will determine what constitutes adequate payment arrangements on a case by case basis. This includes students who intend to arrive early on campus for an activity, academic endeavor or employment.

The Business Office will notify those students whose balance is greater than \$100 on or around July 20 of the consequences of not having an adequate payment arrangement for the fall term. This notification will be sent via U.S. mail, e-mail and/or another method deemed appropriate.

For transfer students intending to matriculate in the spring semester, adequate payment arrangements must be made prior to arriving on campus.

***Registration/Transcript And Diploma Hold:*** If a student account has a balance greater than \$100 throughout the semester, a financial hold will be placed on the account which prevents the student from registering, obtaining transcripts and if graduating, receiving their diploma. These holds will remain on the student account until the balance is paid in full.

Notification of the student account balance and the consequences with respect to registration, transcripts and diploma will be sent to those students whose balance is greater than \$100. This notification will be sent via U.S. mail, e-mail and/or another method deemed appropriate.

Check payments that are presented to register or obtain a transcript may be subject to verification with the bank for sufficiency of funds. Payments on accounts where there have been previous returned items will be verified for sufficiency of funds. Holds will not be released on the accounts until such verification takes place, and in the case of a transcript hold, the check clears the bank (which can take up to 14 days).

The Business Office will make every effort to release students from financial hold in a timely manner once payment in full is received on an account and verified or cleared, whichever is appropriate.

***Additional Consequences Of Outstanding Prior Semester Balances:*** In addition to the above, students who are not registered and have unpaid prior balances will be unable to return to the dorms, participate in College activities, nor attend classes until the account balance is paid in full and the student is registered for classes. Please note that future financial aid cannot be used to cover balances from the previous semesters.

**Payments Returned By Bank:** Payments of any type (check, ACH, credit card, wire) that are returned by the bank for any reason will be subject to a \$15 fee. The fee will be applied to the student account, when possible, upon notification by the bank (on-line or otherwise) of the returned item. The Business Office will attempt to make contact with the issuer of the check to resolve the returned item.

If the returned item permitted the release of a hold on a student account, the hold will be reinstated and additional holds may be added as deemed appropriate under the circumstances. If a payment permitted the student to pre-register, the student will be notified of the returned payment and given 7 days to resolve the unpaid item. If there is no resolution, the registration will be cancelled.

If the payment permitted registration for the semester currently underway, the student will be notified of the returned payment as soon as practicable and will no longer be permitted to attend class, nor participate in College related activities. A maximum of 7 days will be given to resolve the returned payment during the regular academic year, and a maximum of 3 days during the summer semester. The student will also be notified by the appropriate College offices of their status and next steps in accordance with procedures specified in the Handbook for Students, College catalogue and other institutional policies.

**Pre-Payment Hold:** A prepayment hold requires that arrangements for full payment for a semester be in place prior to registration for that same semester. The following accounts will qualify for prepayment holds:

1. Account previously sent to a collection agency.
2. Accounts previously in the College's internal collections process.
3. Accounts currently classified as delinquent that are in internal collections.
4. Accounts with habitual returned payments (3 or more).
5. Accounts for students whose registration was cancelled in any semester for financial reasons.
6. Foreign student accounts.

**Special Conditions For High School/Dual Enrollment:** Balances must be paid in full prior to the first day of class. Failure to make timely payment will result in the cancellation of the student's registration.

**Internal And External Collections:** Outstanding balances remaining on a student account as of the last day of the finals period, and/or upon separation from the College, are subject to the following collection procedures. These students are coded as "DL", delinquent. All applicable holds will remain on the student account during the pre-collections and collections process:

**Internal Collections:**

1. A courtesy letter will be sent approximately one week after the last day of finals or approximately one week after the Business Office receives notification of separation from the College. The delinquency date will correspond to the last day of finals in the case of students expected to return, and to the separation date for students not returning. Charges that occur after the delinquency date for the period of attendance (printing, student affairs fines, etc.) will have the same delinquency date as other charges for that period.
2. Interest will be assessed on the outstanding balance as described above, approximately one month after the courtesy notification is sent to the student.
3. Three monthly statements will be sent to the address on file, along with a letter.
4. If there is no response from sending the statements, up to three additional monthly letters will be sent to the address on file in an effort to collect the outstanding balance and/or to make payment arrangements with the debtor prior to sending the account to an external collections agency. The third letter will contain a deadline for response to avoid

the account going to a collections agency.

5. If the College is successful in obtaining a response from the debtor, payment arrangements may be discussed for the account. All agreements on payment arrangements will be documented on a promissory note which is signed by the debtor.
6. If a payment arrangement is not followed as agreed, the pre-collections process will be reactivated at the point it left off prior to the arrangement being made. If the account reached the point of being sent to external collections prior to the arrangement, the College will make one last effort to contact the debtor prior to sending the account to external collections.
7. Students who wish to return will not be permitted to move into the dorms, participate in College activities, nor attend classes until the account balance is paid in full. If the previous balance is paid by the Friday before classes resume for the new semester, the account will be taken out of internal collections and the student will be permitted to register (assuming that there are no additional holds). Payments received within ten days of the start of the new semester must be made via certified check, money order or via CASHNet (credit card and ACH).

**External Collections:** If the internal collections process is unsuccessful, external collections agencies will be utilized to assist in collecting the outstanding balance. All collections fees will be added to the outstanding balance on the student account and will be the responsibility of the debtor. Generally, the account will be placed in first collections for approximately one year. If the effort is unsuccessful, the account will be returned to the College. The Business Office will make one attempt to reach the debtor prior to the account being entered into second collections. If that effort is unsuccessful, the account will be turned over to second and then to third collections for approximately one year each. The College reserves the right to continue collections efforts beyond third collections.

## Communication

**Means Of Communication:** Our official means of communication with students is via email. To the extent possible, the email address utilized is the student's wclive.westminster.edu address. It is the student's responsibility to read emails from the College on a timely basis.

**Contact:** The College, as well as its agents and contractors, may contact a student at their current and future physical address(es), cellular or other phone number(s), email address(es), or wireless device(s). Communications may include, but are not limited to, information regarding financial aid, student account, loans or other debt, payment due or late payment notices, account holds, collections, tax documents or notices required by Federal Regulations. In an effort to contact a student, Westminster College or its agents and contractors may utilize any of the following means: postal/overnight service, automated telephone dialing equipment, artificial or pre-recorded voice or text messages, and personal calls and emails.

**Opting Out Of Electronic Communications:** A student may withdraw consent to call a cellular phone or receive electronic notifications of financial information by contacting the Financial Aid Office or the Business Office and completing a Opt Out of Electronic Communications Form.

**Requesting Paper Documents:** A student or parent (with FERPA permissions) may request a paper copy of a financial document(s) by contacting the Financial Aid Office or the Business Office.

**Updating Contact Information:** The student is responsible for keeping the College records up to date with current physical address(es), email address(es), and phone numbers by contacting the Office of Student Affairs with any changes. Upon leaving the College for any reason, it is the student's responsibility to provide the

College with updated contact information for the purposes of continued communication regarding any amounts that remain due and owing to the College.

## Refunds

***Withdrawal From The College:*** College fees are usually not returnable to students unless they withdraw from the College because of illness or reasons entirely beyond their control. The process of withdrawing from the College is initiated in the Office of Student Affairs, and the date of approval is considered the official date of withdrawal. Refunds, when allowed, will be made on a pro-rata basis based on the following calculation: the number of calendar days through the official withdrawal date divided by the total number of calendar days in the semester, excluding breaks of five days or more. No refund will be given if the semester is more than 60 percent completed. The pro-rata refund is applied to tuition, room and board, and certain other charges assessed by the College. This pro-rata formula is also applied to College and outside sources of financial aid to determine the amount of aid earned through the date of withdrawal. Specific federal regulations, as described below, apply to Federal Title IV Financial Aid. All earned aid is applied against the pro-rata charges to determine the balance due to/from the withdrawing student. An administrative fee of 5 percent of actual charges (up to \$100) will be assessed against the account. Generally, no refund will be made where the withdrawal is required because of misconduct.

***Room:*** In cases where a withdrawing student is unable to vacate College housing on the official date of withdrawal, a charge of \$22 per day will be added until all possessions are removed from the room and proper check-out is completed with the Student Affairs Office. Except for the pro-rata refund for withdrawal from the College, room charges will not be refunded unless a student is changing from resident to commuter, which must be approved by the Office of Student Affairs. In cases where the residency status changes during the semester, a daily room charge will be assessed from the beginning of the semester through the date the room is vacated. However, no refund will be provided for room if the change from resident to commuter occurs after the semester is more than 60 percent complete.

***Food Service:*** Unused Dine Dollars are not refundable. However, Dine Dollars remaining at the end of the fall semester will rollover to the spring semester, provided you have signed up for a spring meal plan. If a student does not return for the spring semester, then Dine Dollars remaining from the fall semester are forfeited. Any unused Dine Dollars at the end of the spring semester are forfeited. The pro-rata refund calculation above applies when a student withdraws from the school. In addition, any meals provided by the College after the official withdrawal date will be charged to the student's account at the going daily rate. If a student changes from resident to commuter during the semester, a daily meal plan rate (including facility fee) plus any used Dine Dollars will be charged from the beginning of the semester through the official date of notification from Student Affairs of change in residency.

***Federal Title IV Financial Aid:*** If the withdrawing student has Federal Title IV Financial Aid, the financial aid office is required by federal statute to recalculate eligibility for this aid. A percentage of earned aid is determined on a pro-rata basis using the following calculation: the number of calendar days through the official withdrawal date divided by the total number of calendar days in the semester, excluding breaks of five days or more. If withdrawal occurs after the semester is 60 percent completed, the student is deemed to have earned 100 percent of the Title IV aid.

The percentage of unearned aid (100% - the percentage of earned aid determined in the pro-rata formula) is applied to the total amount of Title IV aid that could have been disbursed for the semester to determine that amount of aid that must be

returned to the federal financial aid programs.

From time to time, the full amount of Title IV aid for which the student is eligible has not been fully disbursed when the withdrawal calculation is being performed. In such a case, if the student earned less than the amount of Title IV aid that was disbursed, both the institution and the student would be required to return a portion of the funds. If the student earned more than the amount of Title IV aid that was disbursed, the institution would owe the student a post-withdrawal disbursement of aid within 120 days of the student's withdrawal.

Unearned aid is allocated to the appropriate federal aid program in the following order and must be returned by the institution within 30 days after the determination of the date of the student's withdrawal:

1. Unsubsidized Federal Stafford Loans
2. Subsidized Federal Stafford Loans
3. Federal Perkins Loans
4. Federal Parent Plus Loans
5. Federal Pell Grants
6. Federal Supplemental Opportunity Grants

***Administrative Withdrawals:*** For an administrative withdrawal, the same refund policy would apply as stated above. However, the withdrawal date will be determined by College administration in accordance with federal financial aid guidelines.

***Military Service:*** If a student is called to military service during a semester, the student will be granted a leave of absence from the College and will not be penalized financially as a result. If the student chooses to withdraw from courses (academic record shows a "M" for all courses), tuition and fees will be refunded for the semester. If the student has completed sufficient work to qualify for incomplete grades as determined by the Registrar (academic record shows an "I" for all courses), the student may return at a future date to complete the courses with tuition and fees already paid. With either option, room and board (if applicable) will be prorated on a percentage basis through the effective date of the leave of absence.



## Student Life

Westminster offers the environment of a residential college where there is a close relationship between students, faculty and staff members. Most classes are small, most of the undergraduates live on campus, and many faculty live in the area. Faculty members and administrators are readily available for individual conferences with students. Westminster also views the undergraduate experience as a comprehensive one in which the academic and extracurricular programs complement each other. The complete development of students is the College's aim. Students may choose from a wide variety of activities, listed in the following section in more detail. Separate groups, such as sororities and fraternities (both social and honorary), residence halls, and special interest groups plan their own social activities. Most College dances, films, coffeehouse entertainment, and live concerts are sponsored by the Campus Programming Council and Student Government Association for philanthropic endeavors.

### Athletics, Intramural Sports, and Club Sports

Westminster is nationally known for its excellence in intercollegiate athletics. The College is a Division III member of the National Collegiate Athletic Association (NCAA), the Presidents' Athletic Conference (PAC), and the Ohio River Lacrosse Conference (ORLC). The Department of Athletics sponsors intercollegiate varsity teams for men in baseball, basketball, cross country, football, golf, lacrosse, soccer, swimming, tennis, and indoor and outdoor track and field. The department sponsors intercollegiate varsity teams for women in basketball, cross country, golf, soccer, softball, swimming, tennis, indoor and outdoor track and field, and volleyball. The Department of Athletics also offers programs in intramural sports and various other fitness and recreational activities. Intramural sports for men and women have included basketball, touch football, racquetball, soccer, softball, tennis, ultimate Frisbee, and volleyball.

### Music

Westminster offers a broad program in music, open to majors and non-majors alike. The choral and instrumental programs at Westminster College include 300-400 students from all areas of the campus. Any student wishing to sing or play in an ensemble will be placed in an ensemble according to his/her interests and experiences. While ensembles are available to all with interest, some do require auditions for participation.

THE CONCERT CHOIR, a select mixed ensemble of 50 students, performs on and off campus. The Chamber Singers is a select mixed ensemble of 16 students, which sings repertoire intended for smaller ensembles. The Westminster College Voices is open to all students and sings a wide variety of literature. An Opera Workshop is also offered for those with interest, combining students and community members.

THE TITAN MARCHING BAND is an ensemble of between 100-120 musicians and band fronts including danceline and colorguard. The marching band performs for all home football games and for three to four high school marching band festivals or competitions throughout western Pennsylvania and eastern Ohio. A band camp is held before the academic year begins.

THE SYMPHONIC BAND, an ensemble of between 80-90 musicians, is curricularly attached to the marching band (for credit) in the first semester (marching band through early November transforming to symphonic band for remaining semester and all of the second semester). This ensemble is open to all with instrumental



experience and performs some of the finest established and new literature for large ensembles.

THE WIND ENSEMBLE is the premier band ensemble and is selected through audition. It is an ensemble of between 40-50 musicians, depending upon required instrumentation for literature being performed. This ensemble has been selected multiple times as a guest performance ensemble for the P.M.E.A. State Conference. It performs literature of the highest musical and intellectual challenge, has premiered works and had seminars by highly regarded composers from throughout the nation.

JAZZ ENSEMBLE musicians are also chosen through audition. This ensemble is based upon the standard "Big Band" instrumentation (five saxes, four trombones, five or six trumpets and rhythm section). The Jazz Ensemble, which has featured numerous faculty and professional musicians, performs three major concerts per year. It also performs for various area jazz festivals and other functions both on and off campus.

THE WESTMINSTER COLLEGE SYMPHONY ORCHESTRA performs works for both full orchestra and chamber groups. It is open to all string players, although wind musicians must audition. The orchestra performs three to four concerts per year on campus, offering a wide variety of repertoire to its musicians.

Westminster also offers a wide variety of chamber music opportunities such as Flute Choir, Woodwind Ensembles, Saxophone Quartet, Brass Ensembles, Horn Ensemble, Percussion Ensemble, and mixed chamber groups. A pit orchestra is also needed for the bi-annual all-campus musical.

OPERA WESTMINSTER is a select ensemble that is composed of music majors and other interested singers and community members. Admission is by audition. Spring semesters are reserved for opera scenes from the opera and operetta repertoire and each student is featured in a scene or scenes according to his or her abilities. Every other fall, Opera Westminster holds auditions for a full-scale opera production. Scenes and the opera are sung in the original language providing the experience to work and sing in foreign languages.

Westminster supports its music activities with excellent physical facilities. Will W. Orr Auditorium, which seats 1,722, has a four-manual Moeller organ and two Steinway D Concert Grand pianos. W. Charles Wallace Memorial Chapel contains a three-manual Moeller organ and a Steinway B Concert Grand piano. Old Main Tower houses a three-octave carillon. The music program is located in Patterson Hall.

Membership in all musical organizations is open to any qualified student, and academic credit may be earned for each semester's participation. Private lessons with experienced teachers are available to all Westminster students.

## Theatre

Major theatrical productions are mounted each year in Beeghly Theater by the Theatre program. Auditions are open to all Westminster students, regardless of major. The Theatre Program offers additional performance and production opportunities that require less time commitment. Recent activities include: The 24-Hour Theatre Festival; Murder Mystery Dinner Theatre; The Tiny House New Play Festival; open-mic nights, and staged readings of new student and faculty short plays.

## Religious Life

Campus ministry at Westminster College exists to encourage meaningful and

contemporary expressions of faith. The ministry is carried on by a wide variety of individuals from each of the campus constituencies: students, faculty members, administrators and staff.

It is the goal of the Office of Faith and Spirituality to provide an open atmosphere where all are accepted, along with programming and encouragement where faith experiences allow our students the opportunity to develop spiritually. The chaplain's staff are coordinators of the planning and implementing of events to enhance the dialogue between faith and learning. Through a variety of on- and off-campus events, members of the College community are offered frequent and varied opportunities to work toward realizing the values of the church-related college experience.

Worship is both a personal and community experience at Westminster. Under the direction of the College chaplain, two weekday Chapel services, Saturday night Catholic Mass, and Sunday night non-denominational worship are provided for the Christian community. Services are typically held in Wallace Memorial Chapel. Participation in local worshipping communities is encouraged with transportation often available. A listing of off-campus worship opportunities for most faith traditions is available at [www.westminster.edu/campus/spiritual-life/local.cfm](http://www.westminster.edu/campus/spiritual-life/local.cfm). Annual retreats and off-campus volunteer opportunities are offered. Small groups are encouraged as a way for students to grow in their faith. Chapel programs strive to reach out to persons of all faiths and are by nature pluralistic. The belief that various theological positions contain elements of truth and, therefore, are necessary for growth toward completeness, is a basic principle of the programs.

## Student Government

All students, by virtue of their undergraduate registration and payment of fees, are members of the Student Government Association. The Student Senate is the central representative and legislative organization of the Westminster College Student Government Association. Representatives are elected from each class. The Student Senate allocates part of the budget to student organizations and carries out other responsibilities as outlined in the Student Government Association Constitution. The Student Senators, through the various committees and in cooperation with the student affairs staff, plan student programs. Westminster students participate in College governance by serving on a variety of standing College committees, councils and boards of the faculty. Student representatives to these bodies are elected by the student body and appointed by the Student Senate. The senate also nominates three student associate trustees to the College's Board of Trustees.

## Student Media

Westminster College has two student publications. All students in good academic standing are eligible to compete for editorial or business positions on the staff of each publication. The editor-in-chief for each is selected after submitting an application and being interviewed by members of the Student Publications Committee. Each publication also has a faculty or staff adviser. THE HOLCAD is the award-winning weekly student newspaper. Established in 1884, it contains news, reviews and editorials on all aspects of campus life and of events taking place nationally and internationally that may be of concern to students. SCRAWL, the Westminster College literary magazine, is published annually. Participation in its production is open to all students interested in working on the magazine staff. Scrawl is nationally affiliated with the American Scholastic Press Association.

RADIO STATION WWNW, TITAN RADIO, broadcasts on 88.9 FM at 4000 watts. The station serves both the campus and all of Lawrence County in western Pennsylvania. It can also be heard online at the station's website [www.titanradio.com](http://www.titanradio.com).

net. Apps for mobile phones can be located by searching Titan Radio in the App or Google Play store. The station is also available on TuneIn. In addition to playing commercial-free contemporary music, the station offers a variety of news and sports.

THE WESTMINSTER CABLE NETWORK is available on two area cable systems reaching over 80,000 homes. Westminster Cable Network airs a variety of weekly news and sports programming, including live high school and college sporting events. The cable television program also supports a student-produced website at [www.wcn247.com](http://www.wcn247.com). Positions at the stations are filled on the basis of ability and performance. Auditions are required for all on-air talent.

## The Alumni Association

The Westminster College Alumni Association was established in 1884. All graduates of the College are association members. It is their mission to serve as a liaison between the alumni and the College, to encourage material, moral and spiritual support and to provide resources to assist the College in its academic, cultural, extracurricular and spiritual life. The events and activities of the association are guided by the leadership of the Alumni Council. Homecoming, class reunions, regional activities, and the Westminster Fund are some of the opportunities offered to foster friendship among alumni and to provide forums for alumni service and education.

## Celebrity Series

Special performing arts events, including Broadway musicals and popular entertainers of national acclaim, are made available to the College community and the broader regional community that the College serves through the Celebrity Series program. All shows are staged in Orr Auditorium. For current year's program, visit: [westminster.edu/celebrity](http://westminster.edu/celebrity).

## Honorary and Professional Organizations

ALPHA KAPPA DELTA is the International Sociology Honorary Society. The organization exists to "promote excellence in scholarship in the study of sociology, research of social problems, and such other social and intellectual activities as will lead to improvement in the human condition" (AKD Handbook, 2001-02). Being a member of AKD potentially offers such benefits as travel assistance to sociology conferences, competitions and awards for sociological research, small grants for graduate study in sociology, and funds for on-campus symposia and workshops. To be eligible for membership, a student must 1) be an officially declared sociology, criminal justice studies or international studies/global development/sociology major or minor; 2) possess at least junior year standing; 3) possess a minimum overall grade point average of 3.25 and rank in the top 35% of his or her class in general scholarship; 4) possess a minimum grade point average of 3.25 in the Sociology, Criminal Justice Studies or International Studies/Global Development/Sociology major or minor and 5) have completed at least 4 regular Sociology or Social Science courses prior to initiation.

ALPHA PSI OMEGA is a nationally recognized theatre honorary fraternity. Membership requirements include: grades, acting, crew work and leadership.

BETA BETA BETA BIOLOGICAL SOCIETY was established at Westminster in 1948 as the Alpha Sigma chapter. Prerequisites for active membership include a major in the biological sciences, a minimum of sophomore standing, at least 12 biology semester hours with a 3.000 GPA, and an all-college GPA of 3.000. Associate membership is available to students of any major who have taken four biology semester hours and are enrolled in four more semester hours. Affiliate membership may be granted to anyone with an interest in biology.

ETA SIGMA PHI chartered its Gamma Mu chapter in 1954 as the honor organization for the classics. Membership is open to students who have completed eight semester hours in Greek or Latin with a 4.000 average, or 12 semester hours with a 3.000 average. This honorary was created to increase the knowledge of the art and literature of ancient Greece and Rome.

KAPPA DELTA PI is an international honor society in education. Delta Mu chapter was founded at Westminster College in 1937. Membership is restricted to the top 15 percent of those students seeking teacher certification. To be eligible, students must be at least a second-semester sophomore in a program leading to teacher certification, and present evidence of service to children and the profession. Individuals must fill out an official application and be selected for membership.

KAPPA MU EPSILON's charter at Westminster (Pennsylvania Alpha chapter) began in 1950. The national organization was designed to further the interest in mathematics in schools that place their primary emphasis on undergraduate programs. Credit requirements include a 3.000 GPA, a 3.000 GPA in math classes, 12 completed math semester hours (including MTH 251), and current enrollment in a further math class. Purposes for the organization include aiding undergraduates in understanding the important role mathematics has played in the development of Western civilization, providing a society to recognize the outstanding achievement in mathematics study at the undergraduate level, spreading knowledge of mathematics, and familiarizing members with the advances being made in mathematics.

LAMBDA PI ETA, an honorary organization overseen by the National Communication Association, was organized on Westminster's campus in 2001 with these purposes: (a) to recognize, foster and reward outstanding scholastic achievement in communication studies; (b) to stimulate interest in the field of communication; (c) to promote and encourage professional development among communication majors; (d) to provide an opportunity to discuss and exchange ideas in the field of communication; (e) to establish and maintain closer relationships and mutual understanding between speech communication studies faculty and students; and (f) to explore options for graduate education in communication studies.

LAMBDA SIGMA is an honor society with the purpose of fostering leadership, scholarship, fellowship and the spirit of service among the men and women of the sophomore class, and to serve and promote the interest of the College in every way possible. Prerequisites include a 3.000 GPA, one semester of course credits, and previous Westminster College leadership experience. Each year, Lambda Sigma inducts no more than 10 percent of a first-year class.

MORTAR BOARD recognizes senior students with leadership, scholarship, and service skills. This honor society was chartered on Westminster's campus in 1955. Membership prerequisites include a grade requirement, previous college leadership experience, and a one-time membership fee.

MU PHI EPSILON, the international professional music fraternity, began at Westminster with the installation of its Phi Omega chapter in 1946. Prerequisites for membership include an overall GPA of 2.000 and a GPA of 3.000 in music classes, credits of a second-term first-year student, dues responsibilities, and a major or minor in music. Mu Phi Epsilon aims to advance music in America and throughout the world. Its purpose is to promote musicianship, scholarship and the development of friendship.

OMICRON KAPPA SIGMA, founded in 2006 at Westminster, is the honor society of the All-College Honors Program at Westminster College. The Greek letters stand for "the circle of wisdom." The society is charged with cultivating a sense of community among Honors Scholars while promoting the intellectual life at the College

through events both on and off campus.

PHI ALPHA THETA is the campus history honor society. The local chapter, Alpha Xi, was founded in 1946 and requires of its members a major or minor in history or 16 semester hours in history; a 3.300 average or better in history, and an all-college average of at least 3.300; and payment of national and local dues. Phi Alpha Theta was chartered to enhance the knowledge of and the participation in the scholarly pursuit of the discipline of history.

PI SIGMA ALPHA, national honor society in political science, established its Eta Omicron chapter at Westminster in 1976. Its purpose is to stimulate productive scholarship and intellectual interest in government. Membership is extended to students with either junior or senior standing, who are in the top third of their class (as measured by QPA), and have completed at least 10 hours in political science with a QPA average of at least 3.0 in those hours.

PHI SIGMA TAU was created on the Westminster campus in 1966 to encourage friendship among those who have displayed marked ability in philosophy, to popularize interest in philosophy among the general collegiate public, and to develop and honor academic excellence. The nationally affiliated organization includes such requirements as an overall 2.700 GPA, a 3.000 average in at least eight philosophy semester hours, second-semester sophomore standing, and payment of national and local dues.

PI DELTA PHI, the Delta Rho chapter, was established in 1965 to recognize students who have achieved high levels of proficiency in the French language. Prerequisites for membership include a GPA of 3.000 in French, a 2.800 overall average, and eight French semester hours beyond the intermediate level. Payment of national and local dues is also required.

PI SIGMA PI is a locally chartered honor society for superior students who are candidates for the B.A., B.S., and B.M. degrees at Westminster. Prerequisites for membership include a 3.600 average or better and completion of 80 semester hours.

PSI CHI is a national honor society in psychology, established at Westminster for students with a major or minor in this field. Psi Chi offers a variety of social and educational activities. It also informs students about graduate school programs in psychology. An overall GPA of 3.000 with a 3.000 in psychology classes is required. The organization also requires payment of dues.

SIGMA DELTA PI is an honor society for those who seek and attain excellence in the study of the Spanish language and in the study of the literature and the culture of Spanish-speaking people. Requirements for membership include an average of 3.000 in all Spanish courses and a ranking in the upper 35 percent of their class. At least two Spanish courses on the 300 or 400 level must be completed; one of these needs to be a course in Hispanic literature or culture.

SIGMA PI SIGMA is the honor society subgroup of the nationally affiliated Society of Physics Students. Prerequisites include 12 physics semester hours with at least a 3.000 GPA and payment of national dues.

SIGMA TAU DELTA, the international English honor society, was formed for literary and educational purposes. The society strives to confer a distinction for high achievement in English language and literature in undergraduate, graduate and professional studies. It provides cultural stimulation on the campus of Westminster College and promotes interest in literature and the English language in our surrounding community. Exemplary character and fellowship and high standards of academic excellence are promoted among members.

## Student Services

The central staff of the OFFICE OF STUDENT AFFAIRS consists of the vice president, assistant vice president, associate dean, and assistant director of student engagement. The office has responsibility for the planning of the new student orientation program; administration of the residence life program; student conduct system; coordination of student activities and organizations; supervision of the Wellness Center; diversity; disability resources; student publications; fraternity/sorority life; public safety; leadership development; and assistance with international student advisement. Services for students who have special needs because of a disability are also available. Students should contact the Office of Disability Resources if such services are required.

The ACADEMIC SUCCESS CENTER is located on the fourth floor of Thompson-Clark Hall. Students may be referred by a professor from a particular discipline or they may choose to seek assistance on their own volition. The center offers the following services: general advising, tutoring, support for exploratory majors, and in-depth academic support to students desiring a more challenging exchange. The Academic Success Center is a free service for all Westminster students and incorporates services that are corrective and developmental in nature. Students requiring help with basic skills improvement, students wanting to improve already existing skills, and students desiring to strengthen advanced skills are encouraged to use the service.

Located in McKelvey Campus Center, the PROFESSIONAL DEVELOPMENT CENTER staff helps students, from first year through the senior year, to make informed decisions about majors and careers. Career counseling and fairs, interest inventories, resume creation and review, mock interviews, career shadowing, graduate school application assistance, and professional networking are some of the resources available to students and alumni. The internship coordinator assists students in arranging internships, and an annual internship event offers students the opportunity to meet with employers on campus.

Other programs include the Senior Seminar through which seniors receive instruction on interviewing, networking, and using technology in the job search. An annual etiquette dinner and style show help seniors prepare for the world of work. Staff also assist students in creating electronic portfolios and profiles on common job search sites like Handshake and LinkedIn.

INFORMATION TECHNOLOGY SERVICES offers students a wide range of resources and support. ITS can help you connect to the wi-fi network, locate a computer lab, print your papers, login to my.Westminster, access your email account, and navigate Desire2Learn. ITS also offers a variety of tech tools such as audio and video recorders, digital cameras, projectors, professional lighting and backdrop systems, and sound equipment that students can check-out for free.

The LIS HELP DESK, located in McGill Library, provides both library assistance and tech support for everything from laptops to printing to wi-fi. Students can get tech help by contacting the Help Desk at 724-946-6000 or [lishelp@westminster.edu](mailto:lishelp@westminster.edu).

The WELLNESS CENTER, located in Shaw Hall, provides health care and health education to all full-time Westminster College students. Registered nurses at the Wellness Center provide primary care during specified hours. A physician or physician assistant is available to see students for one to two hours each weekday. The Wellness Center provides health education programs to increase the students' awareness of their role in maintaining a high level of wellness, to enhance their ability to

make health-related decisions, and to empower them to be informed consumers of the health care system.

The emotional health and well-being of students is very important to the College. Westminster provides on-campus confidential, no-fee counseling services to all undergraduate students by a professional counselor. Counselors are available from 9 a.m.-5 p.m. weekdays. Counseling is available for a variety of personal concerns including, but not limited to, depression, anxiety, adjustment problems, self-esteem, stress management, relationship and family issues. Also provided are educational programs. Off-campus referral sources are available for specialized treatment needs.

The COLLEGE CHAPLAIN and the OFFICE OF FAITH AND SPIRITUALITY coordinates religious life on our campus including worship, service, and fellowship programs involving students, faculty, and staff, both on and off campus, and service and experiential learning opportunities during Spring Break and during the summer months. The work of the Office of Faith and Spirituality (McKelvey Student Center, rooms 223 and 224) is to work with people of all faith traditions.

OFFICE OF DISABILITY RESOURCES - Westminster College is committed to providing services and resources to remove unnecessary barriers for students with disabilities, as consistent with the Americans with Disabilities Amendments Act and Section 504 of the Rehabilitation Act. Students with disabilities who are seeking options to address any potential physical and programmatic barriers, which includes academic accommodations, should contact the director of Disability Resources for further information. The director will meet with the student to discuss his or her demonstrated concerns, Westminster's related requirements, relevant resources, and potential options to appropriately address the issue(s). Appeals for disagreement with the disability determination should be made in writing to the Dean of Students. For more information, visit the Disability Resources section under the Student Services section on the Westminster website.

CAMPUS SAFETY AND SECURITY - Westminster College maintains a staff of security personnel to assist and protect individuals, to protect College property, to control parking and traffic, and to report infractions of the Student Code of Conduct. An escort service is provided for students on campus by uniformed public safety personnel. The staff provides these and other services to the campus community 24 hours a day, year round. In addition, this office is also a source for information about the campus and the surrounding community. Staff members strive to provide a safe and stable environment for the Westminster community by encouraging personal safety and security awareness, thus reducing the opportunity for crime.

The OFFICE OF DIVERSITY & INCLUSION serves a variety of functions at Westminster College. Its main purpose is to advance diversity and promote a positive climate for differences of race, color, national origin, ethnic origin, sexual orientation, gender identity, age, religion, or disability on campus and in the community. Among its priorities are the recruitment, retention, and success of students of diverse cultures and backgrounds.

The diversity director's goal is to prepare students to become effective leaders and productive citizens in the culturally diverse 21st century. With students' input, the staff offers activities and experiences that nurture respect for the dignity of all human beings, as well as an appreciation for individual differences.

FINANCIAL AID OFFICE - Westminster College endeavors to provide financial assistance to students through scholarships, grants, work opportunities, loans, and combinations of these various forms of aid, in order to balance the needs of all students.



## Academics

Westminster College offers undergraduate courses of study leading to the Bachelor of Arts, Bachelor of Music, Bachelor of Science, and Bachelor of Science in Nursing degrees. The academic year comprises Fall and Spring semesters of 16 weeks each. The Fall Semester begins in late August and ends before the Christmas holiday, while the Spring Semester starts in mid-January, and ends in mid-May. A student normally takes 16-17 semester hours in each of the Fall and Spring semesters. A Summer Session is also offered. The graduation and other academic requirements contained in this catalog apply to students who enter Westminster College during the academic year 2019-2020 and who remain in continuous enrollment at the College until they graduate. Students who withdraw and are subsequently readmitted will be bound by graduation, major and degree requirements in force during the academic year for which they are readmitted. The College reserves the right to change curricula, courses, and graduation and other academic requirements when such changes are deemed advisable. If academic requirements are changed, continuously enrolled students may elect to comply with the new requirements or to remain under the requirements which applied at the time of the change. All exceptions to academic requirements must be approved in the following manner:

*Exceptions to the requirements for a regular program major must be approved by the department offering the major program;*

*Exceptions to the requirements for an interdisciplinary major must be approved by the committee charged with administering the major;*

*Exceptions to any other academic policy must be approved by the Academic Standards Committee, subject to limitations established by the faculty;*

The decision of the committee will be final. The chair of the department or committee charged with approving exceptions to requirements shall be responsible for notifying the registrar whenever an exception is granted.

## Undergraduate Degree Requirements

In order to qualify for graduation, all students must do all of the following:

1. Successfully complete minimum of 125 semester hours for a bachelor of arts, bachelor of science, or bachelor of science in nursing degree, or at least 133 semester hours for a bachelor of music degree.
2. For all courses taken, attain a minimum grade point average (GPA) of 2.000.
3. Successfully complete the Westminster Plan.
4. Successfully complete a major program of study.
5. For all courses taken in a major or minor, attain a minimum grade point average (GPA) of 2.000 and earn no grade below C-. This includes supporting courses and all courses taken in the major or minor discipline.
6. Successfully complete a minimum of 77 semester hours outside their major discipline, which may include supporting courses but not courses inside the major discipline, even if all major requirements are met. For students with *double majors* the courses in the second major may be counted towards this requirement of 77 hours outside the major. For *interdisciplinary majors*, the student must have this minimum of 77 hours outside the discipline which constitutes the largest number of courses in the major. Students who complete the *All-College Honors Program* need take only 73 semester hours outside the major discipline. For majors in the *bachelor of music* program, a minimum of 33 semester hours outside of music is required. For the *bachelor of science in nursing* degree, 36 semester hours outside of nursing are required.



7. Pass a comprehensive examination, if required by the major program. (See statements under individual program headings for majors which require a comprehensive examination).
8. Spend the senior year at Westminster College.
9. Participate in Commencement exercises.

*Transfer Students* - In addition to the above, transfer students must successfully complete a minimum of 64 semester hours at Westminster College, at least 16 of which must be in the major. Transfer students must successfully complete a minimum of 8 semester hours at Westminster to meet requirements for a minor.

*Intention To Graduate* - Students who plan to graduate must file an application for graduation in a manner established by the Registrar's Office.

## Second Bachelor's Degree

A second undergraduate degree may be earned by successfully completing all requirements for the major associated with the second degree and earning a minimum of 32 semester hours beyond the first degree. If the first degree was earned at Westminster College, the second degree must be a different degree. (One cannot earn two B.A. degrees, for example). If the first degree was earned at another college or university, a second undergraduate degree may be earned at Westminster College by completing the Westminster Plan and the requirements of the major associated with the second degree, subject to the same transfer credit policies as transfer students (see above).

## The Westminster Plan

From a curricular perspective, Westminster's vision of a liberally educated person is achieved from a four-year integrated course of study involving general education, prescribed graduation requirements, a major, and electives.

## Liberal Studies

At the center of the curriculum is the common core, Liberal Studies, a course of study spanning all four years of the undergraduate experience. The entry point for Liberal Studies is Inquiry 111, a semester-long, first-year core requirement for all students. Communication skills are developed in conjunction with the Inquiry course. Students enroll in semester-long courses in writing and oral communication. The middle two years of the undergraduate experience are devoted to cluster courses and to courses satisfying prescribed Intellectual Perspective requirements. The general education curriculum culminates in a senior year capstone course in the major. Throughout the entire curriculum, the use of information technologies is emphasized in order to enhance teaching and learning, and to provide students with knowledge acquisition skills necessary for a lifetime of learning. Finally, the process of liberally educating students is completed by combining general education with in-depth course work in a major and with electives. The Liberal Studies portion of the curriculum is the common core for all students. This program of study is a four-year series of courses crafted to foster collaborative learning and the integration of knowledge, and structured to facilitate the acquisition of learning skills and the development of a community of learners.

*Liberal Studies* has four complementary parts:

1. The First-Year Program
2. Intellectual Perspectives
3. Cluster Courses
4. Senior Capstone

## The First-Year Program

The First-Year Program is an integrated educational experience comprised of several curricular elements in which all new students enroll. Its components are:

*INQ 111 (Introduction to a Liberal Arts Education)* is a four-semester-hour course designed to introduce students to the life of the mind and engage them in liberal learning. With the exception of students who take part in the Honors Program, all first-time, full-time college students who are less than one academic year past high school graduation when they enter Westminster will take INQ 111 in their first fall semester. INQ 211 is a course with outcomes and objectives similar to INQ 111, but is designed for students who have more college or life experience than traditional first-year students, including transfer students with 34 or fewer credit hours accepted for Westminster credit, students who are more than one academic year from their high school graduation, and students who begin their Westminster College experience in the spring semester.

*WRI 111 (Writing)* - Writing is a valuable and necessary tool for the investigation, analysis, evaluation and expression of ideas and experiences encountered in INQ 111. First-year students receive instruction and practice in essential skills and forms of written expression. The course in writing capitalizes on the substance of the Inquiry course to motivate learning-specific skills in written expression and to enhance teaching and learning in Inquiry. WRI 111 (Writing) or an approved equivalent is required of all first-year students. *Students must earn a grade of C- or better in order to meet this requirement.*

*SPE 111 (Introduction to Public Communication)* – Like writing, the mastery of oral expression skills is essential for success in college, a vocation, and throughout life. The first-year course in oral communication provides a basic grounding in these skills. Oral communication capitalizes on the substance of the Inquiry course to motivate learning-specific skills in oral expression, and to enhance teaching and learning in Inquiry. SPE 111 (Introduction to Public Communications) or an approved equivalent is required of all first-year students. *Students must earn a grade of C- or better in order to meet this requirement.*

*WST 101 (Westminster 101)* is a one-credit course that serves to introduce students to life at Westminster College and assist them in making a successful transition to higher education. Students will learn how to take advantage of opportunities for personal and academic growth while on campus and to develop strategies for personal and academic success. Transfer students with 12 or more transferable hours may waive WST 101.

## Intellectual Perspectives

The **Intellectual Perspectives (IP)** portion of the curriculum is designed to assure that all Westminster College graduates are familiar with a broad range of human intellectual endeavors and creativity. The requirements of this component of Liberal Studies are subject based and provide opportunity for students to explore significant areas of knowledge. The seven principal areas of study are:

1. Foreign Language (FL)
2. Humanity and Culture (HC)
3. Quantitative Reasoning (QR)
4. Religious and Philosophical Thought and Tradition (RP)
5. Scientific Discovery (SD)
6. Social Thought and Tradition (ST)
7. Visual and Performing Arts (VP)

All students are required to complete four semester hours or more in each area. Two courses that satisfy major or minor requirements may also be used to satisfy Intellectual Perspectives.

## Cluster Courses

Cluster courses are taken during the sophomore or junior years. A cluster consists of two linked courses taught by at least two faculty members from different disciplines to the same group of students in the same semester. Clusters offer opportunities for students to integrate knowledge and to develop into a community of learners. All students are required to take one Cluster (two courses). Cluster courses may also satisfy Intellectual Perspectives.

## Senior Capstone

The final component of Liberal Studies is a senior capstone course. The capstone is at least a four-semester-hour course within the major designed to provide an opportunity for students to evaluate and assess the strengths and limitations of their major field. Additionally, the capstone experience permits opportunity for structured reflection on the value of education in and beyond the major and provides another chance to strengthen communication and problem-solving skills.

## The Major

Westminster College offers major programs leading to the degrees of Bachelor of Arts, Bachelor of Science, Bachelor of Science in Nursing, and Bachelor of Music. Each candidate for a degree must concentrate in one major field. First-year and first-semester sophomore students who are unsure of a major field may have an exploratory major. All students must declare a major field of study (i.e., not exploratory) by March of their sophomore year.

The minimum requirement for a major is 36 semester hours in one discipline, but some majors require more. The maximum number of semester hours permitted in the major discipline is 48; the maximum number of semester hours permitted in the major, including supporting courses, is 64. Majors appear on the academic transcript.

Students may declare a major at any time. Students should check carefully at the time of declaring a major to ascertain both the requirements for the major and the amount of time needed to finish the program. Students should be aware that changing their major or adding an additional major or minor at any time during their course of study may require added time for completing graduation requirements. Students who choose to complete more than one major or minor may need additional time to complete all requirements.

To declare a major, students must obtain an official major form from the registrar, and, after reviewing the program of studies with the chair(s) or other adviser(s) from the department(s) involved, must file one copy of this form with the registrar. For specific major requirements, see the appropriate program listing.

No credit toward a major can be given for any course in which the student receives a grade below C- and the grade point average for all courses taken in the major must equal at least 2.000.

**Double major.** This involves combining two single majors. Permission of the chairs of both of the departments involved must be secured. All requirements for each major must be completed in order to graduate. Coursework must include a minimum of four semester hours of capstone for each major (as specified by the Westminster Plan).

**Interdisciplinary major.** Structured interdisciplinary majors are available in the following programs:

*Bachelor of Arts*

International Studies

Environmental Studies

Multimedia Journalism

Sports Management

*Bachelor of Science*

Environmental Science

Financial Economics

Human Resources Management

International Business

Marketing & Professional Sales

Neuroscience

**Individual interdisciplinary major.** A student may propose a major program with as few as 24 semester hours in one discipline, and a total of 52 to 76 semester hours. The program will be subject to the approval of all of the departments involved and the Dean of the College, and will be administered by a member of the department giving the core of 24 semester hours or more. Forms for declaring an individual interdisciplinary major are available in the Registrar's Office.

**Minor.** A student may elect to complete one or more academic minors in addition to the required major. A minor, where available, consists of at least 24 semester hours in a single discipline, or as specified by the department. There is no maximum number of semester hours designated for minors. All grade restrictions for academic majors apply to academic minors as well. For specific minor requirements, see the appropriate program listing. Minors appear on the academic transcript.

No credit toward a minor can be given for any course in which the student receives a grade below C- and the grade point average for all courses taken in the minor must equal at least 2.000.

**Concentration.** Some majors require the selection of a concentration. Concentrations have no minimum size but must adhere to the maximum size of the parent major. Concentrations cannot be declared independently of the parent major. For specific concentration requirements, see the appropriate program listing. Concentrations appear on the academic transcript. No credit toward a concentration can be given for any course in which the student receives a grade below C- and the grade point average for all courses taken in the concentration must equal at least 2.000.

**Electives.** Electives are courses available to students outside of the major which provide opportunities for intellectual exploration. Such courses may be taken at any time during the undergraduate years and count toward the total number of semester hours needed to graduate.

## Comprehensive Examination

Certain programs require students to take a comprehensive examination in their major field (see statements under individual program headings for majors which require this type of examination). This examination is intended to be a measurement of the student's grasp of the major field and an incentive to integrate all personal knowledge of this field. The examination, when made mandatory by a program, must be passed with a satisfactory grade if the student is to be graduated. A failed comprehensive examination cannot be retaken during the same semester.

## Academic Advising

Upon matriculation all students are assigned an academic adviser. While they explore various major fields, the adviser is assigned from the faculty at large, but when they declare a major, an adviser is assigned from the major program. Under the direction of the Dean of the College, the faculty adviser helps the student to arrange a

coherent academic program and is available for further consultation at the student's request.

All students are expected to consult their adviser regularly, and especially to work closely with their adviser in arranging to fulfill not only the requirements of their major(s) and minor(s), but also the various other academic requirements. Although the adviser is expected to attempt to arrange these matters to the student's best advantage, the final responsibility for the fulfillment of all academic requirements rests with the student.

## Special Study Opportunities

Westminster provides a number of opportunities for students to pursue projects beyond the regular course work. These options are offered at Westminster in the belief that one of the highest aims of education is to develop the student's capacity to initiate and complete meaningful projects in the major field of study. Each participating student is expected to conduct an independent investigation beyond that possible in regular course work.

***Independent Study.*** All programs list this option for students who want to pursue projects beyond the regular course work. Consent of the major program is required.

***Internship.*** An internship, a practical on-the-job experience outside the classroom, can be an integral part of a student's education at Westminster College. It is a short-term work experience emphasizing learning. A student takes on the role of a worker in an organization and in the process learns about a career field, gains hands-on experience, and contributes to the host organization. An internship may be served during any semester, including the summer, or during the period between semesters. The internship is structured as a three-way agreement among a student, a faculty member, and an on-site supervisor. The student is responsible for arranging the internship and completing all required paperwork. The faculty member sets standards, grants approval, evaluates the work, and assigns the grade. The on-site supervisor provides the opportunity for the student to gain meaningful experience and submits an evaluation at the conclusion of the internship. While most students locate a sponsoring organization for an internship on their own, the Professional Development Center provides assistance in the form of on-campus internship recruiting programs, a Spring Semester internship fair, online postings and a database of previous sponsors.

Students must register for the internship in order to receive academic credit. An internship may be graded or taken on an S/U basis, as determined by the department awarding credit. Forty hours of on-the-job internship experience are required for each academic credit awarded. When taken during the regular academic year, as part of the normal credit load, no additional tuition is charged for an internship. Fees for summer internships will be posted. Application packets for internships are available in the Professional Development Center.

***Off-Campus Study.*** Through off campus study Westminster students may expand their academic and cultural horizons. As a part of their educational program, students can spend as little as a month or as much as a year living and studying in an international or domestic program. Students who study off campus may be able to earn, via their off-campus study, not only credits toward graduation, but also credits toward their major or minor, or toward fulfilling part of the Liberal Studies requirements. Specific credit arrangements, however, must be worked out in consultation with the Director of Global Studies, the academic adviser, and the registrar, and require approval by the chair of the student's major program.

The following general guidelines apply to all students who plan to study off campus:

1. To be eligible to apply, students must have an career GPA of at least 2.500.
2. Students in required programs and tuition-exchange programs receive financial aid.
3. Grades for all courses taken through the Westminster College Off-Campus Study Program are calculated as part of the Westminster College grade point average.

Information about specific off-campus programs is available from the Director of Global Studies.

## Academic Policies

*Student Regulations* - The College reserves the right to change the regulations governing admission, tuition, the granting of degrees, or any regulation affecting the student body.

*Confidentiality Of Student Records* - Westminster College abides by the Family Education Rights and Privacy Act (FERPA) as amended. Students are given three primary rights under FERPA. They have the right to:

- Inspect and review their education records;
- Seek to amend incorrect education records; and,
- Have some control over the disclosure of information from their education records.

Westminster College will not disclose information contained in education records without the student's written consent, except under conditions specified by The Act. Further information about the confidentiality of student records is available in the *Student Handbook* and from the Office of Student Affairs.

## Grades and Grading

Quantity of course work is expressed in semester hours. Quality of course work is expressed in letter grades and grade points. Grades are defined and given by the instructor of each course. The assignment of plus and minus to the letter grade is an option open to the individual instructor.

A:	4.000	Outstanding quality
A-:	3.700	
B+:	3.300	Superior quality
B:	3.000	
B-:	2.700	Satisfactory
C+:	2.300	
C:	2.000	Passing, but inferior
C-:	1.700	
D+:	1.300	Failure to demonstrate even minimal mastery of course content and/or failure to meet the course requirements for a passing grade
D:	1.000	
D-:	0.700	
F:	0.000	

I: INCOMPLETE. This grade may be given in lieu of the letter grades. This is a temporary grade given when a student is unavoidably delayed in completing a course. Such work must be completed within the first seven weeks of the next semester if the student remains in college. Students who are not enrolled at the Col-

lege must remove the incomplete within the first seven weeks of the second semester after the incomplete grade was given unless special permission for an extension is granted by the Dean of the College. All incomplete grades not properly removed are changed to F or U.

**M: MILITARY.** Students who take a leave of absence for service-related reasons will be readmitted with the same academic status as he or she had when last attending or being admitted to Westminster College. The grade transcript for all classes shall show an “M” or “Military” to indicate that the military member or his/her spouse was unable to complete courses because of military service. A grade of “M” is not counted in a student’s GPA.

**S/U: SATISFACTORY/UNSATISFACTORY.** The S grade represents work of at least C- quality; the U represents work of D+ or lower quality. Students in good standing who have attained junior or senior classification may choose to have one course per academic year graded on an S/U basis, provided that it is outside their major or minor field. This option must be declared either at the time of registration or during the add/drop period. Courses in which a student chooses to be graded on an S/U basis may not be used to satisfy any stated requirement. However, courses that are designated S/U for the entire class may be used to satisfy such requirements. Courses in which a grade of S is attained will be counted towards graduation, but a student will earn no credit for a course if the final grade is a U. Neither an S grade nor a U grade is counted in a student’s GPA and may not be changed to a letter grade.

**T: TEMPORARY.** Grade recorded for an Honors Project or a capstone course pending completion. A grade of T may not remain on a student’s transcript as a permanent final grade.

**W: WITHDRAWN.** This grade will be recorded for withdrawal from a course between the third and tenth weeks of the semester if withdrawal is necessitated by illness or other good reason. Granting of the W grade requires approval by the instructor. A grade of W is not counted in a student’s GPA.

## Dean’s List

Full-time students who achieve a grade point average of 3.600 in a minimum of 12 semester hours (not S/U) during the Fall or Spring semesters are recognized by being placed on the Dean’s List. This list is announced twice each year.

## Latin Honors

A student who has completed all of the requirements for graduation may be graduated with honors, provided that he/she earns a GPA of 3.600 or higher in all academic work completed at Westminster College. The three levels of honors and the minimum grade point average for each level are:

Cum laude (with honor)	3.600
Magna cum laude (with high honor)	3.750
Summa cum laude (with highest honor)	3.900

In computing eligibility for honors, the grade point average is obtained by dividing the total grade points earned by the total semester hours carried, exclusive of courses graded on the basis of satisfactory/unsatisfactory.

For all students participating in Commencement exercises, the Latin honors printed in the graduation program will be based upon the student’s GPA at the end of the fall semester preceding graduation; however, the diploma and final transcript will reflect the accomplishments for the student’s entire academic career.

## Change of Final Course Grade

Students may appeal a final course grade for the following circumstances: transcription error, calculation error, failure to include all relevant information in grade determination, failure to follow grading criteria specified in syllabus, or failure to follow established College/program policies. The student must initiate the appeal as soon as possible after notification of the assigned grade so that the process can be completed no later than the end of the seventh week of the following semester.

The procedure for the appeal is as follows:

1. The student must meet with the course instructor in an attempt to resolve the disputed grade. The student must present all pertinent questions and facts concerning the assigned grade and materials supporting the requested change of grade.
2. If the student and instructor cannot reach a mutually agreeable resolution, the student may appeal the instructor's decision to the program coordinator by presenting a written rationale for appealing the grade. The student and instructor will meet together with the program coordinator to attempt to resolve the issue. The program coordinator will make a decision based on the evidence presented and will respond to the student and the instructor in writing.
3. If the decision is not satisfactory, an appeal may be made to the vice president for academic affairs and dean of the College. This appeal must include all materials from preceding steps and any written additions by the student and/or course instructor.
4. The dean may invite all the parties to a meeting to discuss the decision on the disputed grade. After reviewing the written materials and meeting with the parties involved, the dean will notify them, in writing, of his/her decision on the disputed grade.
5. If the decision of the dean is not satisfactory to the student, appeal may be made to the president of the College.
6. The president will review the written file and any additional documentation presented by the student and/or course instructor. The president may request additional information and/or request a meeting with the parties involved before making a decision.
7. The decision of the president is final and will be communicated in writing to all parties involved in the appeal process.

## Academic Classification

Students are classified as first year, sophomore, junior, or senior on the basis of career earned semester hours. At the end of each academic year, a student is listed in the next higher class, provided that the necessary number of semester hours has been accumulated.

Students are classified as *First Year* students until they have earned 28 semester hours. The earned career semester hours for each subsequent classification are:

<i>Classification</i>	<i>Earned Semester Hours</i>
Sophomore	28-61
Junior	62-95
Senior	96+



## Academic Status

**Good Standing** - Students must attain the following minimum career grade point averages (GPA) in order to remain in academic Good Standing:

<i>Career Attempted Semester Hours</i>	<i>Minimum Career GPA</i>
12-27	1.700
28-61	1.900
62+	2.000

Failure to maintain these grade point averages can change academic status and impact eligibility for financial aid and intercollegiate athletics. It can also affect choice of major, impede progress toward earning a degree, or render a student ineligible to remain enrolled at Westminster College.

**Academic Warning** - Beginning with a student's second semester, if the career GPA meets the required GPA for good academic standing, but the semester GPA falls below the standard, an Academic Warning Notice is sent to the student. Students receiving an academic warning are strongly encouraged to arrange an appointment with their academic adviser. The Academic Warning is not noted on the academic transcript. Students with an Academic Warning are considered to be in academic Good Standing.

**Academic Probation** shall be assigned to students and noted on the academic transcript at the conclusion of the semester during which the student falls below the minimum career grade point average for attempted hours. A student will receive written notification if they are placed on academic probation. The student will remain on academic probation for the next full (Fall or Spring) semester. However, if students who have been placed on academic probation attend Summer Session and raise their GPA to the point where they have achieved the minimum level needed for good academic standing (as defined above), probation will automatically be rescinded and will be removed from the academic transcript. Students will again receive written notification of this change.

Students on academic probation should curtail their involvement in the Westminster community to focus on their academic classes. Recommended actions include:

- limiting their participation in any co-curricular activities which do not carry academic credit;
- meeting with their adviser during the first week of classes to discuss the value of a curtailed schedule of classes, improvement of individual study skills, participation in co-curricular activities, and related problems.

**Continued Academic Probation** may be assigned to students who, after a semester on Academic Probation, have made significant improvements in their academic standing (>2.0 term GPA), but whose career GPA is still below the level required for academic Good Standing. Students who appeal an Academic Suspension may also be put on continued probation. Cases of continued academic probation are decided by the Academic Standards Committee. Continued academic probation is noted on the student's Academic Transcript.

**Academic Suspension** - Students who have two consecutive semesters below the minimum required GPA (as defined above), or those who earn a semester grade point average below 1.000, may be subject to Academic Suspension. All such decisions shall be made by the Academic Standards Committee. Students who have been placed on academic suspension shall remain separated from the College for a minimum of one calendar year.

Any student who earns *below a 1.000 grade point average for any semester* shall be placed on Academic Probation and may be subject to Academic Suspension at the discretion of the Academic Standards Committee. Such students shall be notified that he or she is required to meet with the associate dean of academic affairs in order to return to the College. Students who do not follow through with this meeting will be dropped from their next semester's classes. Students who have not yet registered will have a registration hold which will prevent them from registering until the associate dean of academic affairs indicates such a meeting has taken place and the student is allowed to register.

**Academic Dismissal** - Students who are readmitted after having been placed on academic suspension, but who fail to make acceptable progress towards achieving the minimum GPA needed to regain good academic standing (as defined above), are subject to permanent Academic Dismissal. Students who fail to make reasonable progress toward the degree are also subject to dismissal. These decisions shall be made by the Academic Standards Committee.

## Unsatisfactory Progress Policy for Students Using Veterans Educational Benefits

Students who receive Veterans Education Benefits and who earn below a 1.000 grade point average for any semester will be placed on Academic Probation and will be subject to Academic Suspension at the discretion of the Academic Standards Committee. These students will be notified that they are required to meet with the associate dean of academic affairs in order to return to the College. Students who do not follow through with this meeting will be dropped from their next semester's classes. Students who have not yet registered will have a registration hold which will prevent them from registering until the associate dean of academic affairs indicates such a meeting has taken place and the student is allowed to register.

The law requires that educational assistance benefits to Veterans and other eligible persons be discontinued when those students do not make satisfactory progress toward completion of their educational training objective. Based upon this requirement, any students using Veterans Education Benefits will be suspended from Westminster College when they have two consecutive semesters below the minimum required GPA (as defined above), or those who earn a semester grade point average below 1.000. All such decisions will be made by the Academic Standards Committee. Students receiving Veterans Education Benefits and who have been placed on academic suspension shall remain separated from the College for a minimum of one academic semester.

Veteran Education Benefits can be resumed if the student reenrolls in the same educational institution and in the same program. When a student has failed to maintain prescribed standards of progress, VA will be informed promptly so that benefit payments can be discontinued in accordance with the law. The termination date assigned by Westminster College will be the last day of the term or other evaluation period in which the student's progress became unsatisfactory. Upon recertification to VA, Westminster's certifying official should maintain in the student's file a statement that describes the conditions for the student's continued certification to VA. These conditions will prescribe the minimum performance standards to be achieved by the student during the next enrollment/evaluation period.

## Appeals

Appeal of the Academic Standards Committee's decisions on suspension and dismissal must be made in writing to the associate dean of academic affairs. Appeals

must be received by the deadline established by the associate dean.

## Readmission Following Academic Suspension

Students who have been placed on academic suspension may apply for readmission after being separated from the College for a minimum of one calendar year. This form is available on the Registrar's Office web page or in the Registrar's Office, where the completed form must be returned along with a \$200.00 registration deposit. This deposit is non-refundable even if the applicant cancels.

Students who are readmitted after being formally separated from the College as the result of being placed on academic suspension must satisfy the graduation and program requirements as specified in the catalog which is in effect at the time of their readmission.

## Course Registration Policies

The Registrar's Office publishes the undergraduate schedules of classes and course registration schedule in advance of each semester. Students register in the manner prescribed by the Registrar's Office. All changes in registration must be approved by the student's adviser. In certain cases, the approval of the Dean of the College may be required.

**Add/Drop** - Students may Add or Drop courses from their fall or spring semester schedules through the end of the sixth day of the semester.

First-year students may drop one course during weeks 1-10 of classes in the Fall semester with no fee, but there is no tuition adjustment for a course dropped in weeks 2-10 of classes.

**Withdrawal** - A student may withdraw from a course after the add/drop period ends and receive a grade of W (Withdrawal). Students are not permitted to withdraw from a course after week 10 of the Fall or Spring semesters. Students may not withdraw after week 5 of a seven-week course. Students also may not withdraw from a course in which they have been charged with violating the College's Academic Integrity Policy, unless they successfully appeal the finding that a violation has occurred. Students must follow instructions from the Registrar's Office in order to officially withdraw from a course before the deadlines posted each semester.

## Academic Overload Policy

The full-time tuition charge for one semester allows students to enroll in 12-19 semester hours of course work. Any student wishing to carry an academic load above 19 hours must appeal to the Dean of the College for approval. Eligible students may petition to take up to 21 hours in one semester. To be eligible to apply for an academic overload, a student must have second semester status or higher and a grade point average of 3.000 or higher in the previous semester. A student carrying an academic overload may incur additional tuition charges. A number of courses are tuition-exempt in overload situations only. These include: physical education activity classes and Westminster 101, music ensembles, music lessons, travel seminars, and certain other courses. Such tuition-exempt courses are marked in the official course schedule published each semester. However, if the approved course load includes more than 19 semester hours of tuition-incurring courses, each semester hour beyond 19 will be billed at the semester-hour rate. See section on tuition and fees for more details on comprehensive charges. Students who withdraw from the All-College Honors Program during an academic semester in which an overload has been approved will be responsible for paying applicable overload fees, on a prorated basis at the time the program withdrawal is processed by the Registrar.

## Auditing a Course

A person who desires to attend a class without receiving credit or a grade may do so by petitioning to and paying the audit fee. The fee is waived for full-time students. A form, available in the Registrar's Office, must be used to secure the consent of the instructor and the department chair. Students must declare their intentions to audit a course by the end of the add/drop period. Any student who audits a course must satisfy minimum attendance and participation requirements as set forth by the instructor. The instructor must certify completion of these minimum requirements in order for a record of the audit to appear on the student's transcript. An auditor may not, at a later date, request conversion of an audited course to a regular course, nor may an auditor test out of the course.

## Repetition of Courses

If a student elects to repeat a course at Westminster College, the grade and credit for the most recent effort are counted and the previous grade and credit are removed from the GPA calculation. However, each effort is recorded on the student's permanent record; the earlier efforts are notated as having been repeated. Students may take a course three times (i.e., repeat twice). A student's undergraduate GPA at the time of his or her graduation cannot be changed by grades received in courses retaken thereafter.

Students will not be permitted to attempt a course more than three times.

If a student elects to repeat a course at another college or university, the credit for the most recent effort is counted and the grade earned at Westminster is no longer calculated in the student's GPA. As with courses repeated at Westminster, each effort is recorded on the student's permanent record; the earlier efforts are notated as having been repeated. The transient credit policy and procedure apply. The approval of the student's adviser, department chair, and the registrar are required before registering at another institution.

### *Repetition of First-Year Program Courses*

*Inquiry.* Students must obtain a passing grade in either INQ 111 or 211 in order to graduate from Westminster College. Students who fail Inquiry in their first attempt must take INQ 211. In this case, INQ 211 will be treated as a repeat for INQ 111 and the INQ 211 grade will replace the INQ 111 grade for GPA calculations.

*Writing and Speech.* Students who do not earn a grade of C- or better in WRI 111 and/or SPE 111 must repeat the course(s) before the end of their sophomore year.

## Cancellation of Registration

Westminster's faculty and administration reserve the right to cancel at any time the registration of any student whose scholarship is unsatisfactory. The administration also may cancel the registration of any student who has not taken care of any financial obligation to the College.

## Class Attendance and Excused Absences

Regular class attendance is essential if students are to realize the full benefits of a college education. Accordingly, Westminster students are expected to attend all classes, unless specifically excused for some valid reason. Although each individual instructor may interpret what constitutes a valid excuse, in general excused absences are allowed only for the following reasons:

- Course-related field trips.

- Illness that requires confinement to bed on physician's orders or confinement in a hospital.
- Death or serious illness in the immediate family.
- Appearance in court.
- Co-curricular and extracurricular activities recognized and/or sponsored by the College.

Students are encouraged to participate in extracurricular activities, since these functions are often closely tied in to their professional preparation. Students who are involved in extracurricular or co-curricular activities at Westminster College must make this known to their professors before the end of the add period of each semester, particularly if such participation is anticipated to require them to be off campus at specific times. Excused absences do not excuse a student from completing the work that is missed. When possible, students should complete the assigned work in advance, or at such time as the professor specifies. It is the student's responsibility to apprise all appropriate professors of off-campus involvement(s). With the professor's knowledge of the student's upcoming absences, conflicts should be minimized. The Office of Student Affairs will be notified whenever excessive absences occur. Students may be withdrawn from a course at the discretion of the Office of Academic Affairs after missing a quarter of instructional time with unexcused absences.

## Absences from Examinations

Absence from an announced examination results in a failing grade for the examination, unless suitable arrangements are made for a special examination. A student who seeks such a privilege should petition the instructor in writing prior to the scheduled examination date. If the instructor considers that the petition should be granted, then a note to the effect is added and the petition is presented to the Dean of the College. The examination may be given only if the dean also approves the petition.

## Summer Session

Westminster's Summer Session begins in late May and ends by early August and includes undergraduate and graduate courses. The summer session course schedule is generally published in April, and registration for current Westminster students opens concurrently with registration for the following fall. High school students in the Westminster Early College Program seeking dual enrollment credit and students from other colleges and universities may apply for the summer session at Westminster College. Contact the Office of Admissions for more information.

## Transfer/Transient Credit

Westminster students may take classes at other colleges or universities. An approved Transient Credit Permission form, available in the Registrar's Office, must be on file prior to registration for transient coursework. Acceptance of credits submitted without having had prior approval is not guaranteed. After completion of approved transient coursework, students must submit an official transcript from the other institution directly to the Registrar's Office to receive credit. Transient credit approvals are valid for one academic year only.

The following policies apply to transfer/transient credit:

- Credit for approved and successfully completed transient coursework is awarded according to the original semester or credit hour values on the official transcript from the institution of record; e.g., a 3-credit course will be credited as 3 semester hours on the Westminster transcript.

- Courses earning credit other than semester hours (quarter hours, units, etc). will be converted to semester hours.
- If a 3 semester/credit hour course is approved to meet a 4-semester hour requirement, total hours for graduation must be monitored. If additional hours are needed, physical education courses cannot count for the extra semester hour(s).
- No grade lower than C- will be accepted.
- Courses which are graded on a pass/fail or satisfactory/unsatisfactory basis will not be accepted
- Grades earned for transient credit will not be included in the Westminster College GPA.

### *School of Business Policy on Transfer Credit*

A maximum of two major or minor course requirements may be transferred in after a student has matriculated full time to Westminster. With permission, courses taken during a semester abroad while a student is still a Westminster student can be considered courses taken at Westminster.

## Transcripts

Official transcripts of a student's academic record may be requested online or through the Registrar's Office. Financial holds or other obligations to the College must be resolved prior to the release of a transcript. Transcript requests are processed within 3-5 business days unless submitted during peak request periods, during which additional time may be required.

Westminster College partners with Credentials, Inc. to provide online official transcript requests and delivery through a secure website. Credentials, Inc. charges a processing fee for each recipient (transcript addressee). Currently enrolled students may order transcripts online by going through my.westminster and paying the processing fee using a credit card.

## Participation in Commencement Exercises

The College hosts Commencement exercises every May at the conclusion of the spring semester. Participation in these exercises is a graduation requirement. Eligibility for participation in Commencement exercises is determined during the spring semester, based on all work completed at the end of the fall semester.

Students can participate in the Commencement exercises as graduates if at the conclusion of the fall semester they will meet all graduation requirements at the end of the spring semester, assuming the successful completion of all in-progress semester hours taken in the final spring semester.

***Provisional Graduation.*** Students can participate in the Commencement exercises as provisional graduates if they lack no more than 12 semester hours beyond their in-progress spring courses, OR, lack student teaching and no more than 4 semester hours beyond their in-progress spring courses.

Students who participate in the Commencement exercises as provisional graduates must sign a provisional graduation contract indicating that these additional requirements will be accomplished in no more than one year from the Commencement exercises.

## Medical Leave of Absence or Withdrawal

When illness, injury, or a psychiatric disability occurs, a student or guardian may re-

quest, or the College may require, a medical withdrawal or medical leave of absence (MLOA) from the College. All medical withdrawals or leaves must be approved by the vice president for student affairs.

Specific conditions to receive an MLOA or Medical Withdrawal, including the conditions for future re-admittance, are stipulated at the time of the withdrawal or granting of a leave of absence. These conditions may specify what professional medical documentation is required for the withdrawal to be granted, and/or a period of time for a leave. Before the student will be permitted to return to campus, the College may require a professional evaluation or assessment (at the student's expense) stating the professional expert's opinion that the student is now capable of meeting the academic and the social standards of the College (which are stated in the Westminster Student Code of Conduct). Students who are granted an MLOA or Medical Withdrawal will be given a "W" (withdrawal) for all courses in which the student was enrolled at the time of the MLOA or Medical Withdrawal.

## Grievance Procedures for Involuntary Withdrawal

Refer to the information on "Involuntary Administrative Withdrawal" in the *Student Handbook* for additional information and grievance procedures related to a withdrawal that is not voluntarily initiated or accepted by the student.

## Return to Campus Procedures

Students who have taken a leave of absence and desire to return to campus must complete a Return from Leave of Absence form, providing all required documentation. The form is available on the Student Affairs web page or in the Student Affairs office.

Students who wish to apply for readmission after Withdrawal or Suspension from the College must complete an Application for Readmission form. This form is available on the Office of the Registrar web page or in the Office of the Registrar, where the completed form must be returned along with a \$200 registration deposit.

## Readmission for US Armed Forces Members

Students who take a leave of absence for service-related reasons will be readmitted with the same academic status as he or she had when last attending or being admitted to Westminster College.

State law requires colleges or universities to grant a member of the Pennsylvania National Guard or other reserve component of the armed forces or the member's spouse a military leave of absence from their education if he or she is called to active duty (other than active duty for training). The grade transcript for all classes shall show an "M" or "Military" to indicate that the military member or his/her spouse was unable to complete courses because of military service. A grade of "M" is not counted in a student's GPA.

## Semester (Credit) Hour Definitions

Federal Regulation 34 CFR 600.2 provides the following definitions for clock and credit hours:

**Clock hour** - a period of time consisting of:

1. A 50- to 60-minute class, lecture, or recitation in a 60-minute period;
2. A 50- to 60-minute faculty-supervised laboratory, shop training, or internship in a 60-minute period; or
3. Sixty minutes of preparation in a correspondence course.



**Credit hour** - Except as provided in 34 CFR 668.8(k) and (l), a credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates not less than:

1. One hour of classroom or direct faculty instruction and a minimum of two hours of out of class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or ten to twelve weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or
2. At least an equivalent amount of work as required in paragraph (1) of this definition for other academic activities as established by the institution including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours.

At Westminster College, the standard unit of credit is a semester hour. The College meets these requirements using a 16-week semester calendar in which each class period meets at least 14 days each semester.

The standard course at Westminster is worth four semester hours. In every four semester hour course, students receive a minimum of 180 minutes of instruction per week, except for the final week of the semester during which each standard course has one 150-minute examination period. This means every standard course includes a minimum of 2,670 minutes of instruction. Additionally, a minimum of two hours of out of class student work is expected for every hour of instruction. Academic programs that offer courses bearing less than four semester hours of credit are responsible for ensuring that those courses conform to the federal guideline outlined above.

This semester hour policy applies to all courses, both undergraduate and graduate, that award academic credit (i.e., any course that appears on an official transcript issued by the College). Instruction time is the same regardless of whether the course is delivered face-to-face or online. Courses that have less structured classroom schedules, such as independent studies, internships, studio work, research seminars, or any other academic work that is awarded academic credit must also meet or exceed the federal guidelines.

## Academic Integrity

Central to the purpose and pursuit of any academic community is academic integrity. All members of the Westminster community, including students, faculty, staff, and administrators, are expected to maintain the highest standards of honesty and integrity, in keeping with the philosophy and mission of the College. The College's expectation for strong integrity applies to all academic work, including work on campus, online, and at other locations where Westminster courses are offered. Academic dishonesty is a profound violation of this code of behavior. Outlined below are examples of and specific consequences for academic dishonesty at Westminster. The list of examples is not meant to be exhaustive, but rather to provide an overview of the community's common concerns. Students who are unsure as to whether specific behavior not listed here will constitute academic dishonesty should consult with their individual course instructors.

## Violations

Violations of the Westminster College Academic Integrity Policy (AIP) include, but are not limited to, the following:

### *Cheating*



1. Copying answers from another student during a quiz, test, or examination.<sup>1</sup>
2. Divulging answers or information to another student during a quiz, test, or examination, or accepting such aid.<sup>2</sup>
3. Using unauthorized aids (e.g., notes, books, or electronic devices) during a quiz, test, or examination.<sup>3</sup>
4. Collaborating improperly with another student on an open-book, take-home or online quiz, test, or examination.<sup>4</sup>
5. Exceeding the time limit, when one exists, on an open-book, take-home or online quiz, test, or examination.
6. Aiding another student improperly on in- or out-of-class assignments.
7. Leaving a physical or digital testing area to obtain answers or aid.
8. Handing in another's work or ideas as one's own.
9. Acting as or using a substitute online to submit work that is not your own.
10. Taking a quiz, test, or examination with prior knowledge of its contents, when that knowledge has not been authorized or consented to by the instructor.
11. Engaging in any activity which may give an unfair advantage to oneself or another.

### *Misconduct*

1. Engaging, during a class or testing session, in conduct that is so disruptive as to infringe upon the rights of the instructor or fellow students.<sup>5</sup>
2. Submitting the same work, including oral presentations, for different courses without the explicit consent of the instructors.<sup>6</sup>
3. Stealing or intentionally damaging or destroying notes, research data, laboratory projects, library materials, computer software (including the intentional passing of a computer virus), or any other work of another member of the Westminster community.<sup>7</sup>
4. Acting as or using a substitute in any academic evaluation procedures.<sup>8</sup>
5. Depriving others of necessary academic resources.<sup>9</sup>
6. Sabotaging the work of another member of the Westminster community
7. Unethically obtaining answers or other information about a quiz, test, or examination before it is administered, even if not a member of the class in which the quiz, test, or examination is given
8. Violating copyright restrictions, i.e., stealing the intellectual property of another.

### *Plagiarism*

“Derived from the Latin word for kidnapping, plagiarism is the theft of someone else’s ‘brainchild’ —that person’s language, ideas, or research—and the origin of the word conveys the seriousness of such offenses in the view of college teachers and

<sup>1</sup> Wording adopted or adapted from the Ursinus College policy on Academic Honesty at [www.ursinus.edu/resources/CurrentStudentHandbook.pdf](http://www.ursinus.edu/resources/CurrentStudentHandbook.pdf) (pp. 11-13).

<sup>2</sup> Wording adopted or adapted from the Ursinus College policy on Academic Honesty at [www.ursinus.edu/resources/CurrentStudentHandbook.pdf](http://www.ursinus.edu/resources/CurrentStudentHandbook.pdf) (pp. 11-13).

<sup>3</sup> Wording adopted or adapted from the Ursinus College policy on Academic Honesty at [www.ursinus.edu/resources/CurrentStudentHandbook.pdf](http://www.ursinus.edu/resources/CurrentStudentHandbook.pdf) (pp. 11-13).

<sup>4</sup> Wording adopted or adapted from the Ursinus College policy on Academic Honesty at [www.ursinus.edu/resources/CurrentStudentHandbook.pdf](http://www.ursinus.edu/resources/CurrentStudentHandbook.pdf) (pp. 11-13).

<sup>5</sup> Wording adapted from the University of Pittsburgh Law School policy on Academic Integrity at [www.law.pitt.edu/students/pol\\_integrity.html](http://www.law.pitt.edu/students/pol_integrity.html).

<sup>6</sup> Wording adopted or adapted from the Ursinus College policy on Academic Honesty at [www.ursinus.edu/resources/CurrentStudentHandbook.pdf](http://www.ursinus.edu/resources/CurrentStudentHandbook.pdf) (pp. 11-13).

<sup>7</sup> Wording adopted or adapted from the Ursinus College policy on Academic Honesty at [www.ursinus.edu/resources/CurrentStudentHandbook.pdf](http://www.ursinus.edu/resources/CurrentStudentHandbook.pdf) (pp. 11-13).

<sup>8</sup> Wording adopted or adapted from the Ursinus College policy on Academic Honesty at [www.ursinus.edu/resources/CurrentStudentHandbook.pdf](http://www.ursinus.edu/resources/CurrentStudentHandbook.pdf) (pp. 11-13).

<sup>9</sup> Wording adapted from the Goshen College Student Handbook, [www.goshen.edu/edtech/stuhandbk.htm](http://www.goshen.edu/edtech/stuhandbk.htm).

administrators. The reason is that words, ideas, and research are the main forms of currency in academic life.”— Keith Hjortshoj, *The Transition to College Writing* (Boston: Bedford/St. Martin’s, 2001), 172.

1. Quoting or paraphrasing, without proper citation and acknowledgment, the published words, ideas, or work of another (including anonymous publications and online publications).<sup>10</sup>
2. Submitting, as one’s own work, a paper, an oral presentation, or a visual presentation authored wholly or partially by someone else (including commercial services)
3. Borrowing and appropriating, without proper citation and acknowledgement, facts that are not matters of general knowledge, including all statistics and translations, and/or the general idea or logic of another’s argument.

### *Providing False Information*

1. Furnishing false information to the College for the purpose of obtaining special consideration or privilege (e.g., postponement of an examination or a deadline)
2. Misrepresenting source material or information or participating in the falsification or misrepresentation of citations
3. Falsifying laboratory data, notes, or results, or research data of any type, and presenting it as one’s work.<sup>11</sup>
4. Providing false identification in an online course or using someone else’s account and password to access course or College materials.

## Process and Consequences

If a course instructor suspects that a student has violated this policy, the instructor will speak with the student, review appropriate materials, and reach a conclusion. If the instructor determines that a violation has occurred, the following process will apply:

1. The instructor will inform the student that he or she has violated the AIP and that the vice president for academic affairs (VPAA) will be notified. In the event that a violation occurs in graduate courses, the director of the graduate program (DGP) will be notified.
2. The instructor will impose an academic penalty at his or her discretion (e.g., 0 for the assignment without possibility of revisions, failing grade for the course, or other appropriate academic sanctions).
3. The instructor will send the VPAA (and the DGP for graduate courses) a concise written explanation of the violation and the penalty.
4. After reviewing the instructor’s explanation of the violation and penalty, as well as the student’s record of previous offenses, the VPAA (and/or the DGP for graduate courses) will take the following additional action:
  - *For A First Offense*, the VPAA and/or the DGP may supplement the instructor’s penalty with further action, up to and including suspension and permanent dismissal, after consultation with the instructor and the Academic Standards Committee. The VPAA may also meet with the student.
  - *For A Second Offense*, the VPAA and/or the DGP will impose a one-semester suspension. The VPAA may take further action, up to and including permanent dismissal, after consultation with the instructor and the Academic Standards Committee.
  - *For A Third Offense*, the VPAA and/or the DGP will impose a penalty of per-

---

<sup>10</sup> Wording adapted from the Dickinson College Code of Student Conduct at [www.dickinson.edu/students/code/html#6](http://www.dickinson.edu/students/code/html#6).

<sup>11</sup> Wording adopted or adapted from the Ursinus College policy on Academic Honesty at [www.ursinus.edu/resources/CurentStudentHandbook.pdf](http://www.ursinus.edu/resources/CurentStudentHandbook.pdf) (pp. 11-13).

- permanent dismissal from the College.
- The VPAA and/or the DGP will send the student official notification of the penalty for the violation (even if the penalty is solely that imposed by the instructor). The VPAA will send copies of this notification to the instructor and the student's academic adviser.
- A copy of the VPAA and/or the DGP's official notification to the student will be kept in the student's academic file. If there is no second offense, this letter will be removed upon the student's graduation. If there is a second offense, the letter will become part of the student's permanent academic record.
- Within 15 calendar days of the VPAA or DGP's sending official notification of the penalty for the violation, the student may decide to appeal either the finding of a violation or the penalty for the violation.

## Appeals Process

1. Within 15 calendar days of the VPAA's sending official notification of the violation, the student will send the VPAA written notification that he or she intends to appeal the finding of a violation.
2. The VPAA will ask the chair of the Committee on Academic Standards to convene an Academic Integrity Review Board (AIRB), made up of the following:
  - two members of the Committee on Academic Standards, chosen by the committee.
  - the chair of the division or school in which the violation took place, when he or she is not the instructor reporting the violation. In cases of the chair's recusal, the VPAA will appoint another faculty member from the division or school in which the violation took place to serve on the AIRB.
  - one other full-time faculty member nominated by the student.
  - the VPAA, when he or she is not the instructor reporting the violation or when he or she has not imposed a penalty greater than the minimum required by the Academic Integrity Policy. In cases of the VPAA's recusal, he or she will be replaced on the AIRB by the Chair of the Faculty. When neither the VPAA nor Chair of the Faculty can serve, the chair of the Academic Standards Committee will secure the services of a tenured faculty member to serve on the AIRB.
3. One of the two participating members of the Committee on Academic Standards will chair the AIRB.
4. The student may also select an adviser who is a member of the campus community but who is not a member of the student's family or a student. This adviser may accompany the student to the Appeals review but may not participate in the questioning herself or himself. The adviser will not be present at the deliberations of the AIRB, and is not a voting member of the AIRB.
5. Copies of all materials pertaining to the violation will be maintained in the Office of Academic Affairs. The student has the right to review these materials, but must do so in the presence of either the faculty member he or she nominated to the AIRB or his/her adviser.
6. The AIRB will convene as soon as possible, normally within 30 days, or within 30 days of the beginning of the semester following if the report occurs late in a semester.
7. In conducting its review, the AIRB will interview the student and the instructor separately. In the event that the student or instructor is not available to attend the review in person, the student or instructor may participate via conference call or video chat service.

8. If multiple students are involved in a violation, a single AIRB may be convened to consider their appeals. Each student will nominate a full-time faculty member to serve on the Board and may be accompanied by an adviser of their choosing.
9. The AIRB's decision to uphold or overturn the finding of a violation will be reached by majority vote held during a meeting of the AIRB with all members in attendance. Other than the interviews with the student and instructor, all discussions and deliberations of the AIRB must be conducted face-to-face and not by email, phone or other electronic means. The standard for overturning a finding of a violation is "more likely than not."
10. Within 48 hours of the student's appearance before the AIRB, the chair of the AIRB will send the student and the instructor official notification of its decision on the finding of a violation. In the event that the finding of a violation is overturned by the AIRB, all records of the violation will be removed from the student's file.
11. If the student wishes to appeal the decision of the AIRB, he or she must do so within seven calendar days of the AIRB's sending official notification of its decision. This appeal must be made in writing to the President of the College, whose decision will be final.

*Letters of appeal should include:*

- The course for which the violation was reported.
- The name of the instructor reporting the violation.
- The semester when the report occurred.
- The penalty imposed for the violation.
- Whether you are appealing the finding of the violation or the penalty for the violation, or both.
- The grounds on which the student is appealing.
- A detailed account of the circumstances surrounding the incident which led to the report.
- The names of the faculty member that the student chooses to serve on his or her AIRB (see 2. c. above) and the adviser that the student selects, if applicable (see 4. above).

## Additional Stipulations

A student may not withdraw from a class in which he or she has been charged with violating the College's Academic Integrity Policy, unless he or she successfully appeals the finding that a violation has occurred. Charges of violating this policy may be brought by an instructor against a student who is not enrolled in the class affected by the violation. Any member of the Westminster community, including students, staff members, faculty members, and administrators, may bring a charge for a violation of the College's Academic Integrity Policy. If someone other than a course instructor wishes to bring a charge, he or she can initiate the process by contacting the course instructor, the Chair of the division or school in which the violation took place, or the VPAA. Copies of all materials pertaining to violations, penalties, and appeals will be kept in the Office of Academic Affairs. The VPAA will send to the Committee on Academic Standards a monthly report on the number and nature of violations of the policy.

# The Faculty

The faculty and academic degree programs at Westminster College are organized into eight schools. Chairs or directors oversee the general operations of the departments within the schools.

## School of Arts & Humanities

Department of Art & Theatre, *Andrew W. Ade, Chair*

Department of English, *Andrew W. Ade, Chair*

Department of History, *Patricia G. Clark, Chair*

Department of Modern Languages, *Joel T. Postema, Chair*

Department Philosophy & Religion, *Patricia G. Clark, Chair*

## School of Business

*Robert Badowski, Chair*

## School of Communication

*David L. Barner, Chair*

## School of Education

*René A. Picó II, Chair*

## School of Life & Health Sciences

Department of Biology, *John C. Robertson, Chair*

Department of Nursing, *Tricia L. Ryan, Director*

## School of Music

*Daniel E.H. Perttu, Chair*

## School of Physical & Mathematical Sciences

Department of Biochemistry & Chemistry, *Peter M. Smith, Chair*

Department of Mathematics & Computer Science, *Craig L. Caylor, Chair*

Department of Physics, *Craig L. Caylor, Chair*

## School of Social Sciences

Department of Criminal Justice & Sociology, *James C. Rhoads, Jr., Chair*

Department of Political Science, *James C. Rhoads, Jr., Chair*

Department of Psychology, *Sherri P. Pataki, Chair*

# All-College Honors Program

The All-College Honors Program provides challenging learning opportunities for selected students with excellent academic records, superior abilities, intellectual promise, and demonstrated initiative. Only the most outstanding students in the incoming first-year class or rising sophomore class are eligible, and selection is competitive.

## *Eligibility*

High school seniors with a minimum 1300 SAT (math + cr) on tests taken prior to March 2016 or a minimum 1360 (math + EBRW) on tests taken after this date or a 29 ACT score, and a high school GPA of 3.75 are invited to join the All-College Honors Program after they have been accepted to Westminster College. Students admitted to the All-College Honors Program are designated Honors Scholars. Students may also apply in the spring of their first year to enter the All-College Honors Program in the fall of their sophomore year. Students will be selected based on the following criteria: minimum Westminster College GPA of 3.7; support form signed by all Westminster College faculty with whom they have had courses; and an essay. Students who are interested in the All-College Honors Program can obtain more detailed information from the college's website for the Honors Program (under the Academics tab).

## *The Honors Curriculum*

The All-College Honors Curriculum consists of a sequence of five interdisciplinary, global honors courses and 8 hours of honors research. These courses fulfill First-Year Program requirements, several Intellectual Perspective course requirements, and the Cluster requirement. Honors students admitted to the program and successfully completing the first two courses in the Honors sequence are not required to take INQ 111, SPE 111, or WRI 111.

**The All-College Honors Program:** 28 semester hours of coursework, comprising:

HON 201C	Ancient Greek Justice	4
HON 202	The Renaissance and Scientific Revolution	4
HON 520C	Travel	4
HON 660-690	Honors Research	8

*Plus two of the following:*

HON 203	The Battle for Public Memory	4
HON 208	Quantum Mechanics & Society	4
HON 209	Narrative Medicine	4

*Honors Thesis or Project:* Honors Scholars will propose and complete a thesis or project in their major(s) or an interdisciplinary project during their junior and senior years, respectively. They are required to register for at least 8 credits of honors research. Honors Scholars must successfully present and defend their thesis or project before an Honors Board in a public defense. The course sequence for honors research is HON 660-690 Honors Project (1-4 SH) for use by students who are pursuing the Honors Project in an interdisciplinary area. Students who are pursuing the Honors Project in a discipline should use the prefix of their discipline (for example ENG) and sequential numbers 660-690.

HON 201C is taken in the first semester of the first year, and its travel course component, HON 520C, in the spring of the first year. HON 201C/HON 520C fulfills the Cluster requirement of the Westminster Plan. Students are responsible for the

additional fees associated with travel. One travel scholarship is available. Students who withdraw from the Honors Program after the first semester will receive INQ 111 credit for HON 201C.

Students admitted to the Honors Program in the spring semester of their first year are required to take four courses: HON 201C, 520C, 202, and one course from HON 203-209. They also must complete 8 hours of Honors Research.

Honors students must maintain a 3.500 career grade point average to remain in good standing in the All-College Honors Program.

For further information about requirements, students should contact the program director, Dr. Kristianne Kalata.

## Pre-Professional Programs

Westminster College prepares students for professional studies in many disciplines: medicine, law, the ministry, business administration, dentistry, engineering, social work, and numerous others. Students who enter such programs have an undergraduate major in a standard disciplinary or interdisciplinary field of study in the liberal arts. Westminster also offers individual interdisciplinary programs to meet specific professional goals. Westminster has a strong record in preparing students for graduate and professional schools. Some professional schools will admit well-qualified students before they complete their undergraduate degree programs. Under the following conditions, a student may be granted a baccalaureate degree by Westminster College upon satisfactory completion of a professional program at an accredited school: completion of a minimum of 96 semester hours at Westminster with a grade point average of at least 2.500; completion of all College requirements (with the exception of the senior capstone requirement); and a minimum of 24 semester hours in the major with grades of C- or better. The arrangements must be approved in advance by the major program and the Academic Standards Committee.

### Health Sciences (Pre-Med, Pre-Dental, Pre-Vet, etc).

Students interested in careers in health sciences (medicine, dentistry, optometry, podiatry, physician assistant, physical therapy, veterinary medicine, and others) can effectively work toward their goals at Westminster College. Students typically prepare for these career paths by completing prescribed undergraduate courses and taking a professional program-specific national aptitude exam. At Westminster, the Medical Professions Advisory Committee (MedPAC) advises students on course selections, educates students about careers and professional programs, provides information on aptitude exams, and helps students through the application process. The committee provides opportunities for students to meet with practitioners in various fields and with admissions staff of regional professional schools. MedPAC also writes committee letters of recommendation for qualified students. Westminster's curriculum and advising program have been highly successful in helping students gain admittance to health science programs. Contact Dr. Marosh Furimsky, associate professor of biology and chair of MedPAC for information on pre-health science programs at Westminster.

### Music Therapy

Westminster College's School of Music has an Affiliation Agreement with Duquesne University's School of Music in the field of Music Therapy. This agreement was entered into in December, 2016. As a part of this Affiliation Agreement, students pursue some kind of bachelor's degree in music at Westminster. They may then be admitted to Duquesne's Post-Baccalaureate Certification in Music Therapy (PBC-MT) program which will provide them with the appropriate credentials to become music therapists. The PBCMT program requires two full-time semesters' worth of work at Duquesne's campus and then a 6-month internship. For more information, refer to the academic program description for music in this Catalog, or contact Dr. Daniel Erkki H. Perttu, Chair, School of Music.

### 3-4 Dentistry Program

Students in this program spend three years at Westminster, followed by four years at Case Western Reserve University School of Dental Medicine. After students have successfully completed 125 semester hours, they receive a B.S. degree from Westminster College. After completing all seven years of the program, they receive a D.M.D. from Case Western Reserve University. Interested students must apply to and interview with Case Western Reserve University prior to beginning their studies



at Westminster College. Contact the chair of the Medical Professions Advisory Committee (Dr. Marosh Furimsky) for information on this program.

## 4-4 and 3-4 Physician Programs

*Westminster-LECOM 3-4 and 4-4 Affiliations.* Students in the 3-4 program spend three years at Westminster followed by 4 years at Lake Erie College of Osteopathic Medicine (LECOM); when students have completed 125 total undergraduate semester hours (including transfer back of first year LECOM course credits), they receive a B.S. degree from Westminster. Students in the 4-4 Medical School Affiliate Program complete their baccalaureate degree at Westminster, then move directly on to earn a D.O. degree from LECOM. Participation in these programs requires academically eligible students to apply directly to, and interview with, LECOM. Students can enter these programs through their first two years at Westminster, or as a high school student prior to enrolling at Westminster.

*Westminster-PCOM 4-4 Affiliation.* Students in this 4-4 Medical School Affiliate Program earn their baccalaureate degree from Westminster, then move on to earn a D.O. degree from the Philadelphia College of Osteopathic Medicine (PCOM). Eligible students can enter the PCOM 4-4 program at any time through their first two years at Westminster.

Information on all the 3-4 and 4-4 Medical School Affiliation Programs, including specific requirements and qualifications, can be obtained by contacting the chair of the Medical Professions Advisory Committee – Dr. Marosh Furimsky.

## 4-4 Dentistry Program

The 4-4 Dental School Affiliate Program provides a pathway for students to earn a Westminster baccalaureate degree and then receive a D.M.D degree from Lake Erie College of Osteopathic Medicine School of Dental Medicine. To participate in this program, academically eligible students must apply directly to, and interview with, LECOM. Students are eligible to apply to this program through their first two years at Westminster, or as a high school student. For information on the 4-4 Dental Affiliate Program, including specific qualifications and requirements, contact the chair of the Medical Professions Advisory Committee.

## 3-2 Engineering

This program affords students who are seeking an engineering career the advantages of a liberal arts education, personal attention in small classes, and training in the approaches and techniques used by scientists. While at Westminster, students in the 3-2 engineering program are either engineering physics or chemistry majors. Following three years at Westminster, students in the program complete the specialized courses leading to an engineering degree at any accredited engineering school. At the conclusion of the program, bachelor of science degrees are awarded from both institutions. Recent Westminster students participating in the 3-2 engineering program have pursued studies in mechanical engineering, electrical engineering, mining engineering, nuclear engineering, and chemical engineering. Westminster College maintains a Dual Degree Program with Case Western Reserve University. In addition, recent Westminster students have successfully completed their engineering degrees at the University of Pittsburgh, Youngstown State University, Akron University, and West Virginia University. Students entering the 3-2 engineering program should have at least three years (preferably four years) of high school mathematics. All should start the mathematics sequence with MTH 150, MTH 152, or MTH 250 in the first year. Most students in the program will take PHY 151 and PHY 152 in the first year. Students interested in pursuing chemical engineering or

a related discipline take CHE 117 and CHE 180 in the first year. During the Fall Semester of the third year at Westminster, students should apply for admission to the engineering school. Students in the 3-2 program must satisfy Westminster's all-college requirements with the exception of the senior capstone requirement and must complete the specified courses in their major. For more information about the engineering physics 3-2 engineering program, contact program coordinator, Dr. Craig L. Caylor. Students interested in the chemistry 3-2 program should contact Dr. Peter M. Smith.

## 3-2 Environmental Science

Westminster participates in a cooperative program with Duquesne University where students may be eligible to enter the two-year Duquesne program leading to the master of science degree in environmental science and management after three years of undergraduate study at Westminster. Upon successful completion of the first year at Duquesne, a bachelor of science in environmental science is awarded from Westminster, and after the second year, a master of science is awarded from Duquesne. Additional information on this program is available from Dr. Helen Boylan, program coordinator, environmental programs.

## 3-3 Law Program

Westminster also participates in a cooperative program with the Duquesne University Law School, through which students may be eligible to enter Duquesne after three years of undergraduate study at Westminster. Under this agreement, a student begins law school at Duquesne University Law School at the end of his/her junior year at Westminster. The student must complete the full three-year law school program at Duquesne. After students have successfully completed 125 semester hours, they receive a bachelor's degree associated with their major from Westminster College. The student must complete all major, minor, and liberal studies requirements by the end of the junior year at Westminster, including capstone. During the junior year, the student will take the LSAT (Law School Admissions Test), apply to Duquesne Law School through the Law School Admissions Council (LSAC) application system, notify the College's pre-law adviser, Dr. James Rhoads, of your intention to apply to Duquesne, and have a successful interview with the admissions director at the Duquesne Law School. After completing all six years of the program, they receive a J.D. from Duquesne University.

## Pre-Law Program

The Pre-Law Program is designed to help students make informed decisions regarding preparation for law school and a career in the law. Students who plan to attend law school ordinarily pursue a standard disciplinary or interdisciplinary major, along with challenging electives outside the major. The goal is to develop the skills of critical thinking and analysis, clear and persuasive writing, and a broad understanding of human nature and society. The Pre-Law Program provides information and advice on career opportunities in law and law-related fields and assists students in preparing for admission to law schools. As part of this program, students are offered a variety of experiences, including visits to campus by practicing lawyers and law students, trips to area law schools, workshops on applying to law schools, and an annual trip to the Supreme Court in Washington, D.C. The Pre-Law Program is organized by the Law Professions Advisory Committee (LawPAC) which includes faculty from a variety of disciplines. The Westminster Student Pre-Law Society allows students to participate in the planning of programs for Pre-Law students. Students interested in the Pre-Law Program should contact Dr. James Rhoads, professor of political science and chair of LawPAC.

# Degree Programs

## ***Bachelor of Arts (BA)***

Broadcasting and Media Production  
 Child and Family Studies  
 Communication Studies  
 Criminal Justice Studies  
 Early Childhood/Special Education  
 English  
 Environmental Studies  
 Fine Art  
 History  
 International Studies  
 Multimedia Journalism  
 Music  
 Philosophy  
 Political Science  
 Psychology  
 Public Relations  
 Religion  
 Sociology  
 Spanish  
 Sports Management  
 Theatre

## ***Bachelor of Music (BM)***

Music Education  
 Music Performance

## ***Bachelor of Science (BS)***

Accounting  
 Biochemistry  
 Biology  
 Business Administration  
 Chemistry  
 Computer Information Systems  
 Computer Science  
 Engineering Physics  
 Environmental Science  
 Financial Economics  
 Human Resources Management  
 International Business  
 Marketing & Professional Sales  
 Materials Science  
 Mathematics  
 Molecular Biology  
 Neuroscience  
 Physics

## ***Bachelor of Science in Nursing (BSN)***

Nursing

## ***Minors***

Accounting  
 Astronomy  
 Biochemistry  
 Biology  
 Broadcasting and Media  
 Production  
 Chemistry  
 Child and Family Studies  
 Childhood Development  
 Communication Studies  
 Computer Science  
 Criminal Justice Studies  
 Data Science  
 Economics  
 English  
 Environmental Studies  
 Film Studies  
 Fine Art  
 French

History  
 Human Resources  
 International Studies  
 Legal Studies  
 Management for Scientists  
 Marketing  
 Materials Science  
 Mathematics  
 Molecular Biology  
 Multimedia Journalism  
 Music  
 Peace Studies  
 Philosophy  
 Physics  
 Political Science  
 Psychology  
 Public Relations  
 Religion  
 Social Media

Sociology  
 Spanish  
 Sports Management  
 Theatre  
 Writing

# Accounting

(Major and minor)

Accounting majors learn the importance of accurate, relevant, and timely information. Majors develop, interpret, and evaluate data capturing the financial activities of a business. Assessing business activities and their financial consequences make accountants ideally capable of developing business solutions. Imagine yourself a CPA, a partner at an accounting firm, working for a corporation, the government, or a nonprofit, or as an entrepreneur. Pennsylvania's State Board of Accountancy follows the national educational standard for granting a CPA license by requiring 150 semester hours of undergraduate or graduate level courses. At least 36 hours must be in accounting and accounting related subjects such as auditing, tax, finance, and business law. Students should consider class work beyond the 125 semester hours required to graduate in order to take advantage of opportunity to achieve the CPA licenses' 150 credit hour requirement. Westminster accounting majors planning to become licensed CPAs can achieve 150 hours in four years by working closely with their accounting adviser beginning in their first year. The courses listed for Westminster's major in accounting meet the requirements for sitting for the CPA examination in the state of Pennsylvania after graduation. Generally, the School of Business offers courses that meet the CPA licensing requirements for the states of Pennsylvania and Ohio and other states requiring 150 semester hours for CPA licensure.

**The Major in Accounting:** 64 semester hours, comprising:

ACC 201	Principles of Accounting I	4
ACC 202	Principles of Accounting II	4
ACC 300	Cost Accounting	4
ACC 305	Intermediate Accounting I	4
ACC 306	Intermediate Accounting II	4
ACC 310	Federal Income Taxation	4
ACC 320	Corporation and Partnership Taxation	4
ACC 410	Auditing	4
ACC 601	Preparing for the Profession	4
BA/ECO 220	Statistics	4
BA 225	Management Information Systems	4
BA 310	Organizations and Management	4
BA 370	Business Law	4
ECO 150	Economic Reasoning	4

*Plus, one of the following:*

MTH 131	Applied Calculus	4
MTH 150	Calculus I	4
MTH 152	Calculus II	4
MTH 250	Calculus III	4

*Plus, two of the following:*

ACC 331	Accounting Information Systems	2
ACC 332	Forensic Accounting	2
ACC 341	Governmental Accounting	2
ACC 342	Not-For-Profit Accounting	2
ACC 351	Accounting Theory	2
ACC 352	Advanced Accounting	2

**The Minor in Accounting:** 24 semester hours, comprising:

ACC 201	Principles of Accounting I	4
---------	----------------------------	---

ACC 202	Principles of Accounting II	4
ACC 305	Intermediate Accounting I	4
ACC 306	Intermediate Accounting II	4
<i>Plus 8 additional semester hours of ACC courses.</i>		8

## Astronomy

*(Minor only)*

The astronomy minor at Westminster is designed to serve students pursuing careers in astrophysics research or the aerospace industries as well as non-science majors simply seeking to satisfy a deep intellectual curiosity about the Universe. For the former, the minor should be coupled with a major in physics, engineering physics, computer science, mathematics or chemistry. For the latter, the minor welcomes students from any major. Students in the minor take introductory physics and can choose from six special-topic astronomy courses. Both calculus-based and calculus-free paths to the minor are offered.

**The Minor in Astronomy:** Choose the Calculus-based path or the Non-calculus-based path. 24 semester hours, comprising:

### Calculus-based path:

AST 201	Observational Astronomy	4
AST/PHY 402	Astrophysics	4
PHY 151	Principles of Physics I	4
PHY 152	Principles of Physics II	4

*Plus, two of the following special-topic astronomy courses:*

AST 141	Planets	4
AST 142	Stars	4
AST 143	Galaxies and Cosmology	4
AST 161	Life in the Universe	4

### Non-calculus-based path:

AST 201	Observational Astronomy	4
PHY 141	Foundations of Physics I	4
PHY 142	Foundations of Physics II	4

*And three of the following special-topic astronomy courses:*

AST 141	Planets	4
AST 142	Stars	4
AST 143	Galaxies and Cosmology	4
AST 161	Life in the Universe	4

## Biochemistry

*(Major and Minor)*

Students majoring in biochemistry become candidates for the B.S. degree by completing 64 semester hours of required courses.

**The Major in Biochemistry:** 64 semester hours, comprising:

BIO 201	Cell Biology and Genetics	4
CHE 117	Principles of Chemistry	4
CHE 180	Inorganic Chemistry	4
CHE 261	Organic Chemistry I	4

CHE 331	Biophysical Chemistry	4
CHE 381	Biochemistry Principles	4
CHE 382	Metabolic Biochemistry	4
CHE 383	Biochemistry Methods	4
CHE 451	Advanced Laboratory: Synthesis & Analysis	4
CHE 452	Advanced Laboratory: Research Methods	2
CHE 601	Capstone I: Professional Development	2
CHE 602	Capstone II: Professional Perspectives	2
MTH 150	Calculus I	4

*Plus, one of the following:*

CHE 230	Chemical Analysis	4
CHE 231	Environmental Analysis	4

*Plus, one of the following:*

CHE 600	Senior Project	2
CHE 660	Honors Project	2

*One of the following sequences:*

PHY 141	Foundations of Physics I	4
PHY 142	Foundations of Physics II	4
<i>or</i>		
PHY 151	Principles of Physics I	4
PHY 152	Principles of Physics II	4

*One of the following:*

BIO 301	Microbiology	4
BIO 302	Cell and Molecular Biology	4
BIO 303	Molecular Genetics and Heredity	4

A student who completes three BIO or CHE courses and earns a grade lower than a C- in each course before registering for CHE 600 will be identified as not making progress in the major. (Exceptions will be made for students who take medical or personal leave for the semester). Students who are not making progress in the major will not be allowed to continue as a biochemistry or chemistry major. Students cannot register for CHE 600 (Senior Project) unless their major GPA is above 2.0 and they are making progress in the major. All junior and senior biochemistry and chemistry majors are required to participate in a weekly seminar.

Honors scholars majoring in biochemistry or chemistry are expected to register for 2 SH of Honors Research in the spring of their junior year (CHE 662), 4 SH of Honors Research in the fall of their senior year (CHE 674), and 2 SH of Honors Research in the spring of their senior year (CHE 682). Additionally, all biochemistry or chemistry honors scholars are required to enroll in CHE 451, 452, 601, and 602.

NOTE: Students may not double major in biochemistry and chemistry.

**The Minor in Biochemistry:** 28 semester hours, comprising:

BIO 201	Cell Biology and Genetics	4
CHE 117	Principles of Chemistry	4
CHE 230	Chemical Analysis	4
CHE 261	Organic Chemistry I	4
CHE 381	Biochemical Principles	4
CHE 382	Metabolic Biochemistry	4
CHE 383	Biochemical Methods	4

# Biology

(Major and Minor)

**The Major in Biology:** Requirements for a major in biology are met by taking a minimum of 64 semester hours in major courses which must include the following:

BIO 201	Cell Biology and Genetics	4
BIO 202	Organismal Biology	4
BIO 206	Biostatistics and Experimental Design	4
BIO 601	Capstone I	2
BIO 602	Capstone II	2

*Note: BIO 206 must be completed by the end of the second year.*

*Plus, one course from each of three concentrations:*

## Cell Biology and Genetics

BIO 301	Microbiology	4
BIO 302	Cell and Molecular Biology	4
BIO 303	Molecular Genetics and Heredity	4
BIO 304	Developmental Biology	4

## Evolution, Form and Function

BIO 334	Physiology	4
BIO 335	Anatomy & Physiology	4
BIO 337	Comparative Vertebrate Anatomy	4
BIO 338	Evolution	4
BIO 363	Animal Behavior	4

## Biodiversity and Ecology

BIO 360	Ecology	4
BIO 361	Biodiversity and Conservation	4

*Plus, twelve (12) semester hours of elective courses that must be numbered 300 or above (excluding BIO 590, and limited to no more than four semester hours of BIO 620 and eight semester hours of BIO 660-690).*

*Plus, the following required supporting courses for the major in biology:*

CHE 117	Principles of Chemistry	4
CHE 261	Organic Chemistry I	4
PHY 141 or 151	Foundations or Principles of Physics I	4

*Plus, twelve additional semester hours, from at least two different disciplines, of supporting courses from:*

CHE 180	Inorganic Chemistry	4
CHE 230	Chemical Analysis	4
CHE 231	Environmental Analysis	4
CHE 262	Organic Chemistry II	4
CHE 381	Biochemistry Principles	4
CS 151	Principles of Computer Science I	4
MTH 131 or 150	Applied Calculus or Calculus I	4
MTH 152	Calculus II	4
PHY 142 or 152	Foundations or Principles of Physics II	4

A student who completes three biology courses (BIO prefix) and earns a grade lower than C- in each course prior to registering for BIO 601 will be identified as not making progress in the major. (Exceptions will be made for students who take

a medical or personal leave for the semester). Students who are not making progress in the major will not be allowed to continue as a biology or molecular biology major.

Students cannot register for BIO 601 (Biology Capstone I) unless their major GPA is above a 2.0 and they are making progress in the major.

Honors Scholars majoring in biology or molecular biology are expected to attend and participate in BIO 601 while they write their Honors proposal.

**The Minor in Biology:** Requirements for a minor in biology are met by taking 24 semester hours of courses in biology:

BIO 201	Cell Biology and Genetics	4
BIO 202	Organismal Biology	4

*Plus, four courses including at least one course from each of the following concentrations:*

### **Cell Biology and Genetics**

BIO 301	Microbiology	4
BIO 302	Cell and Molecular Biology	4
BIO 303	Molecular Genetics and Heredity	4
BIO 304	Developmental Biology	4

### **Evolution, Form and Function**

BIO 334	Physiology	4
BIO 335	Anatomy & Physiology	4
BIO 337	Comparative Vertebrate Anatomy	4
BIO 338	Evolution	4
BIO 363	Animal Behavior	4

### **Biodiversity and Ecology**

BIO 360	Ecology	4
BIO 361	Biodiversity and Conservation	4

NOTE: A student may not use any combination of the following majors to complete a double major: biology, molecular biology, neuroscience, or environmental science. Students must petition biology for a biology or molecular biology minor.

Many professional and graduate schools require one full year of inorganic chemistry, organic chemistry, and introductory physics for admission. Specific biology courses may also be recommended for particular professional or graduate programs. It is the responsibility of the student to identify and complete specific programmatic requirements of professional and graduate schools.

## **Broadcasting and Media Production**

*(Major and Minor)*

The objective of the broadcasting and media production program is to prepare students for entry-level and subsequent management positions in community media: radio, television, cable, and a range of other organizations including government, education, industry, public relations, and health fields. Classroom lectures, in-class laboratory experience, and hands-on experience at Titan Radio Digital 88.9 FM and the Westminster Cable Network will be coordinated to provide students with a theoretical background as well as practical performance skills. Digital 88.9 FM and Westminster Cable Network productions, air shifts, and crew activities are viewed as



a logical extension of the classroom and in-class laboratory experiences and are treated as co-curricular activities in which reinforcement of theory and understanding and competency are of prime importance. Students are assigned to various positions in the stations based on ability and performance. Auditions are required for all on-air talent. Majors supplement experiences in the classroom and broadcast stations by developing materials for the programs two web pages, [www.titanradio.net](http://www.titanradio.net) and [www.wcn247.com](http://www.wcn247.com).

**The Major in Broadcasting and Media Production:** 56 semester hours, including 44 hours of broadcast and media production course work comprising:

BC 251	Single-Camera Video Production	4
BC 253	Mass Communications	4
BC 311	Broadcast Journalism	4
BC 601	Capstone I	4
BC 602	Capstone II	4
COM 230	Social Media and Web Planning	4
PR 112	Digital Photography + Imaging	4

*Plus, one of the following:*

BC 101	Radio and TV Fundamentals	4
BC 102	Audio Production	4

*Plus, one of the following:*

BC 111	Writing for Electronic Media	4
PR 102	Writing for Media	4

*Plus, one of the following:*

COM 151	Voice and Diction	4
PR 110	Design Principles + Practices	4

*Plus, at least 16 semester hours of broadcasting and media production (BC) electives. Only four of these 16 semester hours may be earned by completing internships (BC 590).*

All broadcast and digital communication majors are required to pass a comprehensive practical and written exam prior to enrolling in senior studies, BC 601 and 602. This exam is administered each January and may be taken after the completion of BC 101 or 102, 111, 251, and 253.

**The Minor in Broadcasting and Media Production:** 28 semester hours, comprising:

BC 251	Single-Camera Video Production	4
BC 253	Mass Communications	4

*Plus, one of the following:*

BC 101	Radio and TV Fundamentals	4
BC 102	Audio Production	4

*Plus, one of the following:*

BC 111	Writing for the Electronic Media	4
PR 102	Writing for Media	4

*Plus, eight semester hours of electives for a total of 28 hours. Only four elective semester hours may be via an internship (BC 590).*

# Business Administration

*(Major only)*

The Business Administration major builds a foundation for successful entrepreneurship through strategic management, organizational behavior, and effective leadership and change. Students explore multiple disciplines and participate in hands-on opportunities while experiencing a variety of business structures. Imagine yourself an entrepreneur, a manager, a corporate officer, or a board member.

**The Major in Business Administration:** 64 semester hours, comprising:

ACC 201	Principles of Accounting I	4
ACC 202	Principles of Accounting II	4
BA 140	Introduction to Business	4
BA/ECO 220	Statistics	4
BA 225	Management Information Systems	4
BA 305	Marketing	4
BA 310	Organizations and Management	4
BA 350	Finance	4
BA 370	Business Law	4
BA 601	Strategic Management (Capstone)	4
ECO 150	Economic Reasoning	4

*Plus, one of the following:*

MTH 131	Applied Calculus	4
MTH 150	Calculus I	4
MTH 152	Calculus II	4
MTH 250	Calculus III	4

*Plus, four of the following:*

ACC/BA 300	Cost Accounting	4
BA 240	Entrepreneurship	4
BA 250	Principles & Practices of Project Mgmt.	4
BA 326	E-Commerce Marketing	4
BA 330/ECO 601	Business Forecasting	4
BA 345	Sales, Business Development, & Big Data	4
BA 360	Human Resources Management	4
BA/ECO 365	International Finance	4
BA 380	Investments	4
BA/ECO 385	Financial Economics	4
BA/ECO 388	Corporate Credit Analysis	4
BA 390	Buyer Behavior	4
BA 410	Global Marketing Management	4
BA 590	Field Experience/Internship	4
BA 611	Seminar/Advanced Topics	4

# Chemistry

*(Major and minor)*

Students majoring in chemistry become candidates for the B.S. degree by completing 64 semester hours of required courses. Students may tailor this curriculum to meet their career goals. Career goals include professional chemist, medicine, forensic scientist, secondary education certification and engineering.

**The Major in Chemistry:** 64 semester hours, comprising:

CHE 117	Principles of Chemistry	4
CHE 180	Inorganic Chemistry	4
CHE 261	Organic Chemistry I	4
CHE 336	Quantum Mechanics and Spectroscopy	4
CHE 337	Thermodynamics and Kinetics	4
CHE 360	Polymer Chemistry	4
CHE 384	Biological Chemistry	4
CHE 451	Advanced Laboratory: Synthesis & Analysis	4
CHE 452	Advanced Laboratory: Research Methods	2
CHE 601	Capstone I: Professional Development	2
CHE 602	Capstone II: Professional Perspectives	2

*Plus, one of the following:*

CHE 230	Chemical Analysis	4
CHE 231	Environmental Analysis	4

*Plus, one of the following:*

CHE 600	Senior Project	2
CHE 660	Honors Project	2

*Plus, at least 4 semester hours from the following:*

CHE 262	Organic Chemistry II	4
CHE 340	Instrumental Analysis	4
CHE 375	Green Chemistry	4
CHE 391	Advanced Inorganic Chemistry	4
CHE 590	Chemistry Internship	4
CHE 610	Advanced Topics	4
CHE 611	Advanced Topics	4
CHE 620	Independent Study	4
MTH 250	Calculus III	4

*Plus, 8 hours from the following:*

MTH 150	Calculus I	4
MTH 152	Calculus II	4
MTH 250	Calculus III	4

*Plus, both of the following:*

PHY 151	Principles of Physics I	4
PHY 152	Principles of Physics II	4

The chemistry program is approved by the American Chemical Society Committee on Professional Training. All chemistry graduates can earn an ACS certified degree.

A student who completes three CHE courses and earns a grade lower than a C- in each course before registering for CHE 600 will be identified as not making progress in the major. (Exceptions will be made for students who take medical or personal leave for the semester). Students who are not making progress in the major will not be allowed to continue as a biochemistry or chemistry major.

Students cannot register for CHE 600 (Senior Project) unless their major GPA is above 2.0 and they are making progress in the major.

All junior and senior biochemistry and chemistry majors are required to participate in a weekly seminar.

Honors scholars majoring in biochemistry or chemistry are expected to register for

2 SH of Honors Research in the spring of their junior year (CHE 662), 4 SH of Honors Research in the fall of their senior year (CHE 674), and 2 SH of Honors Research in the spring of their senior year (CHE 682). Additionally, all biochemistry or chemistry honors scholars are required to enroll in CHE 451, 452, 601, and 602.

**3-2 Chemistry/Chemical Engineering Track:** The requirements for a major in chemistry on this track are met by taking 52 semester hours, comprising:

CHE 117	Principles of Chemistry	4
CHE 180	Inorganic Chemistry	4
CHE 261	Organic Chemistry I	4
CHE 336	Quantum Mechanics and Spectroscopy	4
CHE 337	Thermodynamics and Kinetics	4
CHE 384	Biological Chemistry	4
CS 151	Principles of Computer Science I	4
MTH 152	Calculus II	4
MTH 250	Calculus III	4
MTH 253	Differential Equations	4
PHY 151	Principles of Physics I	4
PHY 152	Principles of Physics II	4

*Plus, one of the following:*

CHE 230	Chemical Analysis	4
CHE 231	Environmental Analysis	4

Students on this track must complete a B.S. in chemical engineering at an approved school to fulfill the requirements for a B.S. in chemistry at Westminster College. Additionally, students on this track must confirm their intention to remain on this track at the end of their fourth semester at Westminster College.

NOTE: Students may not double major in biochemistry and chemistry.

**The Minor in Chemistry:** 24 semester hours, comprising:

CHE 117	Principles of Chemistry	4
CHE 180	Inorganic Chemistry	4
CHE 261	Organic Chemistry I	4

*Plus, one of the following:*

CHE 230	Chemical Analysis	4
CHE 231	Environmental Analysis	4

*Plus, one of the following:*

CHE 331	Biophysical Chemistry	4
CHE 336	Quantum Mechanics and Spectroscopy	4
CHE 337	Thermodynamics and Kinetics	4

*Plus, one of the following:*

CHE 381	Biochemistry Principles	4
CHE 384	Biological Chemistry	4

NOTE: CHE 331 prerequisites are MTH 150 and PHY 142 or 152. CHE 336 and CHE 337 prerequisites are MTH 152 and PHY 152. CHE 381 prerequisite is BIO 201.

# Child and Family Studies

*(Major and minor)*

The Child and Family Studies degree provides students with purposeful theoretical and practical experiences in relevant education-based coursework paired with courses in psychology, sociology and criminal justice studies. The program is offered in the School of Education and will prepare candidates to work with children, adolescents, and adults in all stages of life in diverse settings including human and social services organizations. The coursework is aligned to the National Council Family Relations [www.ncfr.org](http://www.ncfr.org) standards and the Pennsylvania Department of Education (PDE) requirements for associate educators in the field. Child and Family Studies majors are inspired to customize a career path with established professional requirements focused on special areas of need in the community at the local, national and international levels. The major includes personalized internships, community service, independent research, and capstone projects.

**The Major in Child and Family Studies:** 63 semester hours, comprising:

ECE 201 Issues & Trends in Early Childhood Education	3
ECE 203 Diversity within Family-School-Comm Partnerships	3
EDU 231 Educational Psychology	4
EDU 450 Teaching in Areas of High Need	2
EDU 610 Capstone/Internship	4
ELL 206 English Language Learners	3
SED 201 Foundations of Special Education	4
SED 411 Legal Issues	2
SED 412 Assessment	2
SED 413 High Incidence Instructional Strategies	2
SED 414 Low Incidence Instructional Strategies	2

*Plus, three of the following:*

PSY 100	Research Experiences	4
PSY 101	Introduction to Psychology	4
PSY 201	Experimental Design, Methods, and Statistics	4
PSY 212	Psychology of Personality	4
PSY 213	Psychology of Prejudice	4
PSY 219	Early Childhood Development	4
PSY 221	Childhood and Adolescence	4
PSY 225	Lifespan Development	4
PSY 262	Neuropsychology of the Mind	4
PSY 281	Principles of Learning and Memory	4
PSY 291	Psychology of Adulthood	4
PSY 301	Critical Thinking and Writing in Psychology	4
PSY 401	Abnormal Psychology	4

*Plus, three of the following:*

SOC 101	Principles of Sociology	4
SOC 105	Cultural Anthropology	4
SOC 200	Studies in Sociology	4
SOC 204	Introduction to Social Work	4
SOC 214	Social Class in America	4
SOC 215	Women in Cross-Cultural Perspective	4
SOC 306	Sociology of Family	4
SOC 327	Medical Sociology	4
SOC 350	Social Theory	4

*Plus, one of the following:*

CJS 102	Deviance	4
CJS 200	Studies in Criminal Justice	4
CJS 202	Criminology	4
CJS 203	Victimology	4
CJS 204	Corrections	4

EDU 610 is individualized to align with focus area, students would complete field work in a facility (child care center, hospital, social service agency, drug and rehabilitation facility) combined with research.

**The Minor in Child and Family Studies:** 28-36 semester hours, comprising:

SED 201	Foundations of Special Education	4
EDU 231	Educational Psychology	4
ECE 203	Diversity within Family-School-Community	3
ELL 206	English Language Learners	3
EDU 450	Teaching in Areas of High Need	2

*One of the following, or, for ECE/SED majors, two of the following:*

PSY 100	Research Experiences	4
PSY 101	Introduction to Psychology	4
PSY 201	Experimental Design, Methods and Statistics	4
PSY 212	Psychology of Personality	4
PSY 213	Psychology of Prejudice	4
PSY 219	Early Childhood Development	4
PSY 221	Childhood and Adolescence	4
PSY 225	Lifespan Development	4
PSY 262	Neuropsychology of the Mind	4
PSY 281	Principles of Learning and Memory	4
PSY 291	Psychology of Adulthood	4
PSY 301	Critical Thinking and Writing in Psychology	4
PSY 401	Abnormal Psychology	4

*One of the following, or, for ECE/SED majors, two of the following:*

SOC 101	Principles of Sociology	4
SOC 106	Individual and Society	4
SOC 107	Sociology of Gender	4
SOC 108	Social Problems/Social Policies	4
SOC 200	Sociology of Madness	4
SOC 204	Introduction to Social Work	4
SOC 209	Minority/Majority Relations	4
SOC 210	Gerontology	4
SOC 214	Social Class in America	4
SOC 260	Food Culture and Society	4
SOC 306	Sociology of Family	4
SOC 327	Medical Sociology	4
SOC 350	Social Theory	4

*Plus, four semester hours from the following:*

CJS 102	Deviance	4
CJS 201	Juvenile Delinquency and Justice	4
CJS 203	Victimology	2
CJS 206	Corrections	2

# Childhood Development

*(Minor only)*

The Minor in Childhood Development is offered in cooperation between the Psychology and Education programs. This minor serves to strengthen the developmental background of those students interested in working with children. This course of study will advantage students interested in the areas of early childhood education, guidance counseling, criminal justice, special education and social work. Coordinators are Mandy Medvin (Psychology) and Amy Camardese (Education).

**Minor in Childhood Development:** 29 semester hours, comprising:

EDU 231	Educational Psychology	4
EDU 562	Early Childhood Field Experience	2
ELL 206	English Language Learners	3
PSY 101	Introduction to Psychology	4
PSY 281	Principles of Learning and Memory	4
PSY 431	Abnormal Child Development	4

*Plus, one of the following:*

PSY 221	Childhood and Adolescence	4
PSY 225	Lifespan Development	4

*Plus, one of the following:*

SED 201	Foundations of Special Education	4
PSY 401	Abnormal Psychology	4

# Communication Studies

*(Major and minor)*

The Communication Studies major offers a broad foundation in communication theory, opening students to a wide range of occupational choices. Students of communication studies investigate the theory of human interaction in various contexts and learn to apply that theory through practical application. The major emphasizes effective and ethical communication in professional contexts. Students learn to apply their knowledge to real world situations, including communication in interpersonal and group settings, public speaking, organizations and mass media.

**The Major in Communication Studies:** The major in communication studies requires 48 semester hours of Communication Studies courses, comprising:

COM 200	Principles of Tech. Social Communication	4
COM 201	Interpersonal Communication	4
COM 202	Small Group Communication	4
COM 205	Mass Communication	4
COM 225	Communication Ethics	4
COM 450	Communication Theory	4
COM 590	Internship	4
COM 601	Capstone	4

*Plus, four of the following:*

COM 203	Professional Presentations	4
COM 207	Business and Professional Communication	4
COM 230	Social Media and Web Planning	4
COM 301	Applied Social Media	4
COM 303	Sales Communication	4

COM 320	Strategic Sports Communication	4
COM 405	Political Communication	4
COM 410	Advanced Topics	4

**The Minor in Communication Studies:** 6 courses comprising 24 semester hours of COM coursework. Only one of the courses may be an internship (COM 590).

Any student with a major in the School of Communication who takes a COM course to fulfill a requirement in their major cannot count that course toward the minor in communication studies.

Broadcast communications majors who wish to have a communication studies minor may not use BC 253/COM 205 to fulfill the minor requirements. COM 303 may be used to fulfill the minor as long as the same course under the BC prefix (BC 303) has NOT been used to fulfill the broadcast communications major. Additionally, COM 151 may also be used by BC majors to satisfy a communication studies minor.

## Computer Information Systems

*(Major only)*

Computer Information Systems (CIS) is concerned with the relationship between information systems and the organizations that they serve. This relationship includes not only the theory and principles of such, but also the application and development. CIS professionals are involved in: 1) systems deployment and configuration work, 2) user training, 3) tailoring application technologies (especially databases) to the needs of the enterprise, and 4) the development of systems that utilize other software products to suit their organizations' needs for information.

**The Major in Computer Information Systems:** 60 semester hours, comprising:

ACC 201	Principles of Accounting I	4
CS 151	Principles of Computer Science I	4
CS 152	Principles of Computer Science II	4
CS 310	Human-Computer Interaction	4
CS 321	Database Theory and Design	4
CS 601	Capstone I	2
CS 602	Capstone II	2
ECO 150	Economic Reasoning	4
MTH 241	Discrete Mathematics	4

*Plus, one of the following:*

BA 250	Principles and Practices of Project Mgmt.	4
CS 351	Software Engineering	4

*Plus, one of the following:*

ACC 202	Principles of Accounting II	4
BA 240	Entrepreneurship	4
BA 310	Organizations & Management	4

*Plus, one of the following:*

MTH 131	Applied Calculus	4
MTH 150	Calculus I	4

*Plus, one of the following:*

MTH 135	Concepts of Statistics	4
MTH 335	Statistics	4



*Plus, 12 semester hours of CS electives, comprising:*

At most, 4 semester hours from the CS 11x series

At most, 4 semester hours from any CS 200-level course

At least 4 semester hours from any 300-level or above CS course

**Internship/Field Experience:** A student may wish to arrange an off-campus experience with a business, industry, service agency, high school, governmental office, or another appropriate organization. The course credit for an internship depends on the length and the actual learning situation. Students work with the academic adviser to determine the credit. Many of the supervising organizations pay a salary, although this is not necessary. We believe that this is a valuable learning experience for an individual during the junior or senior year. At most only one internship can count for an elective.

**Graduation Requirements:** All prerequisite courses must be completed with a grade of C- or higher before subsequent courses can be taken. A student who earns a grade lower than C- in three courses in the major prior to registering for the Capstone course (MTH 601 or CS 601) will be identified as not making progress in the major. (Exceptions will be made for students who take a medical or personal leave for the semester). Students who are not making progress in the major will not be allowed to register for the capstone course, a requirement for completion of the major.

**Transient Credit Policy:** Students who use transient credit (that is, transfer credit from another college or university) to satisfy course requirements in Westminster's computer science or computer information systems majors (including any concentrations in the programs) may NOT get transient credit for more than four semester hours of computer science/computer information systems courses outside of Westminster College that are 200 level or above.

These restrictions hold for any external course whether it is a traditional classroom style or online.

**All-College Honors:** The All-College Honors Research Project will replace the capstone requirement for students majoring in computer science or computer information systems, if successfully completed. Students do not need to register for both Honors Research and the capstone course in the computer science or computer information systems programs.

## Computer Science

*(Major and minor)*

Computer Science (CS) offers programs which provide a broad background in computing knowledge and skills, as well as practical experience. Traditionally, CS is concerned with the design and development of all types of software, especially software that runs computers or allows devices to work. CS majors work with computer architectures and operating systems and focus on mathematical and theoretical approaches to computation. Many CS majors will take first jobs as programmers. At Westminster College, CS majors take two semesters of programming (currently in Java), data structures, computer architecture, operating systems, database and some advanced programming and theory courses.

**The Major in Computer Science:** 60 semester hours, comprising:

CS 151	Principles of Computer Science I	4
CS 152	Principles of Computer Science II	4
CS 251	Data Structures	4

CS 311	Computer Architecture	4
CS 321	Database Theory and Design	4
CS 331	Advanced Data Structures and Algorithms	4
CS 411	Language Design and Implementation	4
CS 421	Operating Systems	4
CS 601	Capstone I	2
CS 602	Capstone II	2
MTH 150	Calculus I	4
MTH 152	Calculus II	4
MTH 241	Discrete Mathematics	4

*Plus, 12 semester hours of electives from 300-level or above CS courses (MTH 321 may be applied toward these elective hours). A maximum of 4 semester hours of CS 11x-series courses may also be applied toward these elective hours.*

## Software Engineering Concentration

This concentration is for those students interested in careers involving the design, development, and maintenance of large software applications.

**The Major in Computer Science with a Software Engineering Concentration:**  
64 semester hours, comprising:

CS 151	Principles of Computer Science I	4
CS 152	Principles of Computer Science II	4
CS 201	Web Design	4
CS 251	Data Structures	4
CS 310	Human-Computer Interaction	4
CS 321	Database Theory and Design	4
CS 351	Software Engineering	4
CS 383	Advanced Mobile Application Development	4
CS 601	Capstone I	2
CS 602	Capstone II	2
MTH 150	Calculus I	4
MTH 152	Calculus II	4
MTH 241	Discrete Mathematics	4

*Plus, one of the following:*

CS 411	Language Design and Implementation	4
CS 421	Operating Systems	4

*Plus, two of the following:*

CS 110	Python	2
CS 111	Ruby	2
CS 112	R	2

*Plus, one additional elective from 300- and 400-level CS courses.*

**The Minor in Computer Science:** 28 semester hours, comprising:

CS 151	Principles of Computer Science I	4
CS 152	Principles of Computer Science II	4
CS 251	Data Structures	4
MTH 241	Discrete Mathematics	4

*Plus, three electives selected from 300 and 400-level CS courses (MTH 321 may be used as one of these three electives).*

**Internship/Field Experience:** A student may wish to arrange an off-campus expe-

rience with a business, industry, service agency, high school, governmental office, or another appropriate organization. The course credit for an internship depends on the length and the actual learning situation. Students work with the academic adviser to determine the credit. Many of the supervising organizations pay a salary, although this is not necessary. We believe that this is a valuable learning experience for an individual during the junior or senior year. At most only one internship can count for an elective.

**Graduation Requirements:** All prerequisite courses must be completed with a grade of C- or higher before subsequent courses can be taken. A student who earns a grade lower than C- in three courses in the major prior to registering for the Capstone course (MTH 601 or CS 601) will be identified as not making progress in the major. (Exceptions will be made for students who take a medical or personal leave for the semester). Students who are not making progress in the major will not be allowed to register for the capstone course, a requirement for completion of the major.

**Transient Credit Policy:** Students who use transient credit (that is, transfer credit from another college or university) to satisfy course requirements in Westminster's computer science or computer information systems majors (including any concentrations in the programs) may NOT get transient credit for more than four semester hours of computer science/computer information systems courses outside of Westminster College that are 200 level or above.

These restrictions hold for any external course whether it is a traditional classroom style or online.

**All-College Honors:** The All-College Honors Research Project will replace the capstone requirement for students majoring in computer science or computer information systems, if successfully completed. Students do not need to register for both Honors Research and the capstone course in the computer science or computer information systems programs.

## Criminal Justice Studies

*(Major and minor)*

This major is for students interested in law, juvenile and adult corrections, law enforcement, correctional counseling and related areas. The major provides a sociology foundation with electives and an internship in various areas of criminology and criminal justice. Students learn about theories of the causes of crime and about the workings of the criminal justice system. They examine empirical data and study and evaluate policies. Our goal is for students to think sociologically and critically about public opinion, law and social institutions.

**The Major in Criminal Justice Studies:** 48 semester hours, comprising:

CJS 102	Deviance	4
SOC 350	Social Theory	4
SOC 601	Sociology Capstone	4
SSC 251	Research Methods for Social Science	4
SSC 252	Data Analysis for Social Science	4

*Plus, one of the following:*

SOC 101	Principles of Sociology	4
SOC 209	Minority-Majority Relations	4
SOC 214	Social Class in America	4

*Plus, two of the following:*

CJS 203	Victimology	2
CJS 204	Police	2
CJS 205	Criminal Courts	2
CJS 206	Corrections	2
CJS 207	Death Penalty	2

*Plus, one of the following:*

CJS 590	Field Experience/Internship	4
CJS 624	Independent Study	4

*Plus, 16 semester hours, including at least 4 hours at the 300-level, from the following:*

CJS 200	Studies in Criminology and Criminal Justice	4
CJS 201	Juvenile Delinquency and Justice	4
CJS 203	Victimology	4
CJS 204	Police	2
CJS 205	Criminal Courts	2
CJS 206	Corrections	2
CJS 207	The Death Penalty	2
CJS 215	Drugs and Society	4
CJS 302	Sociology of Law and Legal Systems	4
CJS 303	Criminal Justice Management and Leadership	4
CJS 304	Crime & Law Enforcement in Rural Comm.	4
CJS 405	Critical Issues in Policing	4
SOC 105	Cultural Anthropology	4
SOC 204	Introduction to Social Work	4
SOC 209	Minority-Majority Relations	4
SOC 214	Social Class in America	4
SOC 241	Sociology of Violence and Non-Violence	4
SOC 306	Sociology of Family	4

**The Minor in Criminal Justice Studies:** 28 semester hours, comprising:

CJS 102	Deviance	4
SOC 350	Social Theory	4

*Plus, two of the following:*

CJS 203	Victimology	2
CJS 204	Police	2
CJS 205	Criminal Courts	2
CJS 206	Corrections	2
CJS 207	The Death Penalty	2

*Plus, 16 additional semester hours of CJS or SOC classes, of which at least 8 semester hours must be CJS. SOC course options for this requirement are SOC 101, 209, or 214.*

## Data Science

*(Minor only)*

The data science minor will prepare students for the analysis of data-driven problems within their major discipline. It is intended to supplement traditional statistical analysis, open doors for new types of analysis, and expose students to current techniques in the emerging field. This minor can supplement any data-driven major.

**The Minor in Data Science:** 24 semester hours, comprising:

CS 130	Data Visualization	4
CS 230	Data Science	4

*One of the following:*

BA/ECO 220	Statistics	4
BIO 206	Biostatistics and Experimental Design	4
MTH 135	Concepts of Statistics	4
MTH 335	Statistics	4
PSY 201	Experimental Design and Statistics	4
SSC 252	Data Analysis for Social Science	4

*Four semester hours from the following:*

CS 110	Introduction to Python	2
CS 111	Introduction to Ruby	2
CS 112	Introduction to R	2
CS 151	Principles of Computer Science I	4

*Plus, two of the following:*

ES 251	Introduction to GIS	4
CS 238	Machine Learning	4
CS 321	Database Theory and Design	4
CS 341	AI and Machine Learning	4

Computer Science and Computer Information Systems majors must take MTH 335 to satisfy the statistics requirement (unless they are dual majors and their other major already includes a course that satisfies this requirement).

CS 341 has significant prerequisites and is most appropriate for Computer Science majors. Computer Science majors can choose either CS 238 or CS 341.

## Economics

*(Minor only)*

**The Minor in Economics:** 24 semester hours, comprising:

ECO 150	Economic Reasoning	4
---------	--------------------	---

*Plus, one of the following:*

BA/ECO 220	Statistics	4
BIO 206	Biostatistics and Experimental Design	4
MTH 135	Concepts of Statistics	4
MTH 335	Statistics	4
PSY 201	Experimental Design and Statistics	4
PS 301	Research Design & Analysis in Poli Sci	4
SSC 252	Data Analysis for Social Science	4

*Plus, four of the following:*

ECO 310	Managerial Economics	4
ECO 340	Money and Banking	4
ECO/BA 365	International Finance	4
ECO/BA 385	Financial Economics	4
ECO/BA 388	Corporate Credit Analysis	4
ECO 601/BA 330	Business Forecasting	4

# Education

*(Major in Early Childhood/Special Education; minor in Secondary Education)*

The mission of the School of Education at Westminster College is to prepare PreK-4 early childhood/PreK-8 special education and secondary teachers who are distinguished by their subject matter knowledge, interpersonal capacities, pedagogical skills, and professional attitudes.

The School of Education seeks to create a community of learners in which stimulating and challenging expectations are addressed in a positive, caring, and encouraging environment which is respectful of all individuals. The faculty seeks to model the personal attributes and pedagogical practices which distinguish the teaching profession at its best.

Through study in the Westminster Plan, the Intellectual Perspectives, general course work, and professional education, students are encouraged to build a professional knowledge base. Meaningful classroom experiences, multiple opportunities with children and youth, and partnerships with schools and agencies enable students to make connections between academic work and the field of basic education at all levels. Competencies are sought in content knowledge, understanding the diversity of all learners, instructional strategies, management, communication, planning, assessment, professionalism, and collaboration.

The nobility and significance of the preparation of professional educators is acknowledged as the demands for service to an ever-changing, diverse global and technological world increases.

Upon program completion, candidates will have acquired the knowledge, demonstrated the skills, and assumed the attitudes necessary to begin a teaching career, and the credentials necessary for initial certification.

The program outcomes are consistent with the standards, guidelines, and outcomes of the College and the Pennsylvania Department of Education.

## Teacher Preparation

Westminster is approved by the Department of Education of the Commonwealth of Pennsylvania for the preparation of PreK-4 teachers. Secondary school teachers are prepared in the following fields: biology, chemistry, social studies, English, mathematics, and physics. All secondary certifications require Basic Skills Assessment or meeting the SAT/ACT score criteria and the Praxis Specialty Area test. Music, French and Spanish are K-12 certifications. Early childhood/special education, and K-8 certifications require the Basic Skills Assessment or meeting the SAT/ACT score criteria and appropriate Specialty Area tests. Graduates may be certified to teach in other states if they select their courses to meet the requirements for certification which apply in those states. Additional information may be obtained from the School of Education or from the School of Music for the music certification program.

A sequence of learning opportunities and experiences are planned by the faculty to develop personal and professional growth and to meet the requirements for teacher certification. The faculty monitor each student's progress toward the attainment of program guidelines through course work, personal advising, supervised activities, public school practica, field experiences, and a student teaching assignment.

Students majoring in education become candidates for the B.A. degree. Students minoring in secondary education become candidates for the degree appropriate to their discipline.

Students who successfully complete the teacher education program at Westminster and the Basic Skills Assessment Examination requirements will be recommended for certification in Pennsylvania. Students who seek certification in other states can modify their programs accordingly. Generally, the courses leading to Pennsylvania certification are similar to those required by other states.

## Special Requirements and Procedures for Teacher Certification Candidates

The School Laws of the Commonwealth of Pennsylvania require that the individual who intends to teach be of good moral character, and possess the personal qualities, the professional knowledge, and the pedagogical skills which parents may expect to find in teachers to whom the education of children is entrusted. Students must be able to meet certification requirements as set forth in the School Laws of Pennsylvania and in the commonwealth-approved programs of teacher education offered by the College.

It is the student's responsibility to complete and file the following documents and applications:

1. A declaration of major form for early childhood/special education or a declaration of minor form for secondary education to be completed during the sophomore year;
2. An advisement sheet to be completed in the Spring Semester of the sophomore year;
3. An application for student teaching to be completed by Nov. 30 of the junior year;
4. A review of the graduation audit in the Spring Semester of the junior year;
5. An application for state teaching certification during the final semester;
6. Current PPD test prior to activities in the public schools; and
7. Appropriate legal clearances prior to activities in the public schools. Students are advised to secure all clearances upon entrance to the program. Failure to do so may delay timely completion of courses in sequence.

*NOTE: Changes in state requirements take precedence over information printed in this Undergraduate Catalog.*

## Certification Testing

The commonwealth requires a battery of examinations for teacher certification candidates. Early Childhood/Special Education majors must take the Basic Skills Assessment or submit SAT/ACT scores that meet the Pennsylvania Department of Education requirement to waive Basic Skills Assessment scores. The Basic Skills assessments must be passed prior to enrolling in the early childhood education Teaching and Learning Block or the special education Teaching and Learning Block. In order to be certified to teach, students must also successfully pass the Pearson PreK-4 Early Childhood assessment and the Special Education PreK-8 assessments.

For secondary education minors, either the ETS Core Academic Skills for Educators or the PAPA tests: reading, writing, and mathematics must be passed prior to enrolling in EDU 451 Teaching in the Secondary School. Early childhood/special education majors should complete the appropriate Pearson specialty area tests before student teaching. It is strongly suggested that secondary education minors complete the specialty area test before Fall Semester of the senior year. The qualifying scores

are established by the Pennsylvania Department of Education. Westminster's School of Education provides assistance to prepare students for the Pearson and Praxis examinations.

Please reference the Pennsylvania Dept. of Education website at: <http://www.education.pa.gov/Educators/Certification/CertTestingRequirements/Pages/default.aspx>.

## Prerequisites to the Teaching and Learning Blocks: Formal Admission to Candidacy

Either ECE or SED Teaching and Learning Block is taken in either the Fall Semester or Spring Semester of the junior year with the subsequent Teaching and Learning Block taken the first semester the following year. Exceeding 64 semester hours and meeting the stated Early Childhood/Special Education Teaching and Learning Block prerequisites constitutes formal admission to candidacy.

Requirements for entering either Teaching and Learning Block are:

1. A minimum all-college GPA of 3.000;
2. A minimum GPA of 3.000 in ECE 201, ECE 203, EDU 231, EDU 562, ELL 206, SED 201;
3. Completion of the Writing, Oral Communications and Inquiry portions of the Liberal Arts Core;
4. Completion of the mathematics requirement (six semester hours) with grades of "C" or better;
5. Completion of either the life science or the physical science requirement with a "C" or better;
6. Passing the Basic Skills Assessment in reading, writing, mathematics; or qualifying scores on the SAT/ACT; or a combination of SAT/ACT scores and Basic Skills Assessment scores;
7. Presentation and approval of a portfolio which includes experiences with children/adolescents;
8. Completion of EDU 311, Teaching Science
9. The recommendation of a program screening panel during March of the sophomore year.

Continuance in the program is dependent upon maintaining a cumulative GPA of 3.000 and a GPA of 3.000 in the major. In all cases, only Westminster College courses are factored into the GPA calculation. Experience indicates that students who have difficulty in attaining the required 3.000 GPA by the end of the sophomore year are also likely to experience difficulty in passing the state certification examinations.

Students who have not attained a 3.000 by the time of the sophomore portfolio review or who have not met the Praxis Series Examination requirements will be required to address the program screening panel.

Successful Completion of the Program Includes:

1. Satisfactory completion of the prescribed course work
2. Qualifying scores on the appropriate Pennsylvania Department of Education certification tests
3. Graduation
4. Recommendation for Pennsylvania certification

Students who declare an intent to major in Early Childhood/Special Education are assigned an adviser in the program and provided opportunities to explore teaching. During the sophomore year, students must complete a declaration of major form.



Students seeking to change their major to Early Childhood/Special Education should not assume program approval is guaranteed. Admission into this major is based upon a careful review of the following by a program screening panel: 1) GPA; 2) personal qualifications; 3) experiences with children/adolescents; 4) Basic Skills Assessment Examination scores; and 5) performance in courses offered by the program; 6) performance in all academic work.

### **The Major in Early Childhood/Special Education**

*All of the following:*

ECE 201	Issues and Trends in Early Childhood Education	4
ECE 203	Diversity within Family-School-Community Part.	4
ECE 362	Observation and Assessment PreK-4	2
EDU 231	Educational Psychology	4
EDU 311	Teaching Science in Schools	4
EDU 562	Early Childhood PreK-4 Educ. Field Experience II	2
ELL 206	English Language Learners	3
PED 301	Early Childhood Movement	1
PED 302	Adapted Physical Education	1
PSY 219	Early Childhood Development	4
SED 201	Foundations of Special Education	4
SED 462	Observation & Assessment PreK-8/Special Ed.	2
SED 562	PreK-8 Special Education Field Experience	2

*All of the following Certification courses:*

#### *Mathematics*

Six semester hours, MTH 110 & 124, or SSC 252 & 253 recommended 6

#### *Life Science*

One course, BIO 101 or ES 160 recommended 4

#### *Physical Science*

One course, AST 141, CHE 101, 102, GEL 121 recommended 4

#### *Geography*

One course from World or PA History, SOC or PSY 4

#### *American History*

One course, HIS 105 or 106 recommended 4

#### *Visual/Performing Arts*

MUS 185 required 4

#### *Composition/Literature*

Six semester hours of English composition/literature 6

*All of the following ECE Teaching and Learning Block courses:*

ECE 321	Math for Preschool Years	2
ECE 322	Math for Primary Grades	2
ECE 331	Language Development PreK	2
ECE 332	Language Development K-4	2
ECE 341	Emergent Literacy	2
ECE 342	Literacy in the Primary Classroom	2
ECE 352	Teaching Social Studies PreK-8	4
ECE 362	Observation and Assessment PreK-4	2

SPECIAL EDUCATION TEACHING AND LEARNING BLOCK – The Special Education Teaching and Learning Block is taken by early childhood PreK-4/special

education PreK-8 majors who have an overall minimum GPA of 3.000 and a 3.000 in their major, and who have passed the Basic Skills Assessment in Reading, Writing, Math or met qualifying scores on the SAT/ACT.

*All of the following SPE Teaching and Learning Block courses:*

SED 402	Behavior Management in Special Education	4
SED 404	Reading Strategies for Exceptional Children	4
SED 411	Legal Issues & Assessment in Special Educ.	2
SED 412	Assessment Methods in Special Education	2
SED 413	High Incidence Instructional Strat. in SPE	2
SED 414	Low Incidence Instructional Strat. in SPE	2
SED 462	Observation & Assessment PreK-8 Spec. Ed.	2

In addition to the Special Education Teaching and Learning Block, students must also take SED 572, the two semester hours Field Experience, preferably in the junior year of studies.

## Student Teaching

Student teaching is typically completed in the Spring Semester of the senior year.

*NOTE: Student Teacher placements are made by the School of Education. Placements are final and cannot be changed. Transportation is the responsibility of the student teacher.*

*Both of the following:*

ECE 605	Student Teaching	6
EDU 600	Student Teaching Seminar	2
SED 605	Student Teaching	6

## Other Information for ECE/SPE Majors

Recommended electives include another class in music, art, or theatre, SOC 101, 102, or 209, EDU 204 or 450, and PSY 101 or 281.

It is also suggested that Early Childhood/Special Education majors may also complete a minor in one of the following disciplines:

Art	Communication Studies	History
Biology	Computer Science	Mathematics
Broadcast & Med. Prod.	English	Psychology
Chemistry	Foreign Languages	Theatre
Childhood Development		

## The Minor in Secondary Education

Students who plan to qualify for the secondary school teaching certificate should declare a minor in secondary education during their first year or upon declaring a major. To this end they should consult with the School of Education during their first year. For general academic purposes, students remain under the guidance of the program in which they are majoring.

### The Minor in Secondary Education:

SED 201	Foundations of Special Education	4
ELL 206	English Language Learners	3
EDU 231	Educational Psychology	4
EDU 351	Reading in the Content Area	4
EDU 451	Teaching in the Secondary School	4

EDU 452	Student Teaching and Seminar (Secondary)	16
SED 572	Secondary Field Experience	2

*All of the following:*

*Mathematics*

6 semester hours, MTH 110 & 124 or SSC 252 & 253 recommended 6

*Composition/Literature*

Six semester hours of English comp/literature 6

Recommended elective courses: PSY 101 and 221 or 281.

Admission to EDU 451 which is offered in the Fall Semester of the senior year is dependent upon:

1. The recommendation of the student's major program;
2. Passing the Basic Skills Assessment or meeting the SAT/ACT score criteria;
3. A careful review of the student's personal qualifications;
4. A minimum cumulative GPA of 3.000;
5. A minimum GPA of 3.000 in SED 201, EDU 351, 582, ELL 206, and EDU 231;
6. A minimum GPA of 3.000 "in the major" and;
7. The recommendation of a program screening panel during the Spring Semester of the junior year.

Continuance in the program is dependent upon maintaining the GPA requirements. Students should complete the specialty area test of the Praxis Series Examination prior to admission to EDU 451 Teaching in Secondary School. Students who have successfully completed EDU 451 and EDU 452 (student teaching) and the Praxis requirements, and have the recommendation of their major program and the School of Education will be recommended for certification to teach in Pennsylvania upon graduation.

NOTE: Student Teacher placements are made by the School of Education. Placements are final and cannot be changed. Transportation is the responsibility of the student teacher.

## Post-Baccalaureate Studies

Post-baccalaureate certification in elementary education or certification in a subject area for secondary education is designed for a candidate who currently possesses a bachelor's degree and would like to be certified to teach in public schools. Certification is offered for Early Childhood PreK-4 and Special Education PreK-8 or in Secondary Education. The candidate's undergraduate degree does not need to be in education.

Admission into this certification program is based upon a review by the post-baccalaureate program coordinator in the School of Education. Requirements to be considered for admission:

- Completed application and application fee (if applicable);
- Interview with the post-baccalaureate program coordinator of the School of Education;
- Essay describing the rationale to enter the teaching profession;
- 3.0 or higher GPA in the undergraduate degree program;
- Two letters of reference addressing the candidate's potential as a teacher;
- Official transcripts from all previous colleges or universities attended.

An admission decision will be made after a personal interview and the post-baccalaureate certification application, \$35 non-refundable application fee (if applicable), and other required documents are received by the School of Education office.

Students desiring to be certified in secondary teaching in areas of certification (Biology, Chemistry, English, French, Mathematics, Physics, Social Studies, or Spanish) will have to complete all requirements for the major as determined by a program review of their previous work in the particular subject area as well as complete all required education courses for certification.

Successful candidates will be recommended for certification after successful completion of all required coursework and other program requirements, successful completion of required Praxis Series Examinations, and submission of all required health and safety clearances for working in schools.

Specific questions may be addressed to the chair of the School of Education by calling (724) 946-7283 or via email at [schoolofeducation@westminster.edu](mailto:schoolofeducation@westminster.edu).

## Engineering Physics

*(Major only)*

**The Major in Engineering Physics:** 64 semester hours, comprising:

CHE 117	Principles of Chemistry	4
CHE 180	Inorganic Chemistry	4
CS 151	Principles of Computer Science I	4
MTH 152	Calculus II	4
MTH 250	Calculus III	4
MTH 253	Differential Equations	4
PHY 151	Principles of Physics I	4
PHY 152	Principles of Physics II	4
PHY 311	Thermal Physics	4
PHY 313	Modern Physics	4
PHY 321	Experimental Physics I	2
PHY 331	Computational Physics I	2
PHY 601	Capstone I	2
PHY 602	Capstone II	2

*Plus, one of the following:*

PHY 351	Mechanics	4
PHY 352	Electromagnetic Theory	4

*Plus, 12 semester hours from the following:*

MSE 211	Statics and Mechanics of Materials	4
MSE 221	Principles of Electrical Engineering	4
MSE 231	Science and Engineering of Materials	4
MSE 241	Semiconductor Physics	4
MSE 320	Solid State Chemistry	4
MSE 360	Polymer Chemistry	4

The All-College Honors Research Project will replace the capstone requirement for students majoring in engineering physics, if successfully completed. Students do not need to register for both Honors Research and the capstone course in the engineering physics program.

## 3-2 Program in Engineering Physics

Students completing the Engineering Physics major via the 3-2 program will have two choices of tracks to complete their requirements at Westminster. Students interested in mechanical engineering or a related discipline should pursue Track ME; students interested in electrical engineering or a related discipline should pursue Track EE.

**3-2 Engineering Physics (Track ME) Requirements:** 56 semester hours, comprising:

CHE 117	Principles of Chemistry	4
CHE 180	Inorganic Chemistry	4
CS 151	Principles of Computer Science I	4
MSE 211	Statics and Mechanics of Materials	4
MSE 231	Science and Engineering of Materials	4
MTH 152	Calculus II	4
MTH 250	Calculus III	4
MTH 253	Differential Equations	4
PHY 151	Principles of Physics I	4
PHY 152	Principles of Physics II	4
PHY 311	Thermal Physics	4
PHY 313	Modern Physics	4
PHY 321	Experimental Physics I	2
PHY 331	Computational Physics I	2
PHY 351	Mechanics	4

Additionally, students on this track must complete a B.S. in engineering at an approved school to fulfill the requirements for a major in engineering physics at Westminster.

**3-2 Engineering Physics (Track EE) Requirements:** 56 semester hours, comprising:

CHE 117	Principles of Chemistry	4
CHE 180	Inorganic Chemistry	4
CS 151	Principles of Computer Science I	4
MSE 221	Principles of Electrical Engineering	4
MSE 241	Semiconductor Physics	4
MTH 152	Calculus II	4
MTH 250	Calculus III	4
MTH 253	Differential Equations	4
PHY 151	Principles of Physics I	4
PHY 152	Principles of Physics II	4
PHY 311	Thermal Physics	4
PHY 313	Modern Physics	4
PHY 321	Experimental Physics I	2
PHY 331	Computational Physics I	2
PHY 352	Electromagnetic Theory	4

Additionally, students on this track must complete a B.S. in engineering at an approved school to fulfill the requirements for a major in engineering physics at Westminster.

# English

*(Major and Minor)*

The Westminster College English programs envision their undergraduates as scholars and writers from the beginning by placing scholarly conversation and writing at the center of its curriculums. Our programs begin with a trio of courses that introduce our students to literary studies, creative writing, and professional writing. We move on to seminars and writing workshops in the sophomore, junior, and senior years that build on the students' increasing levels of sophistication. In the junior and senior years, our students' work culminates in a two-semester capstone project that has both a scholarly and creative component.

As English majors, our students choose between two concentrations that have significant overlap. Our Literary Studies concentration emphasizes the scholarly approach to literary texts, and it culminates in a capstone project that includes a creative element, but is dominated by the critical study of literary work. Conversely, our Writing concentration emphasizes creative and professional writing, culminating in a capstone project dominated by these forms of writing, but including a critical study of literary work.

English majors are engaged in developing and mastering their ability to:

1. discuss literature, including engaging in an exchange of ideas and offering and supporting insights;
2. sustain controlled, critical arguments that analyze and synthesize texts;
3. understand the craft of writing, including concision, diction, grammar, and syntax;
4. begin mastering a particular genre of creative or professional writing;
5. critique peers' work to assist their fellow writers and improve their own revisions;
6. identify and use a range of sources suitable to the scholarly conversation on a particular topic, to evaluate and integrate source material, and to document accurately;
7. understand the literary tradition, the historical and cultural contexts of literature, and critical methods of reading; and
8. give well-planned, engaging presentations.
9. write convincingly about the art of creative writing—how it is made and why it endures.

**The Major in English with a concentration in Literary Studies:** 44 semester hours, comprising:

ENG 240	Introduction to Literary Studies	4
ENG 250	Writing About Literature	4
ENG 350	Introduction to Literary Criticism	4
ENG 601	English Capstone: Advanced Study 1	4
ENG 602	English Capstone: Advanced Study 2	4
WRI 210	Introduction. to Creative & Prof. Writing	4
<i>Plus, two 300-Level WRI courses.</i>		8
<i>Plus, three 400-Level ENG courses.</i>		12

An internship (ENG 590) is recommended.

**The Major in English with a concentration in Writing:** 44 semester hours comprising:

ENG 240	Introduction to Literary Studies	4
ENG 250	Writing About Literature	4
ENG 350	Introduction to Literary Criticism	4
WRI 210	Introduction. to Creative & Prof. Writing	4
WRI 601	Writing Capstone: Advanced Study 1	4
WRI 602	Writing Capstone: Advanced Study 2	4

*Plus, three 300-level WRI courses.* 12

*Plus, one 400-level WRI course.* 4

*Plus, one 400-level ENG course.* 4

An internship (WRI 590) is recommended.

English majors may have only one concentration within the discipline. Also, English majors may not minor in Writing.

*All-College Honors:* If successfully completed, the All-College Honors Research Project will replace the capstone requirement for students majoring in English. However, All-College Honors scholars must attend capstone courses.

**Secondary Education Teacher Certification:** To be eligible for certification in English, students must successfully complete all requirements for the English major with a concentration in Literary Studies or a concentration in Writing as set out above, plus:

1. ENG/EDU 220 (Teaching of Literature and Grammar in Secondary Schools);
2. Participation on the staff of Holcad or Scrawl;
3. The requirements for graduation listed in this Catalog;
4. The minor in secondary education.

The prerequisites for admission to the Senior Teaching and Learning Block are a cumulative GPA of 3.000 in all-college course work and a 3.000 in the major. "In the major" is defined as all courses required for the major, including those offered by other disciplines.

Students who are interested in secondary education should contact the chair of the School of Education as soon as possible for complete information. If all requirements are to be completed in four years, careful planning in both the major field and the minor is essential.

**The Minor in English:** 24 semester hours, comprising:

ENG 240	Introduction to Literary Studies	4
ENG 250	Writing About Literature	4
ENG 350	Introduction to Literary Criticism	4

*Plus, two 400-level ENG courses.* 8

*Plus, one additional 100- or 400-level ENG course, or WRI 210* 4

# Environmental Science

*(Major only)*

This program, sponsored by the Center for the Environment, is composed of designated and elective courses from those disciplines, and environmental science. The purpose of the program is to provide the broad background and understanding necessary for effective work on problems of the environment and for careers in environmental science. The Program Coordinator is Dr. Helen Boylan.

**The Major in Environmental Science:** 64 semester hours, comprising:

BIO 201	Cell Biology and Genetics	4
BIO 202	Organismal Biology and Ecology	4
BIO 203	Biodiversity and Ecology	4
CHE 117	Principles of Chemistry	4
ES 160	Concepts of Environmental Science	4
ES 360	Ecology	4
ES 601	Capstone: Problem Analyses in Env. Science	4

*Plus, one of the following:*

ES 230	Chemical Analysis	4
ES 231	Environmental Analysis	4

*Plus, one of the following:*

CHE 180	Inorganic Chemistry	4
CHE 261	Organic Chemistry	4

*Plus, one of the following:*

BIO 206	Biostatistics and Experimental Design	4
MTH 135	Concepts of Statistics	4

*Plus, one of the following sequences:*

PHY 141	Foundations of Physics I	4
PHY 142	Foundations of Physics II	4

*or*

PHY 151	Principles of Physics I	4
PHY 152	Principles of Physics II	4

*Plus, one of the following:*

ES 590	Internship	4
ES 624	Independent Study	4
ES 664	Honors Research	4

*Plus, 12 semester hours of approved electives, from:*

BIO 301, 361, 363, 461, 463, 464, 520/521, CHE 180 or 261, CHE 262, 340, 375, 381, PHY 221, ES 250, ES 251, ES 624, ES 664, MTH 150, MTH 152.



# Environmental Studies

*(Major and minor)*

Consistent with the mission of Westminster College, the Environmental Studies program seeks to develop an understanding of the complex interactions between humans and the natural world. An interdisciplinary liberal arts approach, combined with a disciplinary perspective, is used to provide a foundation that students will use to identify, investigate, and propose solutions to environmental problems that face humanity.

1. To demonstrate knowledge of local, regional, and global environmental issues and the diverse stakeholder perspectives involved.
2. To analyze environmental issues from a multi-disciplinary perspective, including scientific, economic, political, social, historical, and cultural contexts.
3. To employ research skills on environmental topics, such as asking relevant questions, gathering and evaluating information, and using evidence to defend positions.
4. To effectively communicate environmental issues to diverse audiences.
5. To work collaboratively to identify, analyze, and propose solutions to environmental problems.

Program coordinator, Dr. Helen Boylan.

**The Major in Environmental Studies:** 36 semester hours of core Environmental Studies coursework and a minimum of 24 semester hours in a second discipline, comprising:

*All of the following:*

ENV 201	Contemporary Environmental Issues	4
*PS 242	Environmental Policy and Politics	4
ENV 590	Internship	4
ENV 601	Environmental Studies Seminar Capstone	4

\*PS 101 is prerequisite to PS 242

*One of the following:*

ES 160	Principles of Environmental Science	4
ES 170	Project-Based Environmental Science	4

*One of the following:*

MTH 135	Concepts of Statistics	4
MTH 335	Statistics	4
BA/ECO 220	Statistics	4
BIO 206	Biostatistics & Experimental Design	4
PSY 201	Experimental Design and Statistics	4
SSC 252	Data Analysis for Social Science	4

*Plus three electives, including one elective (4 SH) from each of the following categories:*

Arts & Humanities Electives: ART 105, 120, 200, 208, ENG 130, 131, 411, 434, GEO 101, HIS 210, 228, 245, 281, 314, PHI 230

Communication Electives\*: BC/MJ 150, BC 251, COM 203, 207, 225, 301, PR 101, WRI 210, 301, 351, 352, 358

Science and Social Science Electives: BIO 105, 120, 113, CHE 105, ES 251, GEL 121, PAX 301, PS 104, 204, 222, 432, SOC 105, 260

\*To qualify as an elective, two projects completed by environmental studies students within the course must have connections to the environment, and students are encouraged to present one of the projects at URAC (April) or the Student Symposium on the Environment (December) during the semester the course is being taken.

**The Minor in Environmental Studies:** 28 semester hours, comprising:

*All of the following:*

ENV 201	Contemporary Environmental Issues	4
*PS 242	Environmental Policy and Politics	4

\*PS 101 is prerequisite to PS 242

*One of the following:*

ES 160	Principles of Environmental Science	4
ES 170	Project-Based Environmental Science	4

*One of the following:*

MTH 135	Concepts of Statistics	4
MTH 335	Statistics	4
BA/ECO 220	Statistics	4
BIO 206	Biostatistics & Experimental Design	4
PSY 201	Experimental Design and Statistics	4
SSC 252	Data Analysis for Social Science	4

*Plus one of the following:*

ENV 590	Internship	4
ENV 601	Environmental Studies Capstone	4

*Plus one elective (4 hrs) from:*

Arts & Humanities Electives: ART 105, 120, 200, 208, ENG 130, 131, 411, 434, GEO 101, HIS 210, 228, 245, 281, 314, PHI 230

Communication Electives\*: BC/MJ 150, BC 251, COM 203, 207, 225, 301, PR 101, WRI 210, 301, 351, 352, 358

\*To qualify as an elective, two projects completed by environmental studies students within the course must have connections to the environment, and students are encouraged to present one of the projects at URAC (April) or the Student Symposium on the Environment (December) during the semester the course is being taken.

Due to the number of overlapping courses, students will not be allowed to double-major or complete a combined major in Environmental Studies and Environmental Science. Additionally, students will not be able to major in Environmental Science and minor in Environmental Studies.

## Film Studies

*(Minor only)*

The Film Studies minor helps develop the ability to discuss, analyze, and write about film texts. As students progress through the program, they become more active and sophisticated readers of film through their introduction to the language systems that make up the film text; their focused studies in film adaptation, screenwriting, critical methods, and selected topics; and their experience in The Jake Erhardt International Film Series, which offers group viewings, discussions, and presentations. Film studies minors gain insight into film history as well as the way films both reflect and

influence the culture in which they were created. Students identify and use a range of sources suitable to the scholarly conversation of film to evaluate and integrate source material and to document accurately.

Film studies minors will demonstrate the ability to:

1. identify the ways in which film viewing can be seen as an active, not passive, process;
2. identify major messages and themes delivered through moving pictures;
3. engage in an informative exchange of ideas and insights;
4. identify and apply the basic language systems of film (photography, mise en scene, movement, editing, sound, acting, sets and costumes, writing, narrative structure, and ideology) to a reading of the film text;
5. discuss the historical and cultural context of American and International filmmaking and the way in which film reflects and influences the society in which it was made;
6. locate and cite key film studies sources and use filmic critical approaches to discuss film texts;
7. sustain controlled, critical, written analyses of film texts that synthesize the basic filmic language systems;
8. give well-planned, engaging, multi-media presentations.

**The Minor in Film Studies:** 24 semester hours, comprising:

FS 101	Introduction to Film Studies	4
FS 102	History of Film: A Survey	4
FS 501	Film Studies Practicum	2
FS 502	Film Studies Practicum	2

*Plus, one 100-level FS Selected Topics course* 4

*Plus, two other FS electives* 8

Students may opt to take a maximum of two Selected Topics courses, as long as they are different in content.

## Financial Economics

*(Major only)*

This program, sponsored by the School of Business, includes courses from accounting, business, and economics. The Financial Economics interdisciplinary degree offers students an economic background and develops skills for financial decision making and forecasting. Students pursuing this degree are interested in both economics and finance. Through this course of study students strengthen their ability to use analytical techniques for banking, financial analysis, and funds management. Imagine yourself an asset manager, investment banker, financial engineer, consultant, broker, or private equity/venture capital manager.

**The Major in Financial Economics:** 64 semester hours, comprising:

ACC 201	Principles of Accounting I	4
ACC 202	Principles of Accounting II	4
ACC 305	Intermediate Accounting I	4
ACC 306	Intermediate Accounting II	4
BA/ECO 220	Statistics	4
BA 225	Management Information Systems	4

BA 350	Finance	4
BA 380	Investments	4
ECO 150	Economic Reasoning	4
ECO 310	Managerial Economics	4
ECO 340	Money and Banking	4
ECO/BA 365	International Finance	4
ECO/BA 385	Financial Economics	4
ECO/BA 388	Corporate Credit Analysis	4
ECO 601/BA 330	Business Forecasting	4

*Plus, one of the following:*

MTH 131	Applied Calculus	4
MTH 150	Calculus I	4
MTH 152	Calculus II	4
MTH 250	Calculus III	4

## Fine Art

*(Major and minor)*

The fine art major is designed to meet the needs of the student who is interested in pursuing study in a variety of studio areas. Students are introduced to diverse art forms through foundation studies. First-year students must take the foundation courses prior to electives or upper-level courses. Art electives enable students to focus upon a specific concentration prior to taking the senior capstone course.

**The Major in Fine Art:** 40 semester hours, comprising:

ART 101	Basic Studio Art 2D	4
ART 102	Foundation Drawing	4
ART 107	Worlds of Art: Ideas and Images	4
ART 200	Basic Studio Art 3D	4
ART 303	Advanced Studies I	2
ART 590	Internship	2
ART 601	Capstone	4

*Plus, one of the following:*

ART 104	Beginning Oil Painting	4
ART 201	Waterbased Painting	4
ART 204	Drawing Explorations	4

*Plus, one of the following:*

ART 106	Handbuilding Ceramics	4
ART 202	Wheelthrowing Ceramics	4
ART 208	Introduction to Sculpture	4
ART 218	Contemporary Crafts	4

*Plus, at least two additional ART electives.* 8

**The Minor in Fine Art:** 28 semester hours, comprising:

ART 101	Basic Studio Art 2D	4
ART 102	Foundation Drawing	4
ART 200	Basic Studio Art 3D	4

*Plus, all of the following:*

One additional 2D course	4
One additional 3D course	4
Two ART electives	8

## French

*(Minor only)*

Westminster College does not offer a major in French; however, students who are interested in pursuing French as a field of study are invited to consult the program faculty to construct an Individual Interdisciplinary Major.

**The Minor in French:** 24 semester hours, comprising FR courses numbered 201 and higher.

## History

*(Major and minor)*

The program in history is designed to assist all students to develop an understanding of the varied eras of humankind's social and cultural heritage. As a major, history prepares students to pursue careers in numerous fields where the research, analytical, and presentation skills of an historian are useful. The history major is frequently used as a preparation for professional training in business, law, library science, or the ordained ministry. History majors also frequently teach social studies in secondary schools or pursue advanced degrees in history or related fields.

**The Major in History:** 48 semester hours, comprising:

HIS 101	History of Civilization to 1715	4
HIS 102	History of Civilization from 1715	4
HIS 410	Historical Methods and Analysis	4
HIS 420	Historiography	4
HIS 590	Internship	4
HIS 601	History Capstone I	2
HIS 602	History Capstone II	2

*History majors seeking secondary education teacher certification must use EDU 452 in place of HIS 590. Majors enrolled in the All-College Honors Program must use HIS 664 in place of HIS 601.*

*Plus, two of the following courses in American history:*

HIS 105	America to 1877	4
HIS 106	America since 1865	4
HIS 210	History of Pennsylvania	2
HIS 222	Social & Intellectual History of the US	4
HIS 223	African-American History	4
HIS 225	From Elvis to Watergate: US Hist. 1945-74	4
HIS 226	The American Civil War	4
HIS 228	Disease in US History	4
HIS 229	History of the United States and the World	4

*History majors seeking secondary education teacher certification must include HIS 210 as one of the two courses in this distribution.*

*Plus, one of the following courses in non-Western history:*

HIS 251	Medieval and Early Modern Russia	4
HIS 252	Modern Russia	4
HIS 253	The Baptism of Rus: A Hist. of Rel. in Russia	4
HIS 261	China	4
HIS 262	Japan	4
HIS 271	Latin America to 1825	4
HIS 272	Latin America from 1825	4
HIS 281	Africa to 1800	4
HIS 282	Africa since 1800	4

*Plus, one HIS course numbered 301-320.* 4

*Plus, two HIS electives.* 8

In fulfilling the above distributions, history majors must select courses that concurrently fulfill a chronological distribution requirement consisting of one course (four semester hours) whose content is primarily focused on each of the following periods:

Ancient/Medieval (prior to 1300): 232, 233, 234, 235, 271, 281

Early Modern (1300-1789): 105, 240, 241, 242, 251

Modern (after 1789): 106, 222, 223, 225, 226, 228, 229, 243, 245, 246, 249, 252, 253, 272, 282

For majors who are not seeking secondary education certification, no additional supporting courses from other disciplines are required. For majors who are seeking secondary education certification, the required supporting courses from other disciplines are listed below.

**Requirements for Secondary Education Teacher Certification:** Students who desire secondary education teacher certification in social studies with a major in history must successfully complete all requirements for the major as described above, plus the following supporting courses:

GEO 101	World Geography	4
ECO 150	Economic Reasoning	4
PS 102	Introduction to American Politics	4
PS 104	Introduction to International Relations	4

*Plus, one of the following:*

SOC 101	Principles of Sociology	4
SOC 105	Cultural Anthropology	4

Plus, the minor in Secondary Education.

*They are also strongly encouraged to take HIS 450 - Teaching Social Studies in Secondary Schools (2 SH).*

The prerequisites for admission to the Senior Teaching and Learning Block in Education are cumulative GPA of 3.000 in all college work and a 3.000 in the major.

Students who are interested in secondary education should contact the chair of the School of Education as soon as possible for complete information. If all requirements are to be completed in four years, careful planning in both the major field and in the minor is essential.

*Interdisciplinary Program:* Students pursuing an International Studies major may

choose an emphasis in history.

*All-College Honors Program:* The program encourages eligible history majors to pursue entrance into the All-College Honors Program.

**The Minor in History:** 24 semester hours, comprising:

*One of the following courses in European history:*

HIS 232	Ancient Greece	4
HIS 233	Rome	4
HIS 234	Early Christianity: Christ and Caesar	4
HIS 235	The Middle Ages, 300-1300	4
HIS 240	Renaissance and Reformation, 1300-1600	4
HIS 241	Early Modern France, 1600-1815	4
HIS 242	England: The Age of Elizabeth I	4
HIS 243	England: The Age of Empire	4
HIS 245	Nineteenth Century Europe	4
HIS 246	Twentieth Century Europe	4

*Plus, one of the following courses in American history:*

HIS 105	America to 1877	4
HIS 106	America since 1865	4
HIS 210	History of Pennsylvania	4
HIS 222	Social & Intellectual History of the US	4
HIS 223	African-American History	4
HIS 225	From Elvis to Watergate: US Hist. 1945-74	4
HIS 226	The American Civil War	4
HIS 228	Disease in US History	4
HIS 229	History of the United States and the World	4

*Plus, one of the following courses in non-Western history:*

HIS 251	Medieval and Early Modern Russia	4
HIS 252	Modern Russia	4
HIS 253	The Baptism of Rus: A Hist. of Rel. in Russia	4
HIS 261	China	4
HIS 262	Japan	4
HIS 271	Latin America to 1825	4
HIS 272	Latin America from 1825	4
HIS 281	Africa to 1800	4
HIS 282	Africa since 1800	4

*Plus, one HIS course numbered 301-320.* 4

*Plus, two HIS electives.* 8

# Human Resources

*(Minor only)*

**The Minor in Human Resources:** 28 semester hours, comprising:

ACC 201	Principles of Accounting I	4
BA 310	Organizations and Management	4
BA 360	Human Resources Management	4
BA 361	Compensation and Benefits	4
BA 362	Employment and Labor Law	4
ECO 150	Economic Reasoning	4

*Plus, one of the following:*

BA/ECO 220	Statistics	4
BIO 206	Biostatistics and Experimental Design	4
MTH 135	Concepts of Statistics	4
MTH 335	Statistics	4
PS 301	Research Design & Analysis in Political Science	4
PSY 201	Experimental Design and Statistics	4
SSC 252	Data Analysis for Social Science	4

# Human Resource Management

*(Major only)*

The Human Resources Management major enables students to apply concepts, theories, and methods to organizational processes, with an emphasis on human resources functions. With a solid course background in business, psychology, and related disciplines, students in this major will be prepared to assess and explain organizational phenomena from multiple disciplinary lenses; to understand the importance of various technologies for and their effects on human resources functions; and to develop an awareness of multicultural and global issues that relate to organizational behavior.

This major will prepare students for direct employment in such human resources functions as: worker selection, worker evaluation and career development, benefits administration, human relations, training, employment law, and program and institutional evaluation, as well as for graduate work in human resource management or organizational psychology programs.

**The Major in Human Resources Management:** 64 semester hours, comprising:

ACC 201	Principles of Accounting I	4
BA 140	Introduction to Business	4
BA 160	Personal Financial Decisions	4
BA 220	Statistics	4
BA 225	Management Information Systems	4
BA 260	Foundations of Leadership and Development	4
BA 310	Organizations and Management	4
BA 360	Human Resources Management	4
BA 361	Compensation and Benefits	4
BA 362	Employment and Labor Law	4
BA 370	Business Law	4
BA 601	Strategic Management & Leadership Capstone	4



ECO 150	Economic Reasoning	4
PSY 101	Introduction to Psychology	4
<i>Plus, two of the following:</i>		
BA 250	Principles & Practices of Project Management	4
COM 207	Business and Professional Communication	4
PHI 250	Business Ethics	4
PSY 235	Psychology of Women	4
SOC 108	Social Problems, Social Policies	4
BA 590	Internship	4

## International Business

*(Major only)*

This program, sponsored by the School of Business and the Division of Communications, Arts, Languages, and Literature, is composed of designated courses from the following disciplines: business, modern languages, economics, political science, and international cultures/religions. The International Business interdisciplinary degree equips students with cultural and language knowledge to complement an intensive background in business. Students in this program graduate with a background in the international aspects of economics and business with a proficiency in a second language, with special emphasis on the concepts of management, marketing, and finance. Imagine yourself an International Business expatriate worker, international economist, international trade specialist, import compliance specialist, or cultural adviser.

**The Major in International Business:** 64 semester hours, comprising:

ACC 201	Principles of Accounting I	4
ACC 202	Principles of Accounting II	4
BA 140	Introduction to Business	4
BA/ECO 220	Statistics	4
BA 225	Management Information Systems	4
BA 305	Marketing	4
BA 310	Organizations and Management	4
BA 350	Finance	4
BA/ECO 365	International Finance	4
BA 410	Global Marketing Management	4
BA 601	Strategic Management (Capstone)	4
ECO 150	Economic Reasoning	4

*Plus, one of the following:*

MTH 131	Applied Calculus	4
MTH 150	Calculus I	4
MTH 152	Calculus II	4
MTH 250	Calculus III	4

*Plus, one of the following:*

PS 104	Introduction to International Relations	4
PS 431	International Law and Organization	4

*Plus, one of the following:*

IC 101	The World of Language	4
IC 102	Reading the World	4
REL 170	Basic Introduction to Religion in the World	4
REL 171	Religion in the Western World	4
REL 172	Religions from India	4
REL 173	Religion in China	4
SOC 105	Cultural Anthropology	4

*Plus, one of the following:*

FR 302	Advanced Conversation & Composition II	4
SPA 302	Advanced Conversation & Composition II	4

*Plus, a one-semester international "Work/Study Abroad" experience arranged through Westminster College.*

To be eligible for international study, students must have an all-college GPA of at least 2.500. During the one-semester abroad experience, the courses taken or the work experience must focus on acquiring knowledge and skills in business or economics. Generally, the location of the experience should promote increased foreign language proficiency.

## International Studies

*(Major and minor)*

This program consists of a designated core of courses taken by all majors and three concentrations of designated and elective courses. International studies majors select one concentration in either International Politics, Peace and Justice Studies, or Cultural Studies. The purpose of the program is to prepare students for careers and graduate study in an increasingly globally-integrated world. Students should consult with the faculty adviser, listed below, for the concentration and emphasis that they select. All students in the major participate in an approved study abroad or off-campus study program for at least 10 weeks. Program coordinator, Dr. Sherri Pataki.

**The Major in International Studies:** 24 semester hours of core courses, comprising:

GEO 101	World Geography	4
IS 101	Introduction to International Studies	4
PS 104	Introduction to International Relations	4

*Plus, one of the following sequences:*

FR 202	Intermediate French II	4
FR 301	Advanced Conversation and Composition	4
FR 302	Advanced Conversation and Composition II	4

*or*

SPA 202	Intermediate Spanish II	4
SPA 301	Advanced Conversation and Composition	4
SPA 302	Advanced Conversation and Composition II	4

*Plus, students select one of the following concentrations:*

**International Politics Concentration:** 36 semester hours, comprising:

PS 101	Introduction to Politics	4
--------	--------------------------	---

*Plus, four of the following, not to include more than one course at the 100-level:*

PS 102	Introduction to American Politics	4
PS 103	Introduction to Political Philosophy	4
PS 204	Model United Nations (x4)	4
PS 222	Political Ideologies	4
PS 232	European Politics	4
PS 233	Politics in Developing Countries	4
PS 235	African Politics	4
PS 236	Russian Politics	4
PS 254	Political Science Seminar	4
PS 255	Political Science Seminar	4
PS 331	Geopolitics	4
PS 332	US Foreign Policy	4
PS 342	Politics and the Economy	4
PS 431	International Law and Organization	4

*Plus, two of the following general concentration electives :*

ECO 365	International Finance	4
HIS 246	Twentieth Century Europe	4
HIS 252	Modern Russia	4
HIS 261	China	4
HIS 262	Japan	4
HIS 272	Latin America from 1825	4
HIS 282	Africa since 1800	4
HIS 303	The Vietnam War	4
HIS 308	Cold War	4
HIS 311	South Africa	4
REL 162	Eastern Orthodox Christianity	4
REL 171	Religion in the Western World	4
REL 172	Religions from India	4
REL 173	Religion in China	4
SOC 105	Cultural Anthropology	4
SOC 215	Women in Cross-Cultural Perspective	4
SOC 304	Social Change	4

*Plus, either (a) or (b) below:*

*(a) One of the following:*

SSC 251	Research Methods for Social Science	4
SSC 252	Data Analysis for Social Science	4

*Plus, one of the following:*

FR 601	Capstone	4
SPA 601	Capstone	4

*(b) All of the following:*

PS 301	Research Design & Analysis in Poli. Sci.	4
PS 601	Capstone	4

*Plus, a semester of Study Abroad or an approved off-campus study program.*

Faculty adviser, Dr. Michael Aleprete.

**Peace and Justice Studies Concentration:** 36 semester hours, comprised of the following:

PAX 301	Advanced Peace Studies Seminar	4
SOC 350	Social Theory	4
SOC 601	Sociology Capstone	4

*One of the following:*

SSC 251	Research Methods for Social Science	4
SSC 252	Data Analysis for Social Science	4

*Plus, 20 semester hours selected from the following, with no more than 8 hours at the 100-level. At least 8 semester hours must be taken from CJS, PSY, and/or SOC:*

CJS 202	Criminology	4
CJS 206	Corrections	2
CJS 207	The Death Penalty	2
CJS 302	The Sociology of Law and Legal Systems	4
ES 160	Concepts of Environmental Science	4
HIS 102	History of Civilization to 1715	4
HIS 223	African-American History	4
HIS 246	20th Century Europe	4
HIS 252	Modern Russia	4
HIS 272	Latin America from 1825	4
HIS 282	Africa since 1800	4
HIS 308	Cold War	4
HIS 310	Slavery in America	4
HIS 311	South Africa	4
PHI 230	Environmental Ethics	4
PS 204	Model United Nations	1
PS 222	Political Ideologies	4
PS232	European Politics	4
PS233	Politics in Developing Countries	4
PS 235	African Politics	4
PS 236	Russian Politics	4
PS 254 (or 255)	Sem. in Comparative (or International) Pol.	4
PS 331	Geopolitics	4
PS 332	US Foreign Policy	4
PS 431	International Law and Organization	4
PSY 213	Psychology of Prejudice	4
PSY 235	Psychology of Women	4
REL 170	Basic Introduction to Religion in the World	4
REL 171	Religion in the Western World	4
REL 172	Religions from India	4
REL 173	Religion in China	4
SOC 105	Cultural Anthropology	4
SOC 209	Minority-Majority Relations	4
SOC 215	Women in Cross-Cultural Perspective	4
SOC 241	Sociology of Violence and Nonviolence	4

SOC 260	Food Culture and Society	4
SOC 590	Field Experience/Internship	1-4

**Cultural Studies Concentration:** The student chooses an emphasis in history or modern languages. 36 semester hours, comprising:

*Eight semester hours of Cultural Studies Concentration electives from ONE of the following options:*

1. Two CLC (Studies in World Literature and Culture) courses;
2. MUS 101 and 102;
3. REL 170, 171, 172, 173, 176;
4. Or, substitute eight semester hours from one additional discipline in the humanities, with included courses approved by the International Studies Committee.

*Plus, one additional elective from any of the Cultural Studies Concentration electives listed above.*

*Plus, a semester of Study Abroad or an approved off-campus study program.*

*Plus, either the History or Modern Languages Emphasis:*

#### **History Emphasis:**

HIS 410	Historical Methods and Analysis	4
HIS 420	Historiography	4
HIS 590	Internship (with international focus)	4
HIS 601	History Capstone I	4

*Plus, two of the following, including at least one at the 300-level:*

HIS 240	Renaissance and Reformation, 1300-1600	4
HIS 241	Early Modern France, 1600-1815	4
HIS 242	England: The Age of Elizabeth I	4
HIS 243	England: The Age of Empire	4
HIS 245	Nineteenth Century Europe	4
HIS 246	Twentieth Century Europe	4
HIS 251	Medieval and Early Modern Russia	4
HIS 252	Modern Russia	4
HIS 253	The Baptism of Rus: A Hist. of Rel. in Russia	4
HIS 261	China	4
HIS 262	Japan	4
HIS 271	Latin America to 1825	4
HIS 272	Latin America from 1825	4
HIS 281	Africa to 1800	4
HIS 282	Africa since 1800	4
HIS 305	Marriage, Family and Sexuality in History	4
HIS 307	Monarchs and Dynasties	4
HIS 308	Cold War	4
HIS 311	South Africa	4
HIS 312	Topic in History and Film	4

#### **Modern Languages Emphasis:**

IC 102	The World of Language	4
--------	-----------------------	---

FR or SPA 590	Internship	4
FR or SPA 601	Capstone	4
<i>Plus, three courses in FR or SPA above the 302 level.</i>		12

History emphasis faculty adviser, Dr. Patricia Clark. Modern languages emphasis faculty adviser, Dr. Ann Murphy Dammron.

Foreign language requirements in the International Studies program may be met through advanced language coursework, taken as part of the approved Study Abroad or off-campus experience, in languages other than those offered by Westminster College.

The main discipline(s) in a particular concentration cannot be combined with those majors that comprise that concentration. The following combinations are not allowed:

1. International politics concentration cannot be combined with a political science major;
2. Global development concentration cannot be combined with history or sociology majors;
3. Cultural studies concentration cannot be combined with history or modern language majors.

International studies majors may minor in the main discipline(s) which comprise(s) that concentration, but no more than two courses may count towards both the international studies major and disciplinary minor.

*EXAMPLE: An international studies major with an international politics concentration may also minor in political science. However, he or she may not use more than two international studies courses towards the political science minor.*

There are no restrictions on double counting courses for double majors beyond the College-wide requirement of taking two capstones.

**The Minor in International Studies:** The minor in international studies is intended to serve students whose major coursework does not allow room for a double major in international studies but whose interests, and proposed careers or graduate study, include an international component. An approved travel course is strongly recommended to fulfill minor requirements. 24 semester hours, comprising:

GEO 101	World Geography	4
IS 101	Introduction to International Studies	4
PS 104	Introduction to International Relations	4

*Plus, one of the following:*

FR 202	Intermediate French II	4
GER 202	Intermediate German II	4
SPA 202	Intermediate Spanish II	4

*Plus, two additional 200-level or above electives from the same discipline and that lie outside the student's declared major:*

PS 204	Model United Nations (x4)	4
PS 222	Political Ideologies	4
PS 232	European Politics	4

PS 233	Politics in Developing Countries	4
PS 235	African Politics	4
PS 236	Russian Politics	4
PS 254	Political Science Seminar	4
PS 255	Political Science Seminar	4
PS 331	Geopolitics	4
PS 332	US Foreign Policy	4
PS 342	Politics and the Economy	4
PS 431	International Law and Organization	4
HIS 241	Early Modern France, 1600-1815	4
HIS 242	England: The Age of Elizabeth I	4
HIS 243	England: The Age of Empire	4
HIS 245	Nineteenth Century Europe	4
HIS 246	Twentieth Century Europe	4
HIS 251	Medieval and Early Modern Russia	4
HIS 252	Modern Russia	4
HIS 253	The Baptism of Rus: A Hist. of Rel. in Russia	4
HIS 261	China	4
HIS 262	Japan	4
HIS 271	Latin America to 1825	4
HIS 272	Latin America from 1825	4
HIS 281	Africa to 1800	4
HIS 282	Africa since 1800	4
HIS 303	The Vietnam War	4
HIS 305	Marriage, Family and Sexuality in History	4
HIS 307	Monarchs and Dynasties	4
HIS 308	Cold War	4
HIS 311	South Africa	4
HIS 312	Topic in History and Film	4
HIS 410	Historical Methods and Analysis	4
HIS 420	Historiography	4
HIS 590	Internship (must have international content)	4
SOC 215	Women in Cross-Cultural Perspective	4
SOC 304	Social Change	4
SOC 590	Internship	4

Any major may be combined with a minor in international studies. However, the required two upper division electives in the international studies minor may not be met using courses from the student's major.

# Legal Studies

*(Minor only)*

The minor in legal studies offers a structured way for our undergraduates to study the law in the context of the liberal arts. The program is not intended as a “preparation” for law school, but rather as an introduction to the role of law and the legal system available to any student with an interest in this essential part of our social and political lives. At the same time, it provides a useful way for students planning to attend law school to organize a course of study that will help develop some of the skills, abilities, and knowledge helpful for success in law school. NOTE: The minor in legal studies is NOT required for students attending law school.

The courses that satisfy the minor are organized into two general categories – courses with a substantive focus in one or more aspects of the law, and supporting courses that emphasize key skills beneficial to the analysis of the law and the pursuit of a legal career. Students have to complete 16 semester hours in the first group and eight semester hours in the second group, for a total of 24 semester hours. Any suggestions for additional courses to be included in the minor should be sent to the chair of the program of Political Science.

**The Minor in Legal Studies:** 24 semester hours, comprising:

*Sixteen semester hours from Category I – Substantive Areas of Law:*

BA 370	Business Law	4
CJS 102	Deviance	4
CJS 202	Criminology	4
CJS 203	Victimology	2
CJS 204	Police	2
CJS 205	Courts	2
CJS 206	Corrections	2
CJS 207	The Death Penalty	2
CJS 302	Sociology of Law and Legal Systems	4
ENG 120	Law, Literature, and Film	4
PS 214	The Courts	4
PS 242	Environmental Policy and Politics	4
PS 252B	Trials of the Century	4
PS 253	Seminar in Political Philosophy	4
PS 321	American Const. Law: Government Powers	4
PS 322	American Const. Law: Civil Liberties	4
PS 431	International Law and Organization	4
PSY 275	Forensic Psychology	4

*Eight semester hours from Category II – Supporting Courses:*

ACC 201	Principles of Accounting I	4
ACC 202	Principles of Accounting II	4
ECO 150	Economic Reasoning	4
HIS 105	America to 1877	4
HIS 106	America since 1865	4
PHI 101	Problems of Philosophy	4
PHI 102	Practical Logic	4
PHI 135	Ancient Greek Justice	4



PS 102	Introduction to American Politics	4
PS 103	Introduction to Political Philosophy	4
PS 221	Public Policy	4
REL 140	Old Testament/Hebrew Bible	4
REL 141	The Torah: The First Five Books of the Bible	4

LAW 590 Internship: Students may count one four semester hour LAW internship towards the requirements for the minor (it can substitute for one regular course in either category).

NOTE: Students pursuing the legal studies minor will be subject to the following restriction: Only one course in the minor can also count for credit towards a student's major and/or other minor(s).

## Management for Scientists

*(Minor only)*

The minor in Management for Scientists is available to students with a major in Biology, Biochemistry, Chemistry, Environmental Science, Molecular Biology, Neuroscience, and Physics.

**The Minor in Management for Scientists:** 28 semester hours, comprising:

ACC 201	Principles of Accounting I	4
BA 305	Marketing	4
BA 310	Organizations and Management	4
ECO 150	Economic Reasoning	4

*Plus, one of the following:*

BA/ECO 220	Statistics	4
BIO 206	Biostatistics and Experimental Design	4
MTH 135	Concepts of Statistics	4
MTH 335	Statistics	4
PS 301	Research Design & Analysis in Political Science	4
PSY 201	Experimental Design and Statistics	4
SSC 252	Data Analysis for Social Science	4

*Plus, two of the following:*

BA 225	Management Information Systems	4
PHI 230	Environmental Ethics	4
PS 241	Public Policy	4
PS 242	Environmental Policy and Politics	4

## Marketing and Professional Sales

*(Major only)*

This program, sponsored by the School of Business, includes courses from accounting, business, economics, and public relations. Majors in Marketing and Professional Sales will explore the managerial approach to developing processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large. Special emphasis will be placed on planning, implementing, and controlling product development, pricing, promotion, and distribution management strategies as carried out by producers, wholesalers and retailers. Students earning a degree in Marketing and Professional Sales will undertake

course offerings pertaining to marketing management, marketing theory, consumer purchasing behavior, global brand management, and social media marketing. The culmination of general business courses and marketing specific courses will prepare students for a wide variety of career opportunities. Imagine yourself an advertising agent, a PR specialist, a corporate marketer, a market researcher, a brand manager, a sales and retailing departmental specialist, or a customer relationship manager.

**The Major in Marketing and Professional Sales:** 64 semester hours, comprising:

ACC 201	Principles of Accounting I	4
BA 140	Introduction to Business	4
BA/ECO 220	Statistics	4
BA 221	Marketing Research Methods	4
BA 225	Management Information Systems	4
BA 305	Marketing	4
BA 310	Organizations and Management	4
BA 345	Sales, Business Development, and Big Data	4
BA 370	Business Law	4
BA 601	Strategic Management (Capstone)	4
COM 303	Sales Communication	4
ECO 150	Economic Reasoning	4

*Plus, one of the following:*

MTH 131	Applied Calculus	4
MTH 150	Calculus I	4
MTH 152	Calculus II	4
MTH 250	Calculus III	4

*Plus, three of the following:*

BA 240	Entrepreneurship	4
BA 326	E-Commerce Marketing	4
BA 335	Sports/Event Planning and Management	4
BA 390	Buyer Behavior	4
BA 410	Global Marketing Management	4
BA 590	Internship	4
PR 202	Advertising & PR: Approaches & Methods	4

## Marketing

*(Minor only)*

**The Minor in Marketing:** 28 semester hours, comprising:

ACC 201	Principles of Accounting I	4
BA 305	Marketing	4
ECO 150	Economic Reasoning	4

*Plus, one of the following:*

BA/ECO 220	Statistics	4
BIO 206	Biostatistics and Experimental Design	4
MTH 135	Concepts of Statistics	4
MTH 335	Statistics	4
PS 301	Research Design & Analysis in Poli. Sci.	4

PSY 201	Experimental Design and Statistics	4
SSC 252	Data Analysis for Social Science	4

*Plus, three of the following:*

BA 221	Marketing Research Methods	4
BA 326	E-Commerce Marketing	4
BA 345	Sales, Business Development, & Big Data	4
BA 390	Buyer Behavior	4
BA 410	Global Marketing Management	4
COM 303	Sales Communication	4
PR 202	Advertising and Public Relations	4

## Materials Science

*(Major and minor)*

The B.S. in Materials Science is supported by the chemistry and physics programs. Materials science is an applied science program that includes study and research into the structures and chemical properties of various natural and synthetic or composite materials, including metals, alloys, rubber, ceramics, semiconductors, polymers, and glass. Students in this program will learn the skills necessary to develop new materials as well as develop the expertise required to have successful careers in materials science. Program coordinator, Dr. Peter Smith.

**The Major in Materials Science:** 64 semester hours, comprising:

CHE 117	Principles of Chemistry	4
CHE 180	Inorganic Chemistry	4
CHE 261	Organic Chemistry I	4
MSE 211	Statics and Mechanics of Materials	4
MSE 231	Science and Engineering of Materials	4
MSE 241	Semiconductor Physics	4
MSE 320	Solid State Chemistry	4
MSE 360	Polymer Chemistry	4
MSE 601	Capstone I: Professional Preparation	2
MSE 602	Capstone II: Senior Research	2
MTH 152	Calculus II	4
MTH 250	Calculus III	4
PHY 151	Principles of Physics I	4
PHY 152	Principles of Physics II	4

*Plus, one of the following:*

CHE 336	Quantum Mechanics and Spectroscopy	4
CHE 337	Thermodynamics and Kinetics	4

*Plus, eight semester hours from the following:*

CHE 230	Chemical Analysis	4
CHE 231	Environmental Analysis	4
CHE 262	Organic Chemistry II	4
CHE 336	Quantum Mechanics and Spectroscopy	4
CHE 337	Thermodynamics and Kinetics	4
CHE 340	Instrumental Analysis	4
CHE 391	Advanced Inorganic Chemistry	4
CHE 451	Advanced Laboratory: Synthesis and Analysis	4
CHE 452	Advanced Laboratory: Research Methods	2

CS 151	Principles of Computer Science I	4
MSE 221	Principles of Electrical Engineering	4
MSE 620	Independent Study	1-4
MTH 253	Differential Equations	4
MTH 261	Linear Algebra	4
PHY 311	Thermal Physics	4
PHY 313	Modern Physics	4
PHY 321	Experimental Physics I	2
PHY 322	Experimental Physics II	2

**The Minor in Materials Science:** 24 semester hours, comprising:

MSE 231	Science and Engineering of Materials	4
---------	--------------------------------------	---

*One of the following pairs:*

CHE 117	Principles of Chemistry	4
CHE 180	Inorganic Chemistry	4
<i>or</i>		
PHY 151	Principles of Physics I	4
PHY 152	Principles of Physics II	4

*Plus, 12 additional semester hours from courses designated MSE.* 12

All students except engineering physics majors are eligible to declare this minor.

Honors scholars majoring in materials science are expected to register for 2 SH of Honors Research in the spring of their junior year (MSE 662), 4 SH of Honors Research in the fall of their senior year (MSE 674), and 2 SH of Honors Research in the spring of their senior year (MSE 682). Additionally, all biochemistry or chemistry honors scholars are required to enroll in MSE 451, 452, 601, and 602.

## Mathematics

*(Major and minor)*

The Mathematics program at Westminster offers the opportunity for students to acquire mathematical knowledge and develop thought processes that are fundamental to their liberal arts education. Students who complete the program successfully are prepared for a variety of careers in business, industry, and education as well as graduate work.

**The Major in Mathematics:** A minimum of 48 semester hours of coursework, comprising:

CS 151	Principles of Computer Science I	4
MTH 152	Calculus II	4
MTH 241	Discrete Mathematics	4
MTH 250	Calculus III	4
MTH 261	Linear Algebra	4
MTH 361	Abstract Algebra	4
MTH 451	Real Analysis	4
MTH 601	Capstone	4

*Plus, either MTH 150 (Calculus I) and at least 12 semester hours of mathematics courses numbered 300 or higher, OR at least 16 semester hours of mathematics courses numbered 253 or higher.*

*Plus, one of the following: CS 152; OR CS 130 and CS 230; OR PHY 151 and PHY 152; OR two chemistry courses at the 117 level or higher; OR ECO 385 and BA 330/*

*ECO 601; OR a minor in any discipline; OR a second major in any discipline.*

NOTE: MTH 431 cannot be used for either the mathematics major or minor.

**The Minor in Mathematics:** 24 semester hours of mathematics courses numbered 150 or higher, comprising:

MTH 152	Calculus II	4
MTH 241	Discrete Mathematics	4
MTH 250	Calculus III	4

*One of the following:*

MTH 253	Differential Equations	4
MTH 261	Linear Algebra	4

*Plus, at least four semester hours of mathematics courses numbered 300 or higher.*

NOTE: MTH 431 cannot be used for either the mathematics major or minor.

**Internship/Field Experience:** A student may wish to arrange an off-campus experience with a business, industry, service agency, high school, governmental office, or another appropriate organization. The course credit for an internship depends on the length and the actual learning situation. Students work with the academic adviser to determine the credit. Many of the supervising organizations pay a salary, although this is not necessary. We believe that this is a valuable learning experience for an individual during the junior or senior year.

**Graduation Requirements:** All prerequisite courses must be completed with a grade of C- or higher before subsequent courses can be taken. In addition to the above, the minor in secondary education must comply with the certification requirements listed on the next page. A student who earns a grade lower than C- in three courses in the major prior to registering for the Capstone course (MTH 601) will be identified as not making progress in the major. (Exceptions will be made for students who take a medical or personal leave for the semester). Students who are not making progress in the major will not be allowed to register for the capstone course, a requirement for completion of the major.

**Transient Credit Policy:** Students who use transient credit (that is, transfer credit from another college or university) to satisfy course requirements in Westminster's mathematics major or mathematics minor may NOT get transient credit for more than four semester hours of mathematics courses that are 200 level or above with the exception of courses equivalent to Westminster's MTH 250 (Calculus III), MTH 253 (Differential Equations) or MTH 241 (Discrete Mathematics). These restrictions hold for any external course whether it is a traditional classroom style or online.

**All-College Honors:** The All-College Honors Research Project will replace the capstone requirement for students majoring in mathematics, if successfully completed. Students do not need to register for both Honors Research and the capstone course in the mathematics program.

**Secondary Education Teacher Certification:** To be eligible for certification in mathematics, in addition to the courses listed above, students must successfully complete MTH 302, 331, 335, and 431; the requirements for graduation listed in the Academic Policies section of this Catalog; 6 semester hours of computer science, and the minor in secondary education. Requirements for the minor are listed under the Education Program. The prerequisites for admission to Senior Block are a cumulative GPA of 3.000 in all college course work and 3.000 in the major. Students who are interested in secondary education should contact the chair of the School of

Education as soon as possible for complete information. If all the requirements are to be completed in four years, careful planning in both the major field and in the minor is essential.

# Molecular Biology

*(Major and minor)*

**The Major in Molecular Biology:** 64 semester hours, comprising:

BIO 201	Cell Biology and Genetics	4
BIO 202	Organismal Biology and Ecology	4
BIO 206	Biostatistics and Experimental Design	4
BIO 302	Cell and Molecular Biology	4
BIO 303	Molecular Genetics and Heredity	4
BIO 601	Capstone I	2
BIO 602	Capstone II	2
CHE 117	Principles of Chemistry	4
CHE 261	Organic Chemistry I	4

*Plus, one of the following:*

PHY 141	Foundations of Physics I	4
PHY 151	Principles of Physics I	4

*Plus, one of the following:*

CHE 262	Organic Chemistry II	4
CHE 381	Biochemistry Principles	4

*Plus, one of the following:*

MTH 131	Applied Calculus	4
MTH 150	Calculus I	4
MTH 152	Calculus II	4

*Plus, one of the following:*

BIO 301	Microbiology	4
BIO 304	Developmental Biology	4
BIO 334	Physiology	4

*Plus, two of the following:*

BIO 401	Recombinant DNA and Biotechnology	4
BIO 403	Biology of Cancer	4
BIO 404	Nuclear Structure and Function	4
BIO 405	Bioinformatics Explorations	4

*Plus, one of the following not already taken:*

BIO 301	Microbiology	4
BIO 304	Developmental Biology	4
BIO 334	Physiology	4
BIO 401	Recombinant DNA and Biotechnology	4
BIO 403	Biology of Cancer	4
BIO 404	Nuclear Structure and Function	4
CHE 382	Metabolic Chemistry	4
CHE 383	Biochemistry Methods	4

*Plus, four hours of research from the following:*

BIO 590	Internship	4
---------	------------	---

BIO 620	Independent Study	4
BIO 660-690	Honors Research	4

Honors Scholars majoring in biology or molecular biology are expected to attend and participate in BIO 601 while they write their Honors proposal and participate in BIO 602 while they complete their research.

A student who completes three biology courses (BIO prefix) and earns a grade lower than C- in each course prior to registering for BIO 601 will be identified as not making progress in the major. (Exceptions will be made for students who take a medical or personal leave for the semester). Students who are not making progress in the major will not be allowed to continue as a biology or molecular biology major.

Students cannot register for BIO 601 (Biology Capstone I) unless their major GPA is above a 2.0 and they are making progress in the major.

**The Minor in Molecular Biology:** 24 semester hours, comprising:

BIO 201	Cell Biology and Genetics	4
BIO 202	Organismal Biology and Ecology	4
BIO 302	Cell and Molecular Biology	4
BIO 303	Molecular Genetics and Heredity	4

*Plus, two of the following:*

BIO 401	Recombinant DNA and Biotechnology	4
BIO 403	Biology of Cancer	4
BIO 404	Nuclear Structure and Function	4
BIO 405	Bioinformatics Explorations	4

NOTE: A student may not use any combination of the following majors to complete a double major: biology, molecular biology, neuroscience, or environmental science. Students must petition the biology program for a biology or molecular biology minor.

## Multimedia Journalism

*(Major and minor)*

**The Major in Multimedia Journalism:** 64 semester hours, comprising:

BC 251	Single Camera Video Production	4
BC/COM 253	Mass Communications	4
COM 301	Applied Social Media	4
CS 201	Web Design	4
MJ 111	Writing for Electronic Media	4
MJ 120	Broadcast Practicum (x4)	4
MJ 150	Digital Media Essentials	4
MJ 201	Journalism I	4
MJ 202	Converged Journalism	4
MJ 311	Broadcast and Digital Journalism	4
MJ 312	Advanced Digital Reporting	4
MJ 590	Internship	4
MJ 601	Documentary & Research Production	4
MJ 602	Documentary Productions & Post-Prod	4

*Plus, one of the following:*

BC 101	Radio and TV Fundamentals	4
--------	---------------------------	---

BC 102	Audio Production	4
<i>Plus, one of the following:</i>		
COM 225	Communication Ethics	4
PR 310	Ethics in PR, Advertising, & Journalism	4

**The Minor in Multimedia Journalism:** 26 semester hours, comprising:

MJ 111	Writing for Electronic Media	4
MJ 120	Broadcast Practicum (x2)	2
MJ 201	Journalism I	4
MJ 311	Broadcast and Digital Journalism	4

*Plus, three of the following, not to include both COM 225 and PR 310:*

MJ 150	Digital Media Essentials	4
BC 251	Single Camera Video Production	4
MJ 312	Advanced Digital Reporting	4
MJ 590	Internship	4
COM 301	Applied Social Media	4
COM 225	Communication Ethics	4
PR 310	Ethics in PR, Advertising, & Journalism	4
MJ 202	Converged Journalism	4

## Music

*(Majors and minor)*

**Program Mission:** The School of Music seeks to provide professional training to talented students who pursue careers as performers, teachers, and scholars, and to offer experiences in music to all persons of the College and community, thereby enriching cultural backgrounds and developing musical skills.

**Program Goals:** The School of Music thus realizes its mission in men and women who as music majors:

- Develop intellectual curiosity about, and the ability to evaluate, the meaning of music and its role in mankind's search for aesthetic communication and human understanding;
- Strive to become sensitive, well-rounded musicians, through the development of technical proficiency and corresponding creative ability in their primary area(s) of musical performance;
- Develop basic and advanced musicianship skills, and acquire a broad knowledge of historical musical styles;
- Commit themselves to a lifetime of increasing musical awareness and appreciation in their own lives and in their respective communities.

**Program Objectives:** Students who major in music will demonstrate achievement in the field of music by:

- Demonstrating individual technical proficiency and musical sensitivity, as well as group performance skills, through the performing of solo, small ensemble, and large ensemble music, in their primary areas of performance;
- Successfully completing courses in music theory which develop basic musicianship skills and which study the constructs and compositional techniques of music and its evolution through time;



- Successfully completing courses in music history and literature in which they acquire an in-depth understanding of music and its societal relationships from the earliest recorded time through the present;
- Successfully completing courses in music pedagogy (music education, techniques, methods) and demonstrating the skills obtained in these courses through conducting and performing in colloquium, lab, master classes, student teaching, and other teaching situations.

Westminster College is an accredited institutional member of the National Association of Schools of Music. Lessons, ensembles, and courses are available to all students in the College.

Prospective music majors must fulfill the general admission requirements of the College. They are also required to arrange an audition with the School of Music to demonstrate proficiency in at least one area of performance. A tape recording is acceptable in lieu of an audition on campus.

## Degrees

The BACHELOR OF MUSIC degree is offered with majors in (1) Music Education and (2) Performance. The music education major fulfills certification requirements for those preparing to teach music in the public schools (K-12). The performance major is designed for students planning to continue specialized study in preparation for careers as professional performers. The student pursuing a major in music education or performance must complete 95 semester hours' credit in music plus 36 semester hours of credit outside of music, including the all-college requirements for graduation.

The BACHELOR OF ARTS degree with a single or first major in Music has been constructed primarily for students who have a strong interest in music and who likewise desire a broad liberal arts education. The student pursuing this major must complete 48 semester hours' credit in music plus 80 semester hours' credit outside of music, including the all-college requirements for graduation.

A student under the BACHELOR OF ARTS or the BACHELOR OF SCIENCE degree can pursue Music as a second major, or as a minor. Both are available to those students who have a strong interest in music but who choose another discipline as their primary major. To receive a second major in music, the student must complete 36 semester hours' credit in music. To receive a minor in music, the student must complete 24 semester hours' credit in music.

A student may be admitted into the performance major, on a provisional basis only, during the first semester of the first year, during which the student will be allowed to take private lessons at the frequency of one hour of instruction per week. The faculty jury at the end of the first semester of private study will assess whether or not the student qualifies to continue as a performance major. A student who is permitted to remain in the major will subsequently take private lessons at the frequency of two hours of instruction per week.

There are no private music lesson fees for prescribed lessons. However, students will be assessed private music lesson fees for any additional private lessons. Each student is required to regularly attend MUS 600 (Music Colloquium) and MUS 600M (Master Class) each semester as a part of his/her private lessons, and MUS 600P (Instrumental Performance Practicum) during the semester he/she is taking instrumental conducting class (MUS 273). MUS 602 Capstone Lecture Recital is not an option for the performance major.

## Major in Music Education (BM)

**The Major in Music Education – BACHELOR OF MUSIC:** The curriculum prescribes the following courses (98 semester hours):

Theory (20 SH)	MUS 121, 121P, 122, 122P, 123, 123P, 124, 124P, 126
History (8 SH)	MUS 141, 142
Conducting (3 SH)	MUS 271, 272, 273
Pedagogy (7 SH)	MUS 200, 201, 202, 203, 204, 205, 206
Prof. Education (35 SH)	EDU 231, MUS 182, 183, 184, 195, 196, ELL 206, SED 201
Private Lessons (7 SH)	7 semesters' private study in primary instrument or voice
Large Ensembles (7 SH)	7 separate semesters' participation in a large ensemble
Secondary Ensemble	2 semester hours of an ensemble not listed as a large ensemble
Music Electives (3 SH)	3 one-hour electives in music from group of MUS 207, 208, 209, 212, 214, 367, 369. Voice concentration must take a minimum of two of the three: MUS 207, 208 or 209. Instrumental concentration must take a minimum of two of the four: MUS 212, 214, 367 or 369 (MUS 379).
Music Literature (4 SH)	1 four-hour elective in music from group of MUS 164, 167 or 168
Capstone Recital (4 SH)	MUS 601: Capstone recital (or MUS 602 Capstone Lecture Recital) concurrent with seventh semester of private study of primary instrument or voice

*Each student is required to pass a series of examinations on his/her primary instrument, as follows:*

7 Juries	one at the end of each semester's primary private lessons
1 Sophomore Hearing	performance and portfolio review during first semester of sophomore year; review of graduation audit (3.000 GPA is required to student teach)

*NOTE: Continuance in the program is dependent upon maintaining a cumulative GPA of 3.000. In all cases, only Westminster College courses are factored into the GPA calculation. Experience indicates that students who have difficulty in attaining the required 3.000 GPA by the end of the sophomore year are also likely to experience difficulty in passing the state certification examinations. Students who have not attained a 3.000 by the time of the sophomore hearing/ portfolio review or who have not passed the Praxis Series Examinations will be required to address the music faculty.*

1 Recital Hearing	two weeks prior to the capstone recital or capstone lecture recital
-------------------	---

*Eligibility Requirements for Admission to Student Teaching*

1. Complete the required block of first year, sophomore, and junior observations and field study in the public schools:
  - First year observation: Six observations in the music classroom, four observations in special education
  - Sophomore year: observations in elementary music attached to MUS 182 General Music Methods
  - Junior year field experience: comprehensive week of observation and teaching in the public schools with one cooperating teacher.
2. Attain a cumulative GPA of 3.000 in all college courses;
3. Complete and attain a minimum grade of B- in all Primary Private Lessons (odd numbers), Large Ensembles, Capstone Recital (or Project), Conducting (MUS 271, 272, and 273), and Professional music courses (MUS 182, 183 and 184);
4. File the Pennsylvania Child Abuse History Clearance, Pennsylvania Criminal History Background Check and FBI Fingerprint Clearance to be completed in the second semester of the first year and updated as necessary throughout the collegiate career;
5. Piano Proficiency Examination Levels 1-3 must be completed by the end of the sophomore year, and Levels 4-10 must be completed by the end of the junior year.
6. Certification Testing: Pass the Praxis examinations as required by the state of Pennsylvania;
7. PAPA Tests must be completed by all Music Education students unless students are exempt from this test due to meeting or exceeding the minimum required SAT or ACT score. Students must report any exemptions to the Music Education Area Head;
8. Fundamentals of Education Test and Music Core (take by second semester of junior year);
9. Make formal application to student teach by mid-term break of Spring Semester of junior year (form is available in music office);
10. Receive a current negative Tine test in the semester immediately preceding student teaching;

*Eligibility requirements for recommendation for Pennsylvania state teacher certification in Music K-12:*

1. Pass the Pre-Professional Skills Test (reading, writing, and mathematics), the Fundamentals of Education Test and the Music Core Battery of the Praxis Series Examination
2. Attain a minimum grade equal to 3.000 in each of MUS 195 and 196 (student teaching)

Each student is required to regularly attend MUS 600 (Music Colloquium) and MUS 600M (Master Class) each semester as a part of his/her private lessons, and MUS 600P (Instrumental Performance Practicum) during those semesters he/she

is taking instrumental pedagogy classes (MUS 200, 201, 202, 203, 204, and 205) or instrumental conducting class (MUS 273). Of the required pedagogies, students must take one String Practicum (MUS 600P-02).

The Pennsylvania state requirement of teachers to take 6 hours of English composition and literature are fulfilled when the student passes INQ 111 and WRI 111. Music Education majors must also take 6 hours of Mathematics courses, MTH 110 and 124 recommended.

NOTE: Although a C- is acceptable, students are strongly encouraged to maintain at least a B cumulative average in these courses in order to attain the 3.000 GPA necessary to student teach.

NOTE: Changes in state requirements take precedence over information printed in this Undergraduate Catalog.

## Major in Instrumental Performance (BM)

**The Major in Instrumental Performance – BACHELOR OF MUSIC:** The curriculum prescribes the following courses (92 semester hours):

Theory (28 SH)	MUS 121, 121P, 122, 122P, 123, 123P, 124, 124P, 125, 126 and 127 or 129
History (8 SH)	MUS 141, 142
Music Literature (8 SH)	MUS 167, 168 if non-string, non-saxophone and non-euphonium; MUS 161 and MUS 167 if string; MUS 168 and choose either 161 or 167 if saxophone and euphonium
Conducting (2 SH)	MUS 271, 273
Private Lessons (15 SH)	1 semester hour in first semester of first year, MUS ____****, plus 2 semester hours in primary area each of the next 7 semesters MUS____**** (****Number would be determined by instrument; i.e., MUS 311)
Pedagogy (1 SH)	Select 1 hour from MUS 200-205
Chamber Music (7 SH)	MUS 410 (or 510; use 410 first)
Large Ensembles (8 SH)	8 semesters of large ensemble
Sec. Ensembles (2 SH)	2 semester hours of an ensemble that is not listed as a large ensemble (ex. MUS 402-406, 410, 422)
Elective Ensembles (4 SH)	MUS (401, 402, 407 441) in addition to large ensemble
Junior Recital (2 SH)	MUS 397 Junior Recital
Capstone Recital (4 SH)	MUS 601 Capstone Recital
Music Electives (2 SH)	MUS 215 strongly encouraged

*Plus, successful completion of piano proficiency. Piano Proficiency Examination Levels 1-3 must be completed by the end of the sophomore year, and Levels 4-10 must be completed by the end of the junior year.*

## Major in Piano Performance (BM)

**The Major in Piano Performance – BACHELOR OF MUSIC:** The curriculum prescribes the following courses (91 semester hours):

Theory (28 SH)	MUS 121, 121P, 122, 122P, 123, 123P, 124, 124P, 125, 126 and 127 or 129
History (8 SH)	MUS 141, 142
Music Literature (12 SH)	MUS 161; Elect two courses from MUS 163, 164, or 167
Conducting (2 SH)	MUS 271, and either 272 or 273
Private Lessons (19 SH)	1 semester hour in first semester of first year, MUS 383, plus 2 semester hours in each of the next 7 semesters – allowable in Piano (MUS 393); Piano concentrations also take a minimum of 4 semester hours in a secondary instrument of their choice (use odd-numbered, non-performance-major lessons)
Large Ensembles (8 SH)	8 semesters of large ensemble
Secondary Ensemble (2 SH)	2 semester hours of an ensemble that is not listed as a large ensemble
Music Electives (4 SH)	MUS 215 strongly recommended
Junior Recital (2 SH)	MUS 397 Junior Recital
Capstone Recital (4 SH)	MUS 601 Capstone Recital
Techniques (2 SH)	MUS 210

## Major in Organ Performance (BM)

**The Major in Organ Performance – BACHELOR OF MUSIC:** The curriculum prescribes the following courses (91 semester hours):

Theory (28 SH)	MUS 121, 121P, 122, 122P, 123, 123P, 124, 124P, 125, 126 and 127 or 129
History (8 SH)	MUS 141, 142
Music Literature (12 SH)	MUS 161; Elect two courses from MUS 163, 164, or 167
Conducting (3 SH)	MUS 271, and 272 or 273
Private Lessons (21 SH)	1 semester hour in first semester of first year, MUS 387, plus 2 semester hours in each of the next 7 semesters-allowable in Organ (MUS 399); Organ concentrations also take 4 semester hours in a secondary instrument of their choice (use odd-numbered, non-performance major lesson)
Large Ensembles (8 SH)	8 semesters of large ensemble

Secondary Ensemble	2 semester hours of an ensemble that is not listed as a large ensemble
Music Electives (4 SH)	One four-hour elective in music
Junior Recital (2 SH)	MUS 397 –Junior Recital
Capstone Recital (4 SH)	MUS 601 – Capstone Recital
Techniques (2 SH)	MUS 210

## Major in Vocal Performance (BM)

**The Major in Vocal Performance – BACHELOR OF MUSIC:** The curriculum prescribes the following courses (95 semester hours):

Theory (28 SH)	MUS 121, 121P, 122, 122P, 123, 123P, 124,124P, 125, 126 and 127
History (8 SH)	MUS 141, 142
Music Literature (12 SH)	MUS 163, 164, and 167
Conducting (2 SH)	MUS 271 plus either MUS 272 or 273
Private Lessons (21 SH)	1 semester hour in first semester (MUS 381), plus 2 semester hours in each of the next 7 semesters (MUS 391); Voice concentrations also take 6 semester hours (1 each for 6 semesters) in piano (MUS 383)
Large Ensembles (8 SH)	Voice concentrations take 7 semesters of large ensemble
Secondary Ensemble (2 SH)	2 semester hours of an ensemble that is not listed as a large ensemble
Add. Ensembles (4 SH)	Voice concentrations take 2 semester hours of opera workshop, and 2 semester hours of musical or opera workshop
Junior Recital (2 SH)	MUS 397 Junior Recital
Capstone Recital (4 SH)	MUS 601 Capstone Recital
Techniques (5 SH)	Voice concentrations take MUS 206, 207, 208, 209

*Each student is required to pass a series of examinations on his/her primary instrument, as follows:*

8 Juries	one at the end of each semester's primary private lessons
1 Sophomore Hearing	performance and portfolio review during second semester of sophomore year
2 Recital Hearings	two weeks prior to the junior and the capstone recitals

*Plus, successful Completion of Piano Proficiency. Piano Proficiency Examination Levels 1-3 must be completed by the end of the sophomore year, and Levels 4-10 must be completed by the end of the junior year.*

A letter grade of at least B- must be attained in each of MUS 271, 272, and 273, and in all Primary Private Lessons (odd numbers) in order to count for graduation.

## Major in Music (BA)

**The primary or single Major in Music – BACHELOR OF ARTS:** The curriculum prescribes the following courses (48 semester hours):

Theory (20 SH)	MUS 121, 121P, 122, 122P, 123, 123P, 124, 124P, 125
History (8 SH)	MUS 141, 142
Private Lessons (8 SH)	8 semester hours in primary instrument or voice (odd course numbers)
Large Ensemble (8 SH)	8 separate semesters' participation in a large ensemble
Secondary Ensembles	2 semesters of an ensemble that is not listed as a large ensemble (use 500-level ensembles)
Capstone Recital (4 SH)	MUS 601 Capstone Recital or MUS 602 Capstone Lecture Recital

*Each student is required to pass a series of examinations on his/her primary instrument, as follows:*

8 Juries	one at the end of each semester's private lessons
1 Sophomore Hearing	performance and portfolio review during second semester of sophomore year
1 Recital Hearing	two weeks prior to the Capstone Recital or Lecture Recital

Each student is required to regularly attend MUS 600 (Music Colloquium) and MUS 600M (Master Class) each semester as a part of his/her private lessons.

A letter grade of at least B- must be attained in all Primary Private Lessons (odd numbers) in order to count for graduation. (Also see the college-wide minimum grade standard for courses taken in the major, under Academic Policies).

*Plus, successful Completion of Piano Proficiency. Piano Proficiency Examination Levels 1-3 must be completed by the end of the sophomore year, and Levels 4-10 must be completed by the end of the junior year.*

**The Major in Music as a Second Major – BACHELOR OF ARTS:** The curriculum prescribes the following courses (40 semester hours):

Theory (12 SH)	MUS 121, 121P, 122, 122P, 123, 123P
History (8 SH)	MUS 141, 142
Private Lessons (8 SH)	8 semester hours in primary instrument or voice (odd course numbers)
Large Ensemble (8 SH)	8 separate semesters' participation in a large ensemble
Secondary Ensembles	2 semesters of an ensemble that is not listed as a Large Ensemble (use 500-level ensembles)
Capstone Recital (4 SH)	MUS 601 Capstone Recital or MUS 602 Capstone Lecture Recital

A student choosing a second major in music while majoring in early childhood education must pass the piano proficiency exam. Piano Proficiency Examination Levels 1-3 must be completed by the end of the sophomore year, and Levels 4-10 must be completed by the end of the junior year.

Each student is required to pass a series of examinations on his/her primary instrument, as follows:

8 Juries	one at the end of each semester's primary private lessons
1 Sophomore Hearing	performance and portfolio review during second semester of sophomore year
1 Recital Hearing	two weeks prior to the Capstone Recital or Lecture Recital

Each student is required to regularly attend MUS 600 (Music Colloquium) and MUS 600M (Master Class) each semester as a part of his/her private lessons.

### *Policy Regarding Changes in a Student's Instrumental or Vocal Concentration*

Occasionally, students may desire to change their instrumental/vocal concentration to a different instrumental/vocal concentration within the Bachelor of Arts Degree (Music as Primary Major), the BA Degree (Music as a Second Major), and the Bachelor of Music Degree in Music Education. If a student wishes to do so, the following procedures must be followed.

1. The relevant faculty to whose area the student is wishing to transfer must consult with (1) the relevant faculty from whose area the student is leaving, as well as with (2) the Chair of the School of Music, before agreeing to hear the audition. The Chair of the School of Music may veto the transfer.
2. The student must audition for relevant faculty on the instrument/voice to which he/she is proposing a change; the faculty may deny the audition. This audition may coincide with a jury.
3. The student's Music Talent Award, if any, will be re-evaluated at the audition. The Chair of the School of Music reserves the right to decrease the Music Talent Award if necessary.
4. If allowed to change concentrations, the student must take at least the number of remaining lessons on the instrument/voice to which he/she is changing. That is, if four semesters' worth of lessons remain, the student must take at least four more lessons on the instrument/voice to which he/she is changing.
5. The student may be required to take additional lessons (up to 8 semesters' worth, depending on the degree program) on the instrument/voice to which he/she is changing at the discretion of the relevant faculty. These lessons may be in the form of the 2-hour-per-week lessons, summer lessons, or they may be added on to the student's course of study, requiring the student to stay longer than the typical four-year plan for a degree. This is at the discretion of the relevant faculty, with approval from the School of Music Chair.
6. If the student takes lessons beyond 8 semesters total because he/she changed his/her instrumental/vocal concentration, regardless of the instrument/voice studied during the lessons, he/she must pay for these lessons. For example, if John Doe takes two semesters of voice lessons and switches to flute,



and is required by the relevant faculty to take 8 more lessons on flute, then he must pay for the last 2 lessons, because he will have accrued a total of 10 lessons, and only 8 are subsidized by the Music School.

7. Students generally may not petition to change concentrations after the first semester of their Junior Year. If there is confusion about what constitutes this timing, the Chair of the School of Music will decide if the student is eligible to petition to change concentrations.
8. Students may change instrumental/vocal concentrations only once, if at all.

## Major in Music with a Track in Business (BA)

**The Major in Music with a Track in Business** - BACHELOR OF ARTS: The curriculum prescribes the following courses (64 semester hours):

Theory (20 SH)	MUS 121, 121P, 122, 122P, 123, 123P, 124, 124P, 125
History (8 SH)	MUS 141, 142
Private Lessons (8 SH)	8 semester hours in primary instrument or voice (odd course numbers)
Large Ensemble (8 SH)	8 separate semesters' participation in a large ensemble
Capstone Recital (4 SH)	MUS 601 Capstone Recital or MUS 602 Capstone Lecture Recital

Each student is required to regularly attend MUS 600 (Music Colloquium) and MUS 600M (Master Class) each semester as a part of his/her private lessons.

*Plus, all of the following:*

ACC 201	Principles of Accounting I	4
BA 140	Introduction to Business	4
ECO 150	Economic Reasoning	4

*Plus, one of the following:*

BA 305	Marketing	4
BA 310	Organizations and Management	4

*Plus, one or more of the following:*

BA 225	Management Information Systems	4
BA 326	E-Commerce Marketing	4
BA 360	Human Resource Management	4
BA 370	Business Law	4
BA 410	Global Marketing Management	4
PR 101	Principles, Practices, & Theory of PR	4
PR 202	Advertising & PR: Approaches & Mthds.	4

Students majoring in Music with a Track in Business are not required to complete the Piano Proficiency Examination.

## Major in Music with a Track in Composition (BA)

**The Major in Music with a Track in Composition** – BACHELOR OF ARTS: The curriculum prescribes the following courses (48 semester hours):

Music Theory (20 SH)	MUS 123, 123P (MUS 121 and 122 are prerequisites, but students can test directly
----------------------	--

	into MUS 123), 124, 124P, 125, 126, and 127
Music History (8 SH)	MUS 141, 142
Applied Lessons (12 SH)	5 semesters of Applied Lessons (MUS 300-399) on Instrument (these credits must be taken in succession starting in the first semester of the freshman year), and 7 semesters of Composition Lessons (MUS 369)
Ensembles (4 SH)	4 large ensembles (VP credit), 4 large ensembles at 500 level
Capstone Recital (4 SH)	MUS 601 (composition-based)

Students are strongly recommended to take a total of 8 applied lessons on their instrument. Students are strongly recommended to take class piano if they do not have piano skills. Students are recommended to take Music Literature Courses.

Students majoring in Music with a Track in Composition must complete the Piano Proficiency Examination. Piano Proficiency Examination Levels 1-3 must be completed by the end of the sophomore year, and Levels 4-10 must be completed by the end of the junior year.

*Combining this track with other music degrees or tracks* – The Track in Composition may be combined with other music degrees or tracks as long as the courses above are taken in addition to courses required by the other music degree or track. Because it may not be possible for a student to have taken seven semesters of composition lessons if the student is enrolled in another music degree or track, the total number of composition lessons may be adjusted at the discretion of the Music Theory/Composition Area Head and the Chair of the School of Music. Ordinarily students in this scenario will have no fewer than a minimum of 5 semesters of composition lessons.

## Music Therapy Affiliation Agreement

Westminster College's School of Music has an Affiliation Agreement with Duquesne University's School of Music in the field of Music Therapy. This agreement was entered into in December, 2016. As a part of this Affiliation Agreement, students pursue some kind of bachelor's degree in music at Westminster. They may then be admitted to Duquesne's Post-Baccalaureate Certification in Music Therapy (PBC-MT) program which will provide them with the appropriate credentials to become music therapists. The PBCMT program requires two full-time semesters' worth of work at Duquesne's campus and then a 6-month internship.

Westminster students must meet the following requirements. After doing so, students may apply for PBCMT at Duquesne University, and must audition into their program. Students who are fulfilling the terms of this Agreement will be given priority consideration for admission to Duquesne's PBCMT. Duquesne's PBCMT program then enables students who have bachelor's degrees to take the necessary coursework to become certified music therapists.

(1) Students attending Westminster are required, or recommended (denoted with an asterisk), to take the following coursework at Westminster to prepare them for admission to Duquesne's PBCMT program:

MUS 121	Music Theory 1	4
MUS 121P	Aural Skills Practicum 1	0
MUS 122	Music Theory 2	4

MUS 122P	Aural Skills Practicum 2	0
MUS 123	Music Theory 3	4
MUS 123P	Aural Skills Practicum 3	0
MUS 124	Music Theory 4	4
MUS 124P	Aural Skills Practicum	0
MUS 141	History of Western Music to 1750	4
MUS 142	History of Western Music from 1750	4
MUS 271	Basic Conducting	1

*One of the following:*

MUS 367	Jazz Improvisation	1
MUS 341	Percussion Lessons	1

*Plus:*

Applied Lessons in Major Instrument (8 semesters)	8
Large Ensemble Credits with VP Designation (4 semesters)	4
Large Ensemble Credits at the 500 level (4 semesters)	0
Senior Capstone Thesis (Music Therapy Topic recommended)	4
Guitar Lessons (may substitute electives if guitar concentrator; 2 sems)	2
Piano Lessons (may substitute electives if piano concentrator; 2 sems)	2
Voice Lessons (may substitute electives if voice concentrator; 2 sems)	2

*Plus:*

BIO 101	Concepts of Biology	4
MTH 131	Applied Calculus	4
PSY 101	Introduction to Psychology	4
PSY 201	Experimental Design and Statistics	4
PSY 401	Abnormal Psychology	4
SED 201	Foundations of Special Education	4

*\*Additional recommended music courses: MUS 102 – Introduction to Ethnomusic; MUS 130 – Psychology of Music\*\*; more guitar, piano, voice, jazz improvisation, or percussion lessons as schedule allows*

*\*Additional recommended psychology courses: PSY 225 – Lifespan Development; PSY 291 – Adulthood and Aging; PSY 431 – Abnormal Child Development.*

*\*\*Note: These courses must be completed by the time the post-baccalaureate certification is completed at Duquesne. It is best to complete these courses at Westminster, or before one arrives at Duquesne.*

(2) Westminster students are required to acquire the following skills:

- a. Read lead sheets
- b. Harmonize with the left hand of the piano while playing melody in the right hand and leading group singing in several different rhythmic styles: e.g., blues, country, pop, sacred
- c. Harmonize with right and left hands while strongly carrying a melody with the voice

(3) Ordinarily, Westminster students are required to have attained a cumulative GPA of 3.25 prior to admission to Duquesne's PBCMT program.

(4) Audition: Westminster students are required to apply and audition for Duquesne's PBCMT program.

(5) As a part of this Affiliation Agreement, Duquesne would give Westminster graduates priority consideration for admission into its PBCMT program contingent upon a successful audition. A maximum of two Westminster College students per

year will be given priority consideration.

(6) Westminster students who enter the PBMT program at Duquesne must meet all Duquesne University requirements in order to complete the program.

(7) Pass the Piano Proficiency Exam. Piano Proficiency Examination Levels 1-3 must be completed by the end of the sophomore year, and Levels 4-10 must be completed by the end of the junior year.

**The Minor in Music** - 24 semester hours, comprising:

Theory (8 SH)	MUS 121, 121P, 122, 122P
History (4 SH)	Elect either MUS 101, 141 or 142
Private Lessons (4 SH)	4 semesters' private study in primary instrument or voice (odd numbered lessons)
Large Ensemble (4 SH)	4 separate semesters' participation in a large ensemble
Music Electives (4 SH)	4 semester hours of credit in music

Music minors are required to perform juries only in the semesters where they take the odd numbered section of the private lesson.

### ***Music Private Lessons***

Students whose major or minor programs prescribe private lessons (excepting the music performance majors) will use the odd numbers for those prescribed private lessons on their primary instrument or voice. They will receive one hour of instruction each week for one semester hour's credit. Each music major is required to participate in the Music Colloquium, as a twice-weekly attendee and a once-each-semester performer, and the appropriate Master Class, as a regular attendee and participant. Students officially excused from Colloquium due to unavoidable scheduling conflicts must still perform once during the semester in Colloquium Performance Class recital. Students officially excused from Master Class due to unavoidable scheduling conflict must still perform twice during the semester in Master Class. A jury is to be performed at the end of each semester's study. Music minors are exempt from attending Master Classes and Colloquium. The student will prepare the jury with the assistance of the private teacher, excepting the one new work which each student beyond the fourth semester of study is required to prepare for each jury without the assistance of the teacher. Prerequisites: student must be actively pursuing the chosen music major or minor. Additionally, the student must receive permission of the instructor. Credit: 1 semester hour; may be repeated for credit.

*NOTE: A letter grade of B- must be attained in primary private lessons (odd numbers) in order to count for graduation as a music major or minor.*

301 Flute	327 Euphonium	367 Jazz Improvisation
303 Oboe	329 Tuba	369 Composition
305 Clarinet	341 Percussion	381 Voice
307 Bassoon	343 Violin	383 Piano
309 Saxophone	345 Viola	385 Harp
321 French Horn	347 Violoncello	387 Organ
323 Trumpet	349 Double Bass	
325 Trombone	361 Guitar	

*Elected private lessons:* Students who choose to take private lessons beyond those prescribed for their major or minor programs will use the even numbers for all non-prescribed private lessons. These students will receive 1/2 hour of instruction each week for one semester hour's credit. Participation in Master Class and an

end-of-the-semester jury on these instruments or voice are not required; however, students may participate in both upon recommendation of their instructors. Prerequisite: permission of the instructor. Credit: 1 semester hour; may be repeated for credit. Extra fee: students registering for even numbered private lessons must pay the private lesson fee.

300 Flute	326 Euphonium	360 Guitar
302 Oboe	328 Tuba	362 Carillon
304 Clarinet	340 Percussion	366 Jazz Improvisation
306 Bassoon	342 Violin	368 Composition
308 Saxophone	342A Scottish Fiddling	
320 French Horn	344 Viola	380 Voice
322 Trumpet	346 Violoncello	382 Piano
386 Organ	348 Double Bass	385 Harp
324 Trombone		

*Performance majors:* Commencing with their second semester, students who are majoring in performance, under the B.M. degree, will use the following numbers for private lessons on their primary instrument or voice. They will receive two hours of instruction each week for two semester hours credit. Each student is required to participate in the Music Colloquium, as a twice-weekly attendee and a once-each-semester performer, and the appropriate Master Class, as a regular attendee and participant. Students officially excused from Colloquium due to unavoidable scheduling conflicts must still perform once during the semester in Colloquium Performance Class recital. Students officially excused from Master Class due to unavoidable scheduling conflict must still perform twice during the semester in Master Class. A jury is to be performed at the end of each semester's study. The student will prepare the jury with the assistance of the private teacher, excepting the one new work which each student beyond the fourth semester of study is required to prepare for each jury without the assistance of the teacher. Prerequisites: student must be actively pursuing the performance major, and must have completed required private lessons (odd numbers-1 credit). Additionally, the student must receive permission of the instructor. Credit: 2 semester hours; may be repeated for credit.

NOTE: A letter grade of B- must be attained in primary private lessons (odd numbers) in order to count for graduation as a music major.

311 Flute	337 Euphonium	373 Carillon
313 Oboe	339 Tuba	391 Voice
315 Clarinet	351 Percussion	393 Piano
317 Bassoon	353 Violin	399 Organ
319 Saxophone	355 Viola	
331 French Horn	357 Violoncello	
333 Trumpet	359 Double Bass	
335 Trombone	371 Guitar	

## Music Ensembles

*Large Ensembles:* For purposes of satisfying specific major and minor requirements, the following are categorized as Large Ensembles: MUS 401, 407, 421, 430, and 441. All ensembles may be repeated for credit.

# Neuroscience

*(Major only)*

Neuroscience is a major program whose curriculum is composed of biology and psychology courses and additional courses in chemistry, physics, mathematics, philosophy and computer science depending upon a student's particular interest. It is designed to provide the necessary scientific background for students interested in the biological basis of behavior and the relationship of neural and psychological processes. In addition to the core requirements, a flexible program of additional courses is planned during advisement centering around a student's particular ambitions.

**The Major in Neuroscience:** 60 semester hours, comprising:

BIO 201	Cell Biology and Genetics	4
BIO 202	Organismal Biology and Ecology	4
NS 100	Research Experience in Neuroscience	1
NS 300	Critical Thinking & Writing in Neuroscience	2
NS 341	Behavioral Neuroscience	4
NS/BIO 434	Neurobiology	4
NS 590	Field Experience/Internship	4
NS 600	Senior Neuroscience Scholarship Experience	4
PSY 100	Research Experience in Psychology I	1
PSY 101	Introduction to Psychology	4
PSY 201	Experimental Design and Statistics	4

*One of the following:*

BIO 302	Cell and Molecular Biology	4
BIO 303	Molecular Genetics and Heredity	4

*One of the following:*

BIO 334	Physiology	4
<i>or</i>		
BIO 335	Anatomy and Physiology I	4
BIO 336	Anatomy and Physiology II	4

*One of the following:*

MTH 131	Applied Calculus	4
MTH 150	Calculus I	4
MTH 152	Calculus II	4

*Plus, 12-16 semester hours from the following courses not already taken, or approved alternatives:*

BIO 302	Cell and Molecular Biology	4
BIO 303	Molecular Genetics and Heredity	4
BIO 304	Developmental Biology	4
CHE 117	Principles of Chemistry	4
CHE 180	Inorganic Chemistry	4
CHE 261	Organic Chemistry I	4
CHE 262	Organic Chemistry II	4
CHE 381	Biochemistry Principles	4
CS 151	Principles of Computer Science I	4
CS 152	Principles of Computer Science II	4
CS 271	Neural Networks: The Computing Perspective	4
PHI 218	Philosophy of Mind	4
PHY 141	Foundations of Physics I	4

PHY 142	Foundations of Physics II	4
PHY 151	Principles of Physics I	4
PHY 152	Principles of Physics II	4
PSY 261	Neural Networks: The Psych. Perspective	4
PSY 262	Neuropsychology of Mind	4
PSY 281	Principles of Learning and Memory	4
PSY 315/BIO 363	Animal Behavior	4
PSY 351	Cognition	4
PSY 401	Abnormal Psychology	4
PSY 431	Abnormal Child Development	4

*NOTE: Neuroscience majors who are in the All-College Honors Program must have at least a 3.5 average in three or more courses in the neuroscience curriculum to enter honors research. There are also opportunities for a more extensive capstone project through our Research Scholars Program.*

## Nursing

*(Major in Nursing only - Bachelor of Science in Nursing)*

The Mission of the Westminster College RN-BSN/Post-licensure Program is to provide a high quality, innovative RN-BSN education grounded in academic rigor and the science of Nursing.

This Mission promotes the professional skills of leadership, inter-professional teamwork, compassion, and cultural competence within all healthcare practice settings and is aligned with the Westminster College Mission of assisting individuals in developing the competencies, commitments, and characteristics to function at their personal best.

The Vision of the Westminster College RN-BSN/Post-licensure Program is to be the most academically respected, innovative RN-BSN Program in the region by preparing baccalaureate nurses who excel in the rapidly changing world of healthcare.

### **RN-BSN End of Program Learning Outcomes**

*The professional nursing graduate will:*

1. Incorporate into professional nursing practice, the intellectual perspectives obtained from the liberal arts and science underpinnings of the Westminster College nursing education program.
2. Employ knowledgeable leadership skills and quality improvement practices to provide safe, high quality patient care.
3. Maintain a commitment to inquiry by appraising the most recent health care research and advances for the provision of safe, high quality care.
4. Integrate current evidence to inform clinical decision making in professional nursing practice.
5. Apply knowledge and skills of information management and healthcare technology to facilitate high quality patient care.
6. Recognize in professional nursing practice, the importance and influence of healthcare policy, finances and regulations as support for quality improvement and safety in the healthcare setting.
7. Effectively communicate and collaborate with all members of the healthcare team to assure high quality, safe care for individuals and groups.

8. Incorporate knowledge of health promotion and disease prevention in all nursing practice encounters from the individual to the population level.
9. Demonstrate professional behaviors that reflect the values of altruism, autonomy, human dignity, integrity, and social justice as the foundation for professional nursing practice.
10. Provide professional nursing care for individuals, families, groups, communities, and populations that is culturally responsive and reflective of patient needs and preferences, as well as the increased use of healthcare resources in meeting those needs.
11. Engage in life-long learning and professional development to maintain practice relevancy and competency to further inform professional nursing practice.

## Four-Year Collaborative Nursing Plan

In the first year of the Collaborative Nursing Plan, accepted Westminster College students are enrolled in general science and first-year courses in preparation for applying to the UPMC School of Nursing at Jameson. The Year One courses are aligned with the required college-level courses that are a part of Jameson's Diploma Program and the Westminster RN-BSN Program curriculum. In Year Two and with acceptance into the UPMC School of Nursing at Jameson, students in the Collaborative Nursing Plan complete nursing courses, lab experiences, and clinical placements within the UPMC School of Nursing at Jameson. Simultaneously, they complete additional liberal arts courses required for the BSN degree at Westminster. At the end of the third year, successful graduates of the UPMC School of Nursing at Jameson are eligible to complete the NCLEX-RN examination for licensure as registered professional nurses. With active RN licensure, students continue in the College's RN-BSN/Post-licensure Program to complete upper-level nursing course work and remaining college courses to fulfill graduation requirements for the BSN degree from Westminster College.

*\*The UPMC School of Nursing at Jameson located in New Castle, PA is one of four UPMC Schools of Nursing.*

**The Major in Nursing:** All of the following:

BIO 135	Foundations of Anatomy and Physiology I	4
BIO 136	Foundations of Anatomy and Physiology II	4
BIO 137	Foundations of Microbiology*	4
MTH 135	Concepts of Statistics*	4
NUR 101	Professional Concepts of Nursing	3
NUR 102	Foundational Concepts of Nursing	9
NUR 201	Physiological Concepts of Nursing	10
NUR 301	Complex Indiv. & Family Nursing Concepts	11
NUR 320	Advanced Nursing Concepts	7.5
NUR 340	Transition into Nursing Practice	5.5
NUR 360	NCLEX-RN Prep Course	2
NUR 401	Community Health Nursing	4
NUR 402	Nursing Research for Evidence Based Practice	4
NUR 403	Advanced Health Assessment	4
NUR 404	Nursing Care of Vulnerable & Diverse Pop.	4
NUR 405	Nursing Leadership Seminar	4
NUR 406	Nursing Capstone	3
PHI 240	Biomedical Ethics*	4
PSY 101	General Psychology*	4



PSY 225	Human Growth and Development	4
SCI 101	Introduction to Healthcare	1
SOC 327	Medical Sociology*	4

*NOTE: The 400-level courses will be reviewed and approved by the College's Curriculum Committee.*

For the nursing major, the UPMC Schools of Nursing require six science/general education courses to be completed before the end of year three and have no letter grade below a C (2.0/satisfactory). These courses are BIO 135, BIO 136, BIO 137, WRI 111, PSY 225 and PHI 240.

Nursing Major students are required to fulfill all seven of the Intellectual Perspectives (IP) as part of the Westminster Plan and to meet requirements of graduation. Courses marked (\*) above satisfy one of the requirements. Nursing Major students are required to complete a minimum of 36 credits outside of the major. This includes, but are not limited to, the Visual/Performing Art and Foreign Language IP requirements.

In year four of the program, each nursing student will complete a Nursing Capstone experience in a community/rural setting of the student's choosing. Transportation to and from the clinical site for this experience is the responsibility of the student.

## Peace Studies

*(Minor or concentration)*

The Peace Studies Program at Westminster College is an interdisciplinary, academic program designed to prepare students for the challenge of living in an increasingly diverse and global community. Faculty at Westminster College officially established a Peace Studies Program in the spring of 1995 to engage faculty and students in the enduring human question: What are the causes of conflict and the means for resolving and preventing conflict? Recent uncertainties about the nature of world security make the present an especially opportune time for peace studies. Students in peace studies will explore difficult societal and ethical concerns from multiple perspectives. In addition to understanding conflict and its resolution, coursework emphasizes global awareness, multiculturalism, public policy, ethics and human rights. Students are encouraged to tailor course selection to meet post-graduation goals and to enhance their ability to secure jobs in an increasingly global economy and multicultural society. Through service learning at the local, national or international level, students will translate their competencies into action.

**The Minor in Peace Studies:** 24 semester hours, comprising:

IS 101	Introduction to International Studies	4
PAX 301	Advanced Peace Studies Seminar	4

*Plus, four of the following electives, of which at least 8 semester hours must be outside the major:*

ES 160	Concepts of Environmental Science	4
HIS 102	History of Civilization from 1715	4
HIS 223	African-American History	4
HIS 246	20th Century Europe	4
HIS 252	Modern Russia	4
HIS 272	Latin America from 1825	4
HIS 282	Africa Since 1800	4
HIS 301	America in the 1960s	4
HIS 308	Cold War	4

HIS 311	South Africa	4
HIS 316	Belief & Power in American Religious Hist.	4
PS 204	Model United Nations (x4)	4
PS 235	African Politics	4
PS 241	Public Policy	4
PS 331	Geopolitics	4
PS 332	United States Foreign Policy	4
PS 431	International Organizations	4
PSY 213	Psychology of Prejudice	4
PSY 321	Social Psychology	4
PSY 235	Psychology of Women	4
REL 160	Understanding Christianity	4
REL 170	Basic Introduction to Religion in the World	4
REL 174	Religion in America	4
SOC 105	Cultural Anthropology	4
SOC 107	Sociology of Gender	4
SOC 209	Minority-Majority Relations	4
SOC 214	Social Class in America	4
SOC 215	Women in Cross-Cultural Perspective	4
SOC 241	Sociology of Violence and Nonviolence	4
SOC 303/REL 177	Religion and Society	4
THE 225	Theatre and Social Engagement	4

Other courses may be taken for peace studies credit with the approval of the steering committee.

**The Concentration in Peace Studies:** Students who do not have time to complete a Peace Studies minor may choose to complete a concentration in Peace Studies by selective four or more approved electives, listed above.

## Philosophy

*(Major and minor)*

Philosophy, a critical and reflective discipline, fosters transferable skills applicable to most careers, fields of study, and personal endeavors. Philosophy may be teamed with virtually any other major in order to add depth and breadth to another discipline. Historically the most fundamental of the liberal arts, philosophy develops perspective, critical and creative thinking, rational standards of discourse, and sensitivity to value issues. Philosophy develops the individual's sense of meaning and encourages the building of a coherent personal world-view. A minor in philosophy enhances almost any major by adding depth and breadth to a degree only somewhat less than that of the major. A member of the philosophy faculty will help students select courses best suited to each person's needs.

**The Major in Philosophy:** 40 semester hours, comprising:

PHI 101	Problems of Philosophy	4
PHI 102	Practical Logic	4
PHI 401	Advanced Topics in Philosophy	4
PHI 601	Capstone	4

Majors enrolled in the All-College Honors Program will substitute a course numbered 660 or higher (totaling at least 4 SH) for PHI 601.

*Plus, all of the following, totaling at least 24 semester hours:*

1. Two History of Philosophy courses (PHI 200-209) 8

- |   |   |
|---|---|
| 2. Two Topics in Philosophy courses (PHI 210-229)   | 8 |
| 3. One Ethics course (PHI 230-259)                  | 4 |
| 4. One or more PHI electives totaling at least 4 SH | 4 |

Philosophy majors must take at least four other philosophy courses before taking 401, and normally take 401 before taking either 601 or courses numbered 660 or higher.

Courses from other disciplines that are recommended to students taking the major in philosophy are PS 221 or 323 and one course each in psychology, sociology, and history. Philosophy majors will also find it helpful to acquire a working knowledge of any of the following languages: Latin, Ancient Greek, French or German.

Students majoring in philosophy may choose to double major in almost any discipline from the humanities, natural sciences, or social sciences and to enter the All-College Honors Program. Pre-law, pre-medical, and pre-seminary students may find the philosophy major or minor especially useful. The critical thinking skills in which philosophers excel are receiving increasing recognition among today's employers as a valuable asset in the ever more complex business and professional worlds.

**The Minor in Philosophy:** 24 semester hours, comprising:

PHI 101	Problems of Philosophy	4
PHI 102	Practical Logic	4

*Plus, all of the following:*

- |  |   |
|--|---|
| 1. One History of Philosophy course (PHI 200-209)          | 4 |
| 2. One Topics in Philosophy courses (PHI 210-229)          | 4 |
| 3. One Ethics course (PHI 230-259)                         | 4 |
| 4. One or more philosophy electives totaling at least 4 SH | 4 |

Students minoring in philosophy must take at least four other philosophy courses before taking 401.

*Scheduling of Major or Minor:* Philosophy majors and minors should plan their schedules carefully, since some courses are offered only in alternate years. Ideally, students anticipating a major in philosophy should complete 101, 102, and one history or one topics course by the close of their sophomore year. A long-range course schedule should be discussed with the adviser as early as possible during the first year. A double major including philosophy, or a philosophy minor combined with another major, can usually be arranged, providing that careful planning occurs early in the student's career.

## Physical Education

*(No major or minor programs)*

The primary goal of the program of Physical Education is to be a driving force in the pursuit of fitness and the knowledge of its importance. The role of physical education during the past several decades has become increasingly important as social awareness of physical appearance, physiological fitness, wellness education, and mental well-being have come to the forefront. The life expectancy of people has increased significantly and great emphasis is being placed on fitness and vitality as the body and the mind work together. Therefore, the most important function of physical education is to promote and encourage active participation in a variety of physical activities. These activities will not only afford immediate educational opportunities but encourage students to improve individual skills and competencies that will carry far beyond the present.

The courses offered by the program are designed to broaden the fitness, knowledge, and skill level of students in conjunction with their individual needs and interests. Special emphasis is being placed on fitness, wellness, and lifetime activities to assist students in generating a more vibrant and energetic lifestyle.

*Intercollegiate and Intramural Programs:* Westminster sponsors intercollegiate teams in baseball, basketball, cross country, football, golf, lacrosse, soccer, softball, swimming and diving, tennis, track and field, and volleyball. The College is a member of the National Collegiate Athletic Association (NCAA) Division III, and the Presidents' Athletic Conference (PAC). First-year students are eligible to participate.

An intramural program, under the supervision of the Athletics department, is offered and has included most recently competition in basketball, racquetball, soccer, softball, tennis, touch football, volleyball, and ultimate frisbee. Participation in the intramural program is voluntary and does not offer credit.

*Recreational Program:* A monthly schedule informs students about the availability of the College facilities for leisure time activities. This includes the gymnasiums (main and intramural), natatorium, and two racquetball courts. Canoes are available for use on Brittain Lake at scheduled times during the year.

## Physics

*(Major and minor)*

The aim of the program of Physics is to help students develop an understanding of the fundamental laws and behavior of the physical universe and to practice the techniques used by scientists in acquiring such an understanding.

A physics major can prepare a student for careers such as secondary school teaching, industrial research, general engineering, or many other jobs that require technical problem-solving skills. With the physics major and additional graduate study, students can prepare for careers in basic research, teaching at the college or university level, medical physics, specialized engineering fields, and combination fields such as biophysics.

**The Major in Physics:** 64 semester hours, comprising:

MTH 250	Calculus III	4
PHY 151	Principles of Physics I	4
PHY 152	Principles of Physics II	4
PHY 311	Thermal Physics	4
PHY 313	Modern Physics	4
PHY 321	Experimental Physics I	2
PHY 322	Experimental Physics II	2
PHY 331	Computational Physics I	2
PHY 332	Computational Physics II	2
PHY 351	Mechanics	4
PHY 352	Electromagnetic Theory	4
PHY 401	Quantum Mechanics	4
PHY 402	Astrophysics	4
PHY 601	Capstone I	2
PHY 602	Capstone II	2

*Plus, four of the following:*

BIO 201	Cell Biology and Genetics	4
BIO 202	Organismal Biology and Ecology	4
CHE 117	Principles of Chemistry	4

CHE 180	Inorganic Chemistry	4
CHE 230	Chemical Analysis	4
CS 151	Principles of Computer Science I	4
CS 152	Principles of Computer Science II	4
MSE 211	Statics and Mechanics of Materials	4
MSE 221	Principles of Electrical Engineering	4
MSE 231	Science and Engineering of Materials	4
MSE 241	Semiconductor Physics	4
MSE 320	Solid State Chemistry	4
MSE 360	Polymer Chemistry	4
MTH 152	Calculus II	4
MTH 253	Differential Equations	4
MTH 261	Linear Algebra	4
MTH 321	Numerical Analysis	4

The All-College Honors Research Project will replace the capstone requirement for students majoring in physics, if successfully completed. Students do not need to register for both Honors Research and the capstone course in the physics program.

**The Minor in Physics:** 24 semester hours, comprising:

*One of the following sequences:*

PHY 141	Foundations of Physics I	4
PHY 142	Foundations of Physics II	4

*or*

PHY 151	Principles of Physics I	4
PHY 152	Principles of Physics II	4

*Plus, 16 additional semester hours of PHY or MSE coursework at the 200 level or higher.*

**Interdisciplinary Programs:** The environmental science program is offered through the biology, chemistry, physics, and mathematics and computer science programs. The materials science program is offered through the chemistry and physics programs.

**Secondary Education Teacher Certification:** To be eligible for certification in physics students must successfully complete all requirements for the major, the requirements for graduation, and the minor in secondary education.

The prerequisites for admission to the Senior Block are a cumulative GPA of 3.000 in all college work and 3.000 in the major.

Students who are interested in secondary education should contact the chair of the School of Education as soon as possible for complete information. If all requirements are to be completed in four years, careful planning in both the major field and the minor is essential.

# Political Science

*(Major and minor)*

The program in political science is designed to provide the student with a knowledge of political theory, of the American political system, political behavior and institutions in other countries, and of international politics and institutions. The political science program prepares students for careers in government service, teaching, law, and related professional and graduate study. It also offers electives in support of major programs in other disciplines. Students planning subsequent enrollment in law school are advised to consult the pre-law adviser. Special programs in international relations and foreign areas can be arranged for students planning careers in the Foreign Service of the United States, in international organizations, or in education. Westminster students may enroll in the Washington Semester program of governmental study in Washington, D.C., at American University, or in other approved off-campus programs. Westminster students may make use of internships in law offices or government agencies.

**The Major in Political Science:** 52 semester hours, comprising:

PS 101	Introduction to Politics	4
PS 102	Introduction to American Politics	4
PS 103	Introduction to Political Philosophy	4
PS 104	Introduction to International Relations	4
PS 301	Research Design & Analysis in Poli. Sci.	4
PS 601	Capstone	4
SSC 252	Data Analysis for Social Science	4

*Plus, four semester hours in American Politics from the following:*

PS 211	State and Local Government	4
PS 212	The Congress	4
PS 213	The Presidency	4
PS 214	The Courts	4
PS 215	The Politics of Rock and Roll	4
PS 251	Seminar in Politics and Behavior	4
PS 252	Seminar in American Politics	4
PS 302	Seminar – Mock Convention I	2
PS 303	Seminar – Mock Convention II	2
PS 311	Campaigns and Elections	4
PS 411	Political Psychology	4

*Plus, four semester hours in Political Theory or Public Policy from the following:*

PS 221	American Political Thought	4
PS 222	Political Ideologies	4
PS 241	Public Policy	4
PS 242	Environmental Policy and Politics	4
PS 251	Seminar in Politics and Behavior	4
PS 253	Seminar in Political Philosophy	4
PS 321	American Con. Law: Government Powers	4
PS 322	American Con. Law: Civil Liberties	4
PS 323	Modern Political Philosophy	4
PS 342	Politics and the Economy	4

*Plus, four semester hours in International Politics or Comparative Politics from the following:*

PS 204	Model United Nations	1
--------	----------------------	---

PS 232	European Politics	4
PS 233	Politics in Developing Countries	4
PS 235	African Politics	4
PS 236	Russian Politics	4
PS 254	Seminar in Comparative Politics	4
PS 255	Seminar in International Politics	4
PS 331	Geopolitics	4
PS 332	US Foreign Policy	4
PS 431	International Law and Organization	4

*Plus, twelve semester hours of PS electives at the 200-level or higher, with the exceptions of PS 301 and PS 601, and a maximum of four semester hours of internship/field experience (PS 590).*

NOTE: All political science majors will take PS 301 in the Spring Semester of the junior year, and PS 601 in the Fall Semester of the senior year. The two courses are linked and together make up a unified capstone experience. Political science majors who enroll in the Honors program are required to complete the political science capstone program – PS 301, PS 601, and SSC 252 – as well.

**The Minor in Political Science:** 24 semester hours, comprising:

*Three of the following:*

PS 101	Introduction to Politics	4
PS 102	Introduction to American Politics	4
PS 103	Introduction to Political Philosophy	4
PS 104	Introduction to International Relations	4

*Plus, twelve semester hours of PS electives at the 200-level or higher. Internship/Field Experience (PS 590) may count toward the minor.*

*Political Science majors planning to attend law school:* The following is a list of recommended courses. These are not required courses, but all do help the student develop some of the skills abilities, and knowledge helpful for success in law school:

BA 370	Business Law	4
PS 214	The Courts	4
PS 321	American Con. Law - Government Powers	4
PS 322	American Con. Law - Civil Rights & Liberties	4
PS 431	International Law and Organization	4
ECO 150	Economic Reasoning	4
PHI 102	Practical Logic	4
PHI 230-259	Practical Ethics	4
CJS 202	Criminology	4
CJS 302	Sociology of Law and Legal Systems	4

Students interested in attending law school may wish to consider the 3-3 cooperative program with Duquesne University Law School. See the section on Pre-Professional Programs in this Catalog.

*Secondary Education Teacher Certification:* To be eligible for certification in social studies with a major in political science, students must successfully complete a major in political science and a minor in secondary education. Students who are interested in secondary education should contact the coordinator of secondary education in the School of Education, as soon as possible for complete information on the requirements for certification.

# Psychology

(Major and minor)

The psychology major is designed to enhance a broad array of fundamental abilities — written and spoken verbal mastery; quantitative facility (especially statistical); and creative problem solving (stressing the scientific method and information technology tools). The major is composed of required and elective content area courses (both laboratory and applied work, an internship and a senior thesis). The senior thesis is accomplished as part of a full-year program of independent and guided research.

Psychology majors find employment in a variety of areas including: mental health, business and industry, educational counseling, research, sales, social work, government and medical services. Because there are so many possible avenues of future employment for psychology majors, students are encouraged to select their courses, internship sites, and senior thesis topics to be most relevant to a particular career track. These “advising” tracks include developmental psychology, business and organizational psychology, clinical/counseling psychology, pre-occupational therapy, and research/general psychology.

**The Major in Psychology:** 44 semester hours, comprising:

PSY 100	Research Experience in Psychology (x2)	2
PSY 101	Introduction to Psychology	4
PSY 201	Experimental Design and Statistics	4
PSY 300	Critical Thinking and Writing in Psychology	2
PSY 590	Internship	4
PSY 600	Senior Psychology Scholarship Experience	4

*Plus, one of the following:*

PSY 281	Principles of Learning and Memory	4
PSY 351	Cognition	4

*Plus, one of the following:*

PSY 301	Psychological Assessment	4
PSY 321	Social Psychology	4

*Plus, at least four additional electives in PSY* 16

NOTE: Honors students will register for PSY 662 Honors Senior Psychology Scholarship Experience. Psychology majors who are in the All-College Honors Program must have at least a 3.5 average in three or more psychology courses to enter honors research. There are also opportunities for a more extensive capstone project through our Research Scholars Program.

*Advising Tracks:* The tracks listed below are an advising tool to help students plan courses to meet their career aspirations. These tracks are intended to help students choose a) among required major courses (e.g., either PSY 301 or PSY 321 is required); b) psychology electives most consistent with their goals; and c) other useful courses outside the psychology program.

*Developmental Psychology Track:*

- Recommended Major Requirement Options: PSY 281 and 301.
- Recommended Psychology Electives: PSY 221, 291, 431.
- Other Recommended Courses: EDU 201, EDU 231, CJS 201 (formerly SOC 201), SOC 204.



*Clinical/Counseling Psychology Track:*

- Recommended Major Requirement Options: PSY 281 and 301.
- Recommended Psychology Electives: PSY 275, 401, 421. Students interested in working with children should also take PSY 221, 431; Students interested in working primarily with adults should also take PSY 291, 212 or 321.
- Other recommended courses: CJS 102, CJS 201, EDU 231, PSY 341, SOC 204.

*Pre-Occupational Therapy Track:*

- Recommended Major Requirement Options: PSY 301.
- Recommended Psychology Electives: PSY 225, 291, 341, 401 and 431.
- Other Recommended Courses: BIO 201, BIO 202, BIO 335, BIO 336, PHI 240, PHY 141 and SOC 101.

*Social/Organizational Psychology Track:*

- Recommended Major Requirement Options: PSY 321 and 351.
- Recommended Psychology Electives: PSY 212, 213, 241 and 301.
- Other Recommended Courses: ACC 201, BA 140, SOC 305.

**The Minor in Psychology:** 24 hours, comprising:

*All of the following:*

PSY 101	Introduction to Psychology	4
PSY 201	Experimental Design and Statistics	4

Plus, four electives, including at least one at the 300-level or above.

## Public Relations

*(Major and minor)*

The mission of the public relations program is to prepare future public relations practitioners to identify problems, research possible solutions, prepare clear responses, persuade management to implement effective plans, and devise suitable evaluative tools through the study of public relations history, theory, and practice and through practical classroom and field experiences. These skills should allow the students to make the fullest use of their liberal arts education. Ancillary to this mission is the development of personal skills including self-awareness, self-confidence, group leadership, social responsibility, discipline, and tenacity.

Students enrolled in the public relations major develop their writing skills, refine their public speaking skills, learn to conduct research, and study strategic communication. These valuable skills enable graduates to build mutually beneficial relationships between organizations and the groups that support them. The public relations major is a student-centered program in which students make the most of their liberal arts education through classroom instruction and field experiences that enable them to put their knowledge and skills into practice. Internships and experiential studies enable students to build strong portfolios to show potential employers. The faculty's professional experience and academic background enable them to mentor students as they move through the public relations curriculum. Imagine yourself a public relations coordinator, social media manager, publicist, copywriter, media relations specialist, sports information director, strategic planner, public affairs officer, director of corporate communications, community relations coordinator, developments associate, or event planner.

Field experience will be off campus, with a graded internship required after students

complete the junior sequence. Because of the importance of the internship in the public relations field, students must have taken the following courses before applying for the internship: PR 101, 202, 203, 401, 402 and WRI 301.

**The Major in Public Relations:** 48 semester hours, comprising:

COM 230	Social Media and Web Planning	4
COM 301	Applied Social Media	4
PR 101	Principles, Practices, & Theory of PR	4
PR 102	Writing for Media	4
PR 202	Advertising & PR: Approaches & Methods	4
PR 203	PR Research for Planning & Evaluation	4
PR 401	Public Relations Writing	4
PR 402	Public Relations and the Media	4
PR 501	Experiential Studies	4
PR 590	Internship	4
PR 601	Capstone	4

*Plus, WRI 302 or a 300-level selected topics course* 4

In addition, majors are strongly encouraged to take courses outside the major that support the Liberal Studies program. Lists of these courses will be supplied to all majors.

**The Minor in Public Relations:** 24 semester hours, comprising:

PR 101	Principles, Practices, and Theory of PR	4
PR 102	Writing for Media	4
PR 202	Advertising & PR Approaches & Methods	4
PR 203	PR Research for Planning & Evaluation	4
PR 401	Public Relations Writing	4
PR 402	Public Relations and the Media	4

## Religion

*(Major and minor)*

For as long as humankind has been present on the earth, religion in some form has played a key role in nearly all societies. As such, understanding this facet of the human experience is critical to understanding humanity, past and present. While developing student understanding of Christian traditions is one element of the study of religion at Westminster, the goals of the courses in religion are broader. They seek to enable students:

- to understand and appreciate faith traditions in all their variety
- to participate in the dialogue between and among people of various faiths
- to understand the relationships between the religious and other dimensions of human existence
- to deepen their own faith commitments, whatever they may be
- to act in informed and compassionate ways that sustain and enrich global community.

An understanding of religion in its various forms has value for the study of the other liberal arts areas.

Students anticipating graduate study in a seminary or university will find a sound foundation in courses in religion and philosophy (as well as in the other component disciplines of the program).

**The Major in Religion:** Within the religion major there are two concentrations: The Christian Traditions concentration and the World Religion concentration. A major in religion requires the number of semester hours specified below for each of these concentrations.

***The Christian Traditions Concentration:*** 48 semester hours in religion courses, comprising:

REL 140	Old Testament/Hebrew Bible	4
REL 150	New Testament	4
REL 160	Understanding Christianity	4
REL 170	Basic Introduction to Religion in the World	4
REL 200	Applied Biblical Interpretation	4
REL 601	Capstone	4

Majors enrolled in the All-College Honors Program will substitute courses numbered 660 and higher (totaling at least 4 semester hours) for REL 601.

*Plus, two of the following:*

REL 141	The Torah: The First Five Books of the Bible	4
REL 142	Prophetic Literature	4
REL 143	The End Times: Apocalyptic Literature	4

*Plus, two of the following:*

REL 151	Jesus	4
REL 152	The Synoptic Gospels	4
REL 153	The Gospel of John	4
REL 154	Paul and His Letters	4

*Plus, one of the following:*

REL 162	Eastern Orthodox Christianity	4
REL 163	Reformed/Presbyterian Theology & Worship	4
REL 177	Religion and Society	4
REL 178	Philosophy of Religion	4

*Plus, one REL elective totaling 4 semester hours.* 4

***The World Religion Concentration:*** 44 semester hours in religion courses, comprising:

REL 170	Basic Introduction to Religion in the World	4
REL 171	Religion in the Western World	4
REL 172	Religions from India	4
REL 173	Religion in China	4
REL 270	Method and Theory in the Study of Religion	4
REL 601	Capstone	4

Majors enrolled in the All-College Honors Program will substitute courses numbered 660 and higher (totaling at least 4 semester hours) for REL 601.

*Plus, one of the following:*

REL 100	Understanding the Bible	4
REL 140	Old Testament/Hebrew Bible	4
REL 150	New Testament	4

*Plus, one of the following:*

REL 174	Religion in America	4
REL 175	Gender and Religion	4

REL 176	Religion and Art	4
<i>Plus, one of the following:</i>		
REL 177	Religion and Society	4
REL 178	Philosophy of Religion	4
REL 260	Text and Meaning	4
<i>Plus, two religion electives totaling 8 semester hours</i>		8

**The Minor in Religion:** 24 semester hours, comprising:

REL 170	Basic Introduction to Religion in the World	4
<i>Plus, one of the following:</i>		
REL 100	Understanding the Bible	4
REL 140	Old Testament/Hebrew Bible	4
REL 141	The Torah: The First Five Books of the Bible	4
REL 150	New Testament	4
REL 152	The Synoptic Gospels	4
REL 153	The Gospel of John	4
REL 154	Paul and His Letters	4
<i>Plus, one of the following:</i>		
REL 160	Understanding Christianity	4
REL 162	Eastern Orthodox Christianity	4
REL 163	Reformed/Presbyterian Theology & Worship	4
<i>Plus, one of the following:</i>		
REL 171	Religion in the Western World	4
REL 172	Religions from India	4
REL 173	Religion in China	4
REL 174	Religion in America	4

*Plus, two REL electives totaling 8 semester hours, at least one of which must be numbered 200 or higher.*

## Seminary Preparation

Students who plan to attend a seminary should take courses that are broad in scope and provide an appropriate foundation for seminary studies. Therefore, in addition to courses in Christian traditions concentration, students should consider taking GR 101, 102, 201 and 251, as well as courses in one or more of the following disciplines: world religion, philosophy, history, literature, psychology, speech, sociology.

## Social Media

*(Minor only)*

Students wishing to complete a communication focus on social media and how it is utilized both personally and professionally may choose the interdisciplinary Social Media minor.

**The Minor in Social Media:** 24 semester hours, comprising:

COM 200	Social Media Literacy	4
COM 230	Social Media and Web Planning	4
COM 301	Applied Social Media	4
COM 590	Internship (with a social media emphasis)	4

CS 201	Web Design	4
MA 110	Design Principles and Practices	4

COM 590 may be taken after a student completes COM 301. Students arrange to conduct the social media efforts of an organization.

Students majoring in communication studies may not complete the social media minor, but can elect to take the social media classes as electives within the major.

## Sociology

*(Major and minor)*

Sociology is the scientific study of human behavior as interpreted and experienced in groups. These groups range from face-to-face interactions to institutions including the family, religious communities, and health care to indigenous, developing and post-industrial societies embedded in globalization processes. The program emphasizes multicultural and global perspectives and material to broaden the outlook of students. The broadly based curriculum in the major allows the student to follow particular interests in depth, as well as to gain an overview of the discipline. The aim of the major is a general introduction to the dominant sociological theories, substantive areas, and methods of inquiry, with students acquiring competency in important analytical and technical skills.

A major in sociology helps to prepare students for both further study and immediate employment. Work or study might be in sociology, law, social work, counseling, or other related areas. The major in sociology with a social policy concentration helps to prepare students for careers in helping professions and public service.

**The Major in Sociology:** 48 semester hours, comprising:

SOC 101	Principles of Sociology	4
SOC 350	Social Theory	4
SOC 601	Sociology Capstone	4
SSC 251	Research Methods for Social Science	4
SSC 252	Data Analysis for Social Science	4

*Plus, one of the following:*

SOC 590	Field Experience/Internship	4
SOC 624	Independent Study	4

Plus, 24 semester hours of SOC or CJS electives, with at least 12 semester hours designated 200 level or above and 4 semester hours designated 300 level or above. At least 16 semester hours must be of courses with a SOC rather than CJS designation.

**The Major in Sociology with a Social Policy Concentration:** 56 semester hours, comprising:

ACC 201	Principles of Accounting I	4
PS 241	Public Policy	4
SOC 101	Principles of Sociology	4
SOC 108	Social Problems, Social Policies	4
SOC 204	Introduction to Social Work	4
SOC 305	Sociology of Organizations	4
SOC 350	Social Theory	4
SOC 590	Internship (in the area of social policy)	4
SOC 601	Sociology Capstone	4
SSC 251	Research Methods for Social Science	4

SSC 252	Data Analysis for Social Science	4
---------	----------------------------------	---

*Plus, three of the following:*

CJS 201	Juvenile Delinquency and Justice	4
SOC 210	Gerontology	4
SOC 214	Social Class in America	4
SOC 327	Medical Sociology	4

**The Minor in Sociology:** 28 semester hours, comprising:

SOC 101	Principles of Sociology	4
SOC 350	Social Theory	4

*Plus, five electives in SOC or CJS, of which three must be at the 200 level or above. SOC 590 or CJS 590 may not be included in the minor.*

## Spanish

*(Major and minor)*

**The Major in Spanish:** A major in Spanish requires a minimum of 36 semester hours and a maximum of 48 semester hours in Spanish courses numbered 201 and higher, including:

*One of the following:*

IC 101	The World of Language	4
IC 102	Reading the World	4

*One of the following:*

SPA 351	Culture of Spain	4
SPA 352	Cultures of Hispanic America	4

*Plus, two SPA courses selected from those numbered 401-499* 8

*Plus, 16 hours of SPA coursework numbered 201 or higher* 16

*Plus, SPA 601 Capstone* 4

Plus, an approved international study experience of at least ten weeks in a Spanish-speaking country.

Of the two courses required in the 401-499 range, at least one must be taken after returning from the international study experience.

**The Minor in Spanish:** A minor in Spanish requires a minimum of 24 semester hours of SPA coursework numbered 201 and higher.

**Requirements for Secondary Education Teacher Certification:** If secondary education teacher certification in Spanish is desired, the major must include the following courses: SPA 301, 302, 351 or 352, 590, and 601. A required supporting course is IC 101 or 102. Students must also complete all the requirements for a minor in secondary education.

## Sports Management

*(Major and minor)*

This program, sponsored by the School of Business, prepares individuals to hone their knowledge in the core areas of communication (including media and public relations), facility and events, finance, law, management, and marketing (including sponsorship, licensing, and ticketing). In class course work will be supplemented

with hands on experience working with campus or regional sports teams in addition to internship opportunities with sports organizations. The wide variety of courses offered provides a solid foundation for anyone interested in a business career outside of sports as well. Imagine yourself in a variety of sports related management careers including sports promotion, marketing and sales, facilities management, athletic or athletic conference leadership, personnel, as well as leadership of recreational organizations including community non-profits.

**The Major in Sports Management:** 64 semester hours, comprising:

ACC 201	Principles of Accounting I	4
BA 140	Introduction to Business	4
BA 305	Marketing	4
BA 310	Organizations and Management	4
BA 335	Sports/Event Planning and Management	4
BA 370	Business Law	4
BA 590	Internship	4
BA 601	Strategic Management (Capstone)	4
COM 303	Sales Communication	4
COM 320	Strategic Sports Communication	4
ECO 150	Economic Reasoning	4
MTH 135	Concepts of Statistics	4
SMGT 110	Sports Management	4
SMGT 201	Practical Experience	2
SMGT 202	Practical Experience	2

*Plus, at least two of the following:*

BA 325	Management Information Systems	4
BA 345	Sales, Business Development, & Big Data	4
BA 360	Human Resources Management	4
BC 309	Sports Broadcasting	4
COM 225	Communication Ethics	4
COM 301	Applied Social Media	4
MJ 110	Design Principles + Practices	4
PR 101	Principles, Practices, and Theory of PR	4
PR 311	Selected Topics in Public Relations	4
PR 402	Public Relations and the Media	4
SOC 307	Sociology of Sport	4

**The Minor in Sports Management:** 28 semester hours, comprising:

ACC 201	Principles of Accounting I	4
BA 140	Introduction to Business	4
BA 335	Sports/Event Planning and Management	4
COM 320	Strategic Sports Communication	4
SMGT 110	Sports Management	4

*Plus, two of the following:*

BA 225	Management Information Systems	4
BA 305	Marketing	4
BA 310	Organizations and Management	4
BA 360	Human Resources Management	4
BA 370	Business Law	4
BA 590	Internship	4
BC 309	Sports Broadcasting	4
COM 225	Communication Ethics	4

COM 301	Applied Social Media	4
COM 303	Sales Communication	4
PR 101	Principles, Practices, and Theory of PR	4
PR 311	Selected Topics in Public Relations	4
PR 402	Public Relations and the Media	4
SOC 307	Sociology of Sport	4

## Theatre

*(Major and minor)*

The undergraduate curriculum in theatre is designed to introduce the student to the content and structure of theatre as an important cultural institution, and to encourage the student to explore both its theoretical and its practical aspects. In addition, theatre majors are expected to participate in all programs main stage productions.

**The Major in Theatre:** 44 semester hours, comprising:

THE 102	Introduction to Acting	4
THE 111	Stagecraft I	4
THE 201	Script Analysis	4
THE 301	Practicum (x4)	4
THE 404	Directing	4
THE 601	Capstone I	2
THE 602	Capstone II	2

*Plus, one of the following:*

THE 370	Theatre History I	4
THE 371	Theatre History II	4

*Plus, one of the following:*

THE 210	Science on the Stage	4
THE 211/ENG 108	American Playwrights	4
THE 212/ENG 113	Shakespeare's Plays	4
THE 213/ENG 124	African American Drama	4
THE 214/ENG 127	British and Irish Drama	4
THE/WRI 355	Playwriting	4

*Plus, one of the following:*

THE 321	Principles of Theatrical Design	4
THE 410	Advanced Topics: Advanced Stagecraft	4

*Plus, one of the following:*

THE 215	Soldiers on the Stage: Military Ent./Drama	4
THE 225	Theatre for Social Engagement	4

*Plus, one of the following:*

THE 101	Introduction to Theatre	4
THE/COM 151	Voice and Diction	4
THE 202	Acting II	4
THE 220	Introduction to Performance Studies	4
THE 221	Survey of American Musical Theatre	4
THE 251	Oral Interpretation	4

**The Minor in Theatre:** 22 semester hours, comprising:

THE 101	Introduction to Theatre	4
---------	-------------------------	---



THE 102	Introduction to Acting	4
THE 111	Stagecraft I	4
THE 301 (x2)	Theatre Practicum	2
<i>Plus, 8 semester hours of THE electives.</i>		8

## Writing

*(Minor only)*

**The Minor in Writing:** 28 semester hours, comprising:

WRI 210	Introduction to Creative & Professional Writing	4
---------	---	---

*Plus, 6 additional courses selected from PR 401, or any 300- or 400- level course in WRI.*

NOTE: PR majors and minors may not count WRI 301 or WRI 302 toward the writing minor.

# Course Descriptions

## Accounting (ACC)

**ACC 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**ACC 201 Principles of Accounting I (4 SH).** A two-semester study of the basic principles and concepts underlying the measurement of financial activity, and the preparation and use of financial statements. Among the topics will be basic accounting theory, transaction analyses, income determination, asset and liability valuation.

**ACC 202 Principles of Accounting II (4 SH).** A continuation of the basic accounting concepts, plus issues that relate to the financial management of a company, cost behavior, cost control, capital budgeting and profit planning. Prerequisite: ACC 201.

**ACC 300 Cost Accounting (4 SH).** Development and use of financial information for management purposes. Coverage includes cost determination, analysis and control, budgeting, decision making, and performance evaluation. Prerequisites: ACC 201, ACC 202 and MTH 131. (Also listed as BA 300.)

**ACC 305 Intermediate Accounting I (4 SH).** A two-semester advanced study of accounting principles as they relate to the preparation, form, content and decision usefulness of financial statements. Selected topics include the conceptual framework of accounting, current professional pronouncements, revenue recognition, income determination and presentation, asset valuation and measurement, liability and equity reporting and financial statement analysis. Prerequisites: ACC 201 and ACC 202 for ACC 305.

**ACC 306 Intermediate Accounting II (4 SH).** A two-semester advanced study of accounting principles as they relate to the preparation, form, content and decision usefulness of financial statements. Selected topics include the conceptual framework of accounting, current professional pronouncements, revenue recognition, income determination and presentation, asset valuation and measurement, liability and equity reporting and financial statement analysis. Prerequisite: ACC 305.

**ACC 310 Federal Income Taxation (4 SH).** A study of the current federal income tax law as it pertains to individual taxpayers, including their interaction with sole proprietorships. The concept of taxable income is developed. Tax planning and tax determination within the provisions of the law are covered. Prerequisites: ACC 201 and ACC 202.

**ACC 320 Corporation & Partnership Taxation (4 SH).** A study of the principles of taxation pertaining to corporations, partnerships, and related entities. Emphasis is placed on the impact of taxation on business transactions and its role in planning and decision making. Prerequisite: ACC 310 or consent of the instructor.

**ACC 331 Accounting Information Systems (2 SH).** The study of computer technology's role in the accounting process: the accurate development and beneficial use of financial information as well as the ability to assign responsibility for results and motivate performance needed to achieve results. Prerequisites: ACC 201 and ACC 202.

**ACC 332 Forensic Accounting (2 SH).** The study of investigative and analytical skills necessary to resolve financial issues in a manner that meets standards required by a court of law. Prerequisites: ACC 201 and ACC 202 and junior status.

**ACC 341 Governmental Accounting (2 SH).** The study of local, state, and federal government accounting and reporting, including public sector auditing. Prerequisites: ACC 201 and ACC 202.

**ACC 342 Not-For-Profit Accounting (2 SH).** The study of accounting and reporting for not-for-profit organizations such as colleges, universities, and health care organizations. Prerequisite: ACC 201 and ACC 202.

**ACC 351 Accounting Theory (2 SH).** The study of the theoretical issues behind advanced accounting practices as they relate to stockholders, business consolidations, international accounting standards, and overall full disclosure of financial information, issues frequented by small, mid-sized, and large companies alike. Prerequisite: ACC 306.

**ACC 352 Advanced Accounting (2 SH).** The study of the application of accounting principles and problems as they relate to partnerships, business mergers, intercompany transactions, consolidations, issues which are frequented by small, mid-sized, and large companies alike. Prerequisites: ACC 306 and ACC 351.

**ACC 410 Auditing (4 SH).** A study of auditing objectives, standards, and procedures employed in the examination of business enterprises and verification of their financial statements. This course includes an evaluation of internal control, preparation of work papers, report writing, professional ethics, and current auditing trends. Prerequisite: ACC 306.

**ACC 590 Field Experience/Internship (1–4 SH).** All grading S/U. Prerequisites: Must be School of Business major, have four courses completed toward the major, sophomore, junior or senior standing, consent of School of Business, and a GPA of at least 2.0.

**ACC 601 Preparing for the Profession (4 SH).** A study of regulatory concepts, statements, and opinions regarding the measurement and presentation of financial information. Issues related to the practice of professional accounting will be explored through research and presentations. Serves as the capstone for the accounting major. Prerequisite: ACC 410 or consent of instructor.

**ACC 610, 611 Seminar/Advanced Topics (1–4 SH).** A study of relevant topics and techniques pertaining to the current business and economics environment. Solution processes and problem defining are stressed.

**ACC 620-624 Independent Study (1–4 SH).** Prerequisites: six courses in accounting, economics and/or business with at least a 3.250, junior or senior standing, and consent of program.

**ACC 660, 670, 680, 690 Honors Project (1–4 SH).**

## Art (ART)

**ART 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**ART 101 Basic Studio Art 2D (VP) (4 SH).** An introductory art course that emphasizes exploration of two-dimensional art mediums, which range from drawing, painting, printmaking, photography and design. Projects encourage both representational and abstract strategies for constructing unified compositions. Project assignments utilize line, shape, value, texture and color while introducing techniques for working within two-dimensional space. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**ART 102 Foundation Drawing (VP) (4 SH).** A basic course for all students that covers the fundamentals of composition, exploring a variety of media. Students will be taught a “visual grammar”—how to translate what they see through the language of drawing. A wide range of techniques are introduced. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**ART 104 Beginning Oil Painting (VP) (4 SH).** This is a fundamental course in the production of oil paintings; technical and creative skills are given equal emphasis. Color theory, composition and self-expression are areas covered. Related areas in art history and aesthetics are introduced. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**ART 105 Art and Nature (VP) (4 SH).** This course takes an in-depth look at the natural world through art. Students explore a variety of subjects from butterflies to birds; seedpods to sea shells; the microscopic to the expanse of landscapes. Content and themes ranging from more scientific to the artistic. Primary techniques are basic drawing and painting using simple and portable materials. The course revolves around the creation of a field journal/sketchbook. More involved projects spin off assignments from the sketchbook. Students can expect to work on location/campus and at the biology department's Field Station and Nature Trail. Our studio is the great outdoors. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**ART 106 Handbuilding Ceramics (VP) (4 SH).** An introductory course concentrating on handbuilding techniques: coil, slab, press mold, drape mold, and modeling. Problem-solving assignments will utilize the versatility of clay to create both functional and sculptural forms. Clay making and kiln firing procedures are also components to the course. Students will be shown both contemporary and historical works in clay that correspond to project themes. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**ART 107 Worlds of Art: Ideas & Images (HC) (4 SH).** An introductory course in art appreciation that explores art, artists and creativity as they pertain to our daily lives, contemporary society, and cultural identities. The course is structured around artistic themes, which range from self-exploration, religion and spirituality, politics, technology, race, landscape, environment, science, sex and sensuality, among other topics. Both physical art projects and written assignments will be used to address course content. Guest speakers and field trips to museums and galleries will also provide valuable input and expand the exposure to artwork being created today. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**ART 108 Landscape Painting (VP) (4 SH).** This is a course dedicated to landscape painting. Themes include those of the 20th century and the evolution of nature in art from realism to symbolism. Students will work from a variety of source imagery and explore selected styles. This course is occasionally taught as a cluster with WRI 351 Creative Non-Fiction. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**ART 114 Introduction to African Art (VP) (4 SH).** Taught as a cluster course with HIS 281: Africa to 1800 or HIS 282: Africa since 1800. With appreciation for the creative processes and contexts of African Art, students will create art projects that incorporate their own contemporary concerns. Through studio art projects, students will think critically about the artwork being shown in class, interpret meaning, understand context and hone their skills of observation and creative expression. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**ART 120 Sculpture and Science (VP) (4 SH).** This course will explore the intersection of art and science through a variety of sculptural projects inspired by scientific disciplines. A background in science is not required; the subject matter, processes and tools of both natural and social sciences are used as a framework for making art. Emphasis on experimentation, critical thinking, collaboration and problem-solving. A range of three-dimensional materials and processes will be utilized throughout the course. Development of concept through the study of artists combining science and

art. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**ART 200 Basic Studio Art 3D (VP) (4 SH).** An introductory class for students to explore the physical and visual properties of three-dimensional form. Students will work with a variety of materials such as plaster, balsa wood, paper, foam, cardboard, and found objects. Problem-solving projects will address aspects of design, technique and process, presentation, function and innovation in the creating of physical objects in space. Traditional and contemporary artists working in three-dimensional media are shown to illustrate project themes. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**ART 201 Waterbased Painting (VP) (4 SH).** A studio course in either acrylic or watercolors as designated by the instructor. Elements of design, techniques and related historical and aesthetic issues will be covered. Students will develop critical and problem-solving skills through a visual language. This course can encompass all levels of skills. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**ART 202 Wheelthrowing Ceramics (VP) (4 SH).** A course that introduces students to creating thrown forms utilizing the potter's wheel. The design, function and presentation of the forms will be emphasized. Assignments will incorporate a variety of surface techniques and applications. Clay making and kiln firing procedures are also components to the course. Additionally, this course is taught as service learning and students will organize and participate in an Empty Bowls fund-raiser. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**ART 204 Drawing Explorations (VP) (4 SH).** A course that will explore the expressive potential of drawing. Contemporary drawing involves a wide range of mixed media that include collage, frottage, paint, traditional drawing methods, color, and some three-dimensional components. Students will be asked to explore a wide range of topics that include dreams, social, cultural, political, and environmental themes. This course is open to all skill levels. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**ART 208 Introduction to Sculpture (VP) (4 SH).** This course is an introduction to utilizing sculpture as a three-dimensional vehicle for creative expression. The physical, spatial, and thematic properties of sculptural media are addressed through course projects. A range of materials and processes will be utilized in the course and may include wood, plaster, wax, metal, fabric, found materials, casting, site-specific, and installation. The course is designed for all skill levels. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**ART 211 Who Am I? (VP) (4 SH).** This course will focus upon studio art to explore a variety of themes related to discovering "the self." A variety of mixed media and techniques will be used to create art forms that reflect the student's ideas about assigned topics related to self-awareness within various contexts. Occasionally offered as a cluster course with ENG 105. Check current course listings for CL designation prior to enrollment. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**ART 218 Contemporary Crafts (VP) (4 SH).** This course explores the rich history of craft mediums and processes within a contemporary context. Both material and technique will be looked at as potential for the communication of ideas. Thematic projects will address the social, cultural, and historical significance of craft. A variety of craft media will be utilized and may include paper, wood, fiber, jewelry, book-making, and mixed media. The course is designed for all skill levels. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**ART 219 Fiber Arts (VP) (4 SH).** This course is a creative exploration of design as it applies to fiber arts. Felt making will be the primary area of focus. Students will learn to use fibers to create a variety of projects using wool from both local and regional sources. Students will learn how to blend their own colors, make both flat wall works, and three dimensional forms such as bags, boots, pillows. A brief history of this ancient first textile” will be introduced as well as contemporary artists who use felt as their primary art form. Methods covered are classic wet felting that blends the wool layers to each other, needle felting that provides fine detail work, and experimental forms such as web and nuno felting that merge sheer textiles with wool to create wearables such as vests and scarves. Offered in Spring term. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**ART 300 Fiber Arts & Natural Dyes (VP) (4 SH).** A course about eco-color and fiber arts. Students will research, harvest, and create botanical dyes from regional plants. The first half of the semester will be about making dyes, dyeing different fibers, and experimenting with safe mordents. There will be a segment on surface design using your dyes. The second half of the semester will be focused upon creating artwork from the dyed fibers/materials. Methods include, but are not limited to, basic felting, simple frame weaving, and fabric constructions. Topics to be introduced throughout the semester include: basic design and color theory, the history of textiles and dyes, and related environmental issues. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**ART 303 Advanced Studies I (2 SH).** Courses of study that are taken concurrently with regular studio courses, but structured for advanced levels. Students may select media for further study, but must first exhaust all related course offerings in that media that are taught at Westminster College. Course work will be structured by the supervising instructor and emphasis will be upon conceptual and technical development within the given medium as well as self-directed projects. Permission of instructor is required prior to registration for the course. Course work is to be organized by the instructor and executed during regularly scheduled courses in the same area. 3.000 GPA in major. Art majors only.

**ART 304 Advanced Studies II (4 SH).** Courses of study that are taken concurrently with regular studio courses, but structured for advanced levels. Students may select media for further study, but must first exhaust all related course offerings in that media that are taught at Westminster College. Course work will be structured by the supervising instructor and emphasis will be upon conceptual and technical development within the given medium. Prerequisites: ART 303 and permission of instructor prior to registration.

**ART 590 Internships (1-4 SH).** Students must have completed their fall sophomore semester and have a 3.0 average in the major as well as college GPA. All internships must be approved by the faculty PRIOR to enrolling in the course. No internships will be approved for the fall term of senior year. The course will be graded S/U and carry a minimum of 40 hours of work.

**ART 601 Capstone (4 SH).** Art majors must present a series of artworks around an approved topic or theme. Additionally, a digital portfolio will be created to document their work. The work must be created in a medium that they have previously studied at Westminster College (painting, ceramics, sculpture, etc.). Students will submit a written proposal describing the topic, rationale, and medium of choice. This proposal must be submitted by March 1 of their Junior year and approved by the Art Faculty. In some cases, the faculty reserve the option to assign a topic and medium. At the end of the capstone course, students will present a talk about and display their work in a predetermined location. Talks will be open to the public. Prerequisites: Completion of two courses in a similar or related media taken at West-

minster College. GPA of 2.5 in the major to enroll in Art 601. Offered Fall term.

**ART 620 Independent Studies (1-4 SH).** Student must be an art major or minor and carry a 3.0 GPA in the major. After exhausting options in a given media and in Advanced Studies I & II, students may continue a focused study through independent work approved and supervised by an art faculty member prior to enrollment in the course. Art faculty will determine grading criteria and develop a syllabus with the student.

## Astronomy (AST)

**AST 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**AST 141 Planets (SD) (4 SH).** This course is an introduction to the science of planets, from our own Earth to exoplanets around distant stars, as well as the moons, asteroids, comets, and other bits of rock and ice that exist where planets do. We will study the properties of these objects; learn how they form, evolve and interact with their environment; explore the processes in their atmospheres, on their surfaces, and within their cores; learn how astronomers are able to detect these objects around distant stars; and, finally, study the past, present, and future of robotic and manned exploration of the Solar System and beyond. A laboratory is included. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**AST 142 Stars (SD) (4 SH).** This course is an introduction to the science of stars. When we look up at the night sky, a few thousand stars can be seen with the unaided eye. Using telescopes, we have found that another few hundred billion exist in our Galaxy. But these stars are not all the same. From the smallest brown dwarfs to the largest blue supergiants, and from young stellar objects to deadly black holes, we will explore and study the processes that form, shape, power, and, in some cases, destroy stars. We will learn that life on Earth is at the same time sustained and threatened by stars. Most of all, we will learn that the atoms in our bodies, in the air we breathe, in the jewelry we wear, and in most everything we see were forged by stars long ago: we are stardust, and to stardust we will one day return. A laboratory is included. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**AST 143 Galaxies and Cosmology (SD) (4 SH).** This course is an introduction to the science of our Universe on the largest scales. It covers the astrophysics of galaxies and the processes that shape our Universe as a whole – a field of study known as cosmology. We will explore the formation of galaxies, their interactions in clusters, and their transformation through mergers. We will explore evidence for the beginning of our Universe, its evolution through time, and what its fate may be. Our explorations will start in our own Milky Way galaxy and take us outward to the most distant quasars, back in time to the earliest echoes of the Big Bang, and up in scale to view the largest structures in the Universe. All the while we will be mindful of the effects our knowledge of the Universe has on our understanding of ourselves and humanity's place in the Universe. A laboratory is included. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**AST 161 Life in the Universe (SD) (4 SH).** Currently, we only know of life in one place: on Earth. This course is an introduction to the science behind the possibilities for finding life in places other than on Earth. We will investigate the scientific understanding of what life means, including the biochemical basis for life on Earth. We will investigate the conditions necessary for the formation and existence of life and where those conditions may exist in our Universe. Finally, we will talk about the search for evidence of life on other planets and moons in our Solar System and the cutting edge discovery of potentially habitable planets and moons around other stars. It is difficult to imagine a scientific discovery that would have a greater impact



on our sense of place in the Universe than the definitive discovery of life that has arisen on a place other than Earth. To date, we know of no examples, but in all probability, within a few decades, we will either have discovered evidence that life exists elsewhere or we will be able to set very stringent limits on how common a life-bearing planet such as Earth is in a galaxy such as ours. A laboratory is included. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**AST 201 Observational Astronomy (SD) (4 SH).** This course is an introduction to the methods and tools for observing stars, planets, galaxies, and other objects in the Universe. It will require students to learn the motions of astronomical objects in the sky and to complete several observing projects – during both the regularly scheduled night lab and on students' own time. We will start with naked-eye observing and progress to binoculars and eventually to telescopes. With telescopes, we will progress from eyepieces to cameras and eventually to spectrometers. At the same time, the course will explore the long history of humankind's observations of the night sky – from early hunter-gatherers through Ptolemy, Galileo, and the professional astronomers of today – and the technology created to observe it – from Stonehenge and Chichén Itzá to the Hubble Space Telescope and Atacama Large Millimeter Array. A laboratory is included. Offered Spring Semester, alternate years. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**AST 402 Astrophysics (4 SH).** Astrophysics provides a quantitative overview of the physical processes in astronomy and cosmology at a level accessible to the junior or senior undergraduate science major. The student will be introduced to advanced topics at the forefront of current research, while also building a foundation based on the traditional methods and models of astrophysics. Topics covered may include planetary processes, stellar evolution, and the structure of the universe. Prerequisites: PHY 142 or PHY 152; MTH 152; and junior or senior standing. Also listed as PHY 402. Offered Fall Semester, alternate years.

## Biology (BIO)

**BIO 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**BIO 101 Concepts of Biology (SD) (4 SH).** A general survey course designed for education majors and students making a transition to the biology, molecular biology, or environmental science curriculum. (Students from other non-science majors seeking to fulfill their Scientific Discovery IP should consider other 100-level courses.) Students explore ways of observing and thinking about fundamental biological processes common to many living organisms. The goal of this class is to help students become better citizens and teachers of science by increasing their ability to make informed decisions regarding current and future scientific discoveries. Emphasis is placed upon identifying and studying topics of a biological nature that are relevant to modern society. A laboratory is included, during which time students will apply the scientific method and develop critical thinking and inductive reasoning skills. Offered every semester. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**BIO 102 Understanding Evolution (SD) (4 SH).** A course for the non-science major. Biological evolution is examined from a historical perspective, from inception to our current understanding of this unifying theory of biology. Natural selection and the modern genetic theory of evolution as continuing processes are emphasized, as are the ways that evolution as a theory is testable by the scientific method. A laboratory is included. If this course is offered as a cluster, students must also register for ENG 106. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**BIO 105 Pattern & Process (SD) (4 SH).** This is a cluster course for the non-sci-



ence major. Students will learn how scientific discoveries are made and they will use the scientific method to investigate biological systems. Ecological concepts will be used to illustrate biological patterns at the individual, population, and community level and to explain the importance of change in the natural world. A laboratory which emphasizes field work is included. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**BIO 106 Human Biology (SD) (4 SH).** An introductory course for non-science major designed to introduce the student to the workings of the human body. Emphasis will be placed on an understanding of how a homeostatic balance must be maintained for proper functioning of our various organ systems. A laboratory is included. This course is intended for non-science majors and is not open to biology, molecular biology, neuroscience, or environmental science majors. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**BIO 108 Human Genome (SD) (4 SH).** An introductory course for non-science majors. The primary objectives of this course are to provide college students with a fundamental understanding of scientific technologies and concepts underlying the Human Genome Project and genetic research, and to make students aware of the ethical, social, and legal implications of this monumental achievement. Students will also develop an appreciation for the types of questions that science can and cannot answer using the scientific approach. During laboratory sessions, students will study the inheritance patterns of humans and other organisms, extract DNA from their own cells, analyze their DNA using a variety of genetic techniques and participate in a mock trial. If this course is offered as a cluster, students must also register for ENG 137. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**BIO 112 Pharmacology (SD) (4 SH).** An introductory course for non-science majors that aims to give students a background in what drugs are, how drugs affect the body, and how a drug is discovered and approved for public use. This course will cover basic concepts in human physiology, the cellular and molecular level aspects of drug function, and ethical considerations surrounding drug testing and drug use to treat childhood dysfunctions. The laboratory section of this course will include hands-on demonstrations of the scientific method, detailed case studies, and exercises that promote scientific literacy and critical evaluation of marketing claims. If this course is taught as a cluster, students must also register for EDU 201, where different disabilities are discussed on a weekly basis that correspond with drugs and treatments discussed in BIO 112. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**BIO 113 Global & American Epidemics (SD) (4 SH).** An introductory course for non-science majors which explores the causes, pathology, epidemiology and treatment of infectious diseases, through examples of epidemics that have occurred throughout history in the United States and that are occurring currently around the globe. We will also take a look at emerging diseases such as hemorrhagic fevers and multi-drug resistant infections. BIO 113 is a service-learning course. Students will be expected to participate in an ongoing, service learning project which includes the development of educational materials to enhance the education of school children in Africa. A laboratory component is included and BIO 113 fulfills the SD IP requirement for graduation. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**BIO 114 Cell Biology of Human Disease (SD) (4 SH).** This introductory course for non-majors provides students with a background in cell and molecular biology as it relates to the development of human disease. The course covers a range of topics in cell and molecular biology including: cell organization, the structure of DNA and protein, the effect of DNA mutations on protein function, the relationship between

genotype and phenotype and genetic inheritance. This content knowledge will then be applied to a variety of diseases in order for students to understand the science behind the symptoms. Specifically, students will explore the molecular underpinnings of cancer biology, immune system related disorders and rare diseases. Laboratory sessions will explore techniques related diagnostic tests for diseases as well as negotiating how to interpret and assess the overwhelming online content available regarding human disease. If this course is offered as a cluster, students must simultaneously register for ENG 156. (Also listed as HON 206). Meets Scientific Discovery Intellectual Perspective requirement (SD).

**BIO 120 Biology of Birds (SD) (4 SH).** An introductory course for non-science majors. A primary goal of this course is for students to emerge with a lasting knowledge of and appreciation for birds and birding. Through lecture and laboratory, students will develop understanding and appreciation for the diversity, evolution, life histories, morphological traits, ecological relationships, behaviors, and conservation of birds. Field experiences will help students learn to identify regional species by sight and/or sound. Students will also contribute to and explore citizen-science databases to study how birds are affected by habitat loss, climate change, and disease in North America. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**BIO 135 Foundations of Anatomy & Physiology I (4 SH).** An introductory course designed for nursing students that covers the structure, metabolism, chemical make-up, cellular structure, tissues, movement, support, coordination and control of the human body. Students will gain specific knowledge of anatomical terminology and the way in which the body functions as a balanced system. The structure and role of the nervous, sensory and endocrine systems is covered. This course includes lab time for the student to visualize and apply learned material.

**BIO 136 Found Anatomy & Physiology II (4 SH).** The second part of the Anatomy and Physiology course designed for nursing students that covers cardiac, lymphatic, respiratory, digestive, urinary and reproductive body systems. The student will gain specific knowledge of anatomical terminology and the way in which the body functions as a balanced system. This course includes lab time for the student to visualize and apply learned material.

**BIO 137 Foundations of Microbiology (SD) (4 SH).** An introductory course designed for nursing students. Topics covered include cellular structure, microbes and antimicrobial agents, genetics, epidemiology, infectious diseases and parasites. This course includes lab time for the student to visualize and apply learned material. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**BIO 180 Nutrition Concepts & Controversies (4 SH).** An introductory course in human nutrition with emphasis on cells, nutrients, hormones and human body systems. The primary goal of the course is to expose students to current concepts, facts and myths regarding human nutrition. Life cycle nutritional needs of women, infants, children, teens and older adults is also discussed. Students become familiar with various nutritional charts and are encouraged to examine their own dietary practices to improve their nutritional health. The course includes food safety, food technology, hunger and the global environment. Principles of scientific inquiry are integrated throughout the course.

**BIO 201 Cell Biology & Genetics (SD) (4 SH).** This course serves as an introduction for students who have chosen biology or molecular biology as a major or minor. A combination of lectures, laboratory exercises, and assignments will introduce students to ways of observing and thinking about fundamental concepts and processes in the following areas of biology—biochemistry, cell structure and

function, metabolism, genetics, and biotechnology. Various resources will be utilized to reinforce biological concepts, learn new laboratory skills, and improve critical thinking skills. Multiple sections offered every Fall Semester; one section offered every Spring Semester. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**BIO 202 Organismal Biology and Ecology (4 SH).** An integrative evolution-themed exploration of structure and function in plants and animals, along with study of interactions of organisms at the population, community and broader scales.

**BIO 206 Biostatistics & Experimental Design (QR) (4 SH).** An introductory course in experimental design and data analysis designed to encourage an understanding and appreciation of the role of experimentation, hypothesis testing, and data analysis in biology. The course will emphasize principles of experimental design, methods of data collection, exploratory data analysis, and the use of graphical and statistical tools commonly used by biologists to analyze data. Prerequisite: C- or better in BIO 201. Offered every semester. Meets Quantitative Reasoning (QR) IP

**BIO 301 Microbiology (4 SH).** A study of the diversity in viruses, bacteria, fungi, and algae with an emphasis on the role of evolution in generating the diversity found in microorganisms. Consideration will be given to various energy metabolisms, genetic strategies, molecular systematics, and microbial adaptations that allow such diversity. Also considered will be the importance of microorganisms in medical, industrial, and environmental settings. A laboratory is included. Prerequisite: C- or better in BIO 201. Offered Spring Semester.

**BIO 302 Cell & Molecular Biology (4 SH).** A study of molecular structure and function in eukaryotic cells. Topics include organic molecules that contribute to cells the function of cells, membrane transport and signal transduction, gene expression, intracellular transport, structure and motility, energy conversions, tissue composition and cell division. Laboratory exercises will reinforce many of concepts covered in lecture. Required for the molecular biology major. Prerequisite: C- or better in BIO 201. Offered Fall Semester.

**BIO 303 Molecular Genetics & Heredity (4 SH).** This course serves as a broad introduction to the structure and function of nucleic acids, processes that regulate expression of genetic information, and processes that direct inheritance of genetic information. Prokaryotic and eukaryotic organism will serve as model systems for studying topics such as nucleic acid structure, function, replication, damage, repair, and control of gene expression. Additional topics include, but are not limited to, Mendelian genetics, epigenetics, population genetics, and the genetics of cancer. Weekly laboratory exercises are an essential component of this class and will be used to explore various molecular and biochemical techniques for isolating, replicating and analyzing nucleic acid sequence as well as studying modes of inheritance. Required for the molecular biology major. Prerequisite: C- or better in BIO 201. Offered every other Spring Semester.

**BIO 304 Developmental Biology (4 SH).** A study of the mechanisms of organism development from fertilization to birth. Both molecular and classical morphologic aspects of development are covered, with emphasis on the vertebrates. A laboratory is included. Prerequisite: C- or better in BIO 202.

**BIO 334 Physiology (4 SH).** An introduction to the physiology of cells and animals. Major emphasis is placed on the functional interrelationships that exist within cells and organisms. A laboratory is included. Prerequisite: C- or better in BIO 202. Offered Fall Semester.

**BIO 335 Anatomy & Physiology I (4 SH).** First of a two-course sequence study-

ing the anatomical and physiological principles of the human body, including a survey of the major organ systems of the human body and their relationship to health and disease. Emphasis is placed on cells, tissues, and the musculo-skeletal, nervous, and endocrine systems. A laboratory is included. Prerequisite: C- or better in BIO 202. Offered Fall Semester, alternate years.

**BIO 336 Anatomy & Physiology II (4 SH).** Second of the two-course sequence studying the anatomical and physiological principles of the human body. Emphasis is placed on the cardiovascular, respiratory, digestive, urinary, immune, and reproductive systems. A laboratory is included. Prerequisite: C- or better in BIO 335. Offered Spring Semester, alternate years.

**BIO 337 Comparative Vertebrate Anatomy (4 SH).** A study of the phylogenetic history of the vertebrates through gross anatomy. Emphasis is placed on adaptive radiation of structures which are homologous through the classes of the vertebrate subphylum. The laboratory includes dissection of representative vertebrates. Prerequisite: C- or better in BIO 202. Offered Spring Semester, alternate years.

**BIO 338 Evolution (4 SH).** A study of the population as the unit of evolution. Considered are the origins of life, gene pools and genetic equilibrium, adjustments and adaptations to the environment including natural selection, fluctuations in numbers, genetic drift, polymorphism, isolation, and the origin of races and species. A laboratory is included with some field work. Prerequisite: C- or better in BIO 202. Offered alternate years.

**BIO 360 Ecology (4 SH).** A study of the structure of ecological populations, communities, and ecosystems, and the processes that affect them. Topics include population growth, regulation and dynamics, population interactions, food webs, species diversity, succession, biogeography, and energy flow and nutrient cycling. Laboratories stress experimental design and data analysis. Prerequisite: C- or better in BIO 202. Offered every Spring Semester. (Also listed as ES 360.)

**BIO 361 Biodiversity and Conservation (4 SH).** An in-depth, cross-sectional study of the diversity of eukaryotic organisms. Pertinent to this course is the evolutionary process which is centered on adaptation, diversity, natural selection and speciation. Topics include paleontology, life histories, survival strategies in feeding and reproduction, biogeography and patterns of extinction. The social, ethical and political consequences of human activities will also be addressed. This course assumes reasonable knowledge of all major taxa and schemes of taxonomy. The laboratory component will consist primarily of field work. Prerequisite: C- or better in BIO 202. Offered every other Fall Semester.

**BIO 363 Animal Behavior (4 SH).** An introduction to the fascinating fields of animal behavior. This course focuses on the relationships between animals and their environments through adaptation, communication and social organization. It also explores other exciting issues such as, what animal behavior can teach us about ourselves, how economic game theory has been used to explain evolution of behavior, and how our understanding of animal behavior is changing the way we treat them. The lab component consists mainly of field work and bench work in the form of animal observations and a possible field trip to a wild animal facility. Prerequisites: C- or better in BIO 202 or PSY 201; willingness to spend significant amounts of time watching animals. (Also listed as PSY 315.)

**BIO 401 Recombinant DNA & Biotechnology (4 SH).** This course examines traditional and more recent advances in nucleic acid analysis and manipulation. Topics include genome analysis, subcloning, sequencing, gene expression, microarrays, RNAi, bioinformatics, vaccine development, pharmacogenomics, and gene therapy. Information literacy assignments reinforce topics covered in lecture and lab. Weekly

laboratory exercises are an essential component of this class and will be used to reinforce and explore many of the concepts covered in lecture. Prerequisite: C- or better in BIO 302 or 303. Offered every other Spring Semester.

**BIO 402 Biology of Infectious Disease (4 SH).** This course investigates the causes, pathology, prevention and treatment of important infectious diseases that occur around the globe. The course is in a lecture/discussion format with focus on case studies and readings from primary literature, and includes hands-on laboratory investigations of living microorganisms. BIO 402 is a service-learning course. Students will be expected to participate in an ongoing, service learning project which includes the development of a lab manual and a set of experiential learning exercises to aid in the health education of school students at home and overseas. Prerequisite: C- or better in BIO 202.

**BIO 403 Biology of Cancer (4 SH).** This course provides students with a general introduction to the nature of cancer, a conceptual understanding of the molecular events underlying the development of human cancers, and an historical perspective on its underlying causes, including the role of tumor viruses, cellular oncogenes and tumor suppressors. The larger implications of these causes will be addressed by studying the mechanisms of tumorigenesis, metastasis, and angiogenesis. In addition, students will investigate the development and clinical use of therapies based on major discoveries in cancer research. This is a textbook-based course, but will involve substantial use of the related primary literature and will include a laboratory component exploring a range of techniques used in the study of cancer biology. Prerequisite: C- or better in BIO 302. Offered every other Spring Semester.

**BIO 404 Nuclear Structure and Function (4 SH).** The study of the cell nucleus provides an amazing bridge between the architectural aspects of cell biology and the functional/molecular understanding of gene expression and genomes. This course uses these links to apply the fundamental knowledge students learned in 300 level courses in cell biology or genetics to the microcosm of the nucleus, in order to build on the concepts and skills covered in the pre-requisite courses. Specifically, the course uses current primary and secondary literature to broaden student's scientific knowledge and skill set across four main topics, the nuclear periphery, nuclear transport, chromatin, and nuclear bodies. Beyond the specific content, this course emphasizes the building of skills in content comprehension, productive scientific discussion, refined oral presentation, and scientific writing. Furthermore, the accompanying lab applies basic cellular and molecular laboratory techniques to the study of the nucleus, with an emphasis on experimental design, interpretation of results and presentation of new research. Prerequisite: C- or better in BIO 302 or 303. Offered every other Spring Semester.

**BIO 405 Bioinformatics Explorations (4 SH).** A hands-on exploration of how computational approaches are being used in a variety of biological subdisciplines. Using case studies, students will gain background knowledge on a topic and then carry out an investigation using state-of-the-art web-based tools and software. This course is designed for students with career goals in biological research as well as healthrelated professions and will give students an appreciation for the diverse applications of bioinformatics. Prerequisite: C- or better in BIO201.

**BIO 433 Behavioral Neuroscience (SD) (4 SH).** Analysis of how nervous systems activity underlies sensory, perceptual and higher cognitive activities including motivation, memory, language, thought and mental illness. A laboratory is included. Prerequisite: PSY 101 or BIO 201. (Also listed as NS 341 and PSY 341.) Meets Scientific Discovery Intellectual Perspective requirement (SD).

**BIO 434 Neurobiology (4 SH).** This course is an exploration of advanced topics

in the field of neurobiology, with the focus being the nervous system as the central control and integrating system in animals. It reviews fundamental neuroanatomy and neurophysiology, as well as more specific topics such as sensory systems, neuroendocrinology and nervous system development and disease. Recent advances published in the field of neurobiology will also be discussed. The lab component will be complementary to material covered during lectures. Prerequisite: C- or better in BIO 334 or BIO 335. Offered Spring Semester in alternate years. (Also listed as NS 434.)

**BIO 461 Field Biology (4 SH).** This course examines the local flora and fauna and is based upon field observation, natural history, and identification of local plants and animals. The lab component will involve extensive field work, including techniques for monitoring and assessment, and will be a major focus of this course. Prerequisite: C- or better in BIO 338, 360, or 361.

**BIO 463 Marine Biology (4 SH).** A detailed study of marine organisms and their interactions with physical, chemical, and biological factors in their environment. Adaptations of the most important groups of marine organisms will be examined from evolutionary, ecological, and physiological points of view. Major marine ecosystems will be described. In addition, the course will examine how marine organisms and ecosystems are affected by human activities and how those activities affect the future of ocean resources on Earth. Prerequisite: C- or better in BIO 338, 360, or 361. Offered Spring Semester, alternate years.

**BIO 464 Freshwater Biology (4 SH).** A study of inland water systems, including lakes, rivers, estuaries, and wetlands. The biological, physical, and chemical features of these systems are described, and the interaction between aquatic and terrestrial ecosystems is discussed. A laboratory emphasizing field work is included. Prerequisite: C- or better in BIO 338, 360, or 361.

**BIO 467 Epidemiology (4 SH).** Epidemiology is the study of the distribution and determinants of health-related states or events (including disease), and the application of this study to the control of diseases and other health problems. During this course, emphasis will be placed on fundamental concepts of epidemiology, which forms the scientific rationale for public health assessment, assurance, and policy development. Infectious disease and environmental epidemiology will be at the core of the course, however, other areas will be discussed during the semester. Comprehension and recall of concepts covered in BIO 203 are essential for this course and will be assessed throughout the semester. Prerequisite: C- or better in BIO 202.

**BIO 520 Biology Travel Course (SD) (2 SH).** A combination of on-campus study, with off-campus study in a natural setting to gain firsthand knowledge of biological concepts and principles that are particularly well illustrated in the region being studied. Experiential, problem-based learning is emphasized. The specific region, topics, and focus are likely to change with each offering. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**BIO 590 Field Experience/Internship (1-4 SH).** An experience planned cooperatively with a research center, laboratory, clinic, government agency, or similar institution. The course does not replace any of the three biology elective courses for a biology major. Prerequisite: program approval after submission of an internship application.

**BIO 601 Biology Capstone (2 SH).** The first semester of a two-course sequence emphasizing biological discovery and the synthesis of knowledge and skills from previous courses in the major. Focus of the capstone is on application of the scientific method through the design, execution, analysis, and presentation of an experimental study. In the spring of their junior year, students produce a formal proposal for



research to be completed in the second half of the capstone, BIO 602. Required of all biology and molecular biology majors. Prerequisites: Junior or senior status, and successful completion of BIO 201, 202, and 206, and above a 2.0 GPA within the major. Offered Spring Semester.

**BIO 602 Biology Capstone (2 SH).** The second semester of the capstone experience. Students in the class perform individual studies that were proposed in the prior semester, analyze their data, and present the results of their research in an appropriate forum. Required of all biology and molecular biology majors. Prerequisite: C- or better in BIO 601. Offered Fall Semester.

**BIO 620-624 Independent Study (1-4 SH).** Prerequisite: program approval after submission of a proposal.

**BIO 660, 670, 680, 690 Honors Research (1-4 SH).** Prerequisites: Successful completion of BIO 201, 202, 203, and 206 and a minimum GPA of 3.500 (total GPA, and GPA of courses in the major) are required to be considered for Honors Research. Honors Scholars are expected to attend and participate in BIO 601 while they write their Honors proposal. They are also expected to attend and participate in BIO 602 while completing their Honors research project. Honors status will be assessed and reviewed at various points during the Honors research project by an Honors Committee and select members of the biology program.

## Broadcast Communication (BC)

**BC 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**BC 101 Radio & TV Fundamentals (4 SH).** Students will learn basic audio and video production skills that will enable them to function as announcers and crew members at the College radio and TV facilities. Weekend work at the radio or TV stations is a required component of the course.

**BC 102 Audio Production (4 SH).** Provides the student with theoretical and practical experience in the preparation of audio materials for radio, television, web, and social media using both analog and digital audio equipment.

**BC 111 Writing for Electronic Media (4 SH).** This class introduces students to the fundamental techniques of broadcast news writing along with writing for online platforms. Students gain skills and experiences in interviewing, writing, editing news on the air and online in short and long formats.

**BC 112 Digital Moviemaking (VP) (4 SH).** This beginning level course will introduce students to the art of digital moviemaking using consumer digital cameras. The class will shoot, edit, act in and produce projects to be shared online. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**BC 120 Practicum (1 SH).** Students engage in experiential learning and professional development in multi-media content and programming with the campus radio and cable television stations and WCN 24/7. Hands-on experience may include radio on-air or news anchor shifts, television news anchoring or reporting, serving on television and remote crews, news writing, videography or similar approved activities. On-air radio and television positions require an audition. Practicum requires each student to demonstrate best practices, competency and advancement of audio, video and writing skills. Students cannot receive practicum credit for work done for other BC classes, labs or assignments, or count work study hours as part of the practicum. Students must be involved at the stations a minimum of 40 hours per semester. Early morning, evening and weekend work with our stations, remote truck and online media is required. Only one semester hour of BC 120 broadcast

practicum may be taken per semester. Program approval is required for all BC 120 classes. A maximum of six semester hours of BC 120 credit is allowed. Prerequisites: consent of instructor. (Also listed as MJ 120).

**BC 150 Digital Media Essentials (4 SH).** This course provides fundamental for building best practices skills when using smartphones and other consumer-based products to produce digital media content to document and share one's story or the story of an academic or professional project. Students learn how to critically review aesthetics of quality digital photography, audio and video and transition from critiquing to producing original content. The student will share the content via social media and other platforms while creating materials for a digital portfolio. This course requires you to create and maintain a professional presence on social media. You will share positions and experiences publicly with an online audience. (Also listed as MJ 150).

**BC 201 Broadcasting Workshop (1 SH).** A one- semester-hour workshop conducted by a broadcasting professional. A variety of topics will be presented over a four-year period. The student will be required to attend two six-hour Saturday sessions or four three-hour evening sessions and produce an assigned project for critique between sessions. Will be graded on a S/U basis. Students are limited to four semester hours of workshop experiences.

**BC 251 Single Camera Video Production (4 SH).** This course introduces the student to the fundamentals and best practices of single-camera video production. Students obtain experience in pre-production, production and post-production utilizing digital video cameras and digital video editing. They also apply fundamentals for audio and lighting in productions while operating in our cable TV operations and with online video productions with WCN 24/7. Lab required.

**BC 253 Mass Communications (HC) (4 SH).** An introductory analysis of problems, criticisms and structure and history of mass media in the United States. Emphasis will be placed on the nature, impact, consequences and roles of print media, broadcasting, motion pictures, advertising, and auxiliary media. (Also listed as COM 205.) Meets Humanity and Culture Intellectual Perspective requirement (HC).

**BC 301 Broadcast Sales and Advertising (4 SH).** Explores the broadcast product as an advertising medium and compares broadcast commercials to other advertising methods. Students are taught techniques to sell broadcast advertising and are required to make actual sales calls and presentations. Prerequisites: BC 102 and BC 111 or consent of instructor. This course is also beneficial to business administration and public relations majors. Also listed as COM 303 Sales Communication. May not get credit for both BC 301 and COM 303.

**BC 302 Radio/TV Announcing (4 SH).** Theory and practice of effective communication skills as they apply to the electronic media. Students will participate in various radio and television performance activities. Prerequisites: BC 102 and SPE/ THE 151 or consent of instructor. On-air shifts at the campus radio and announcing duties at Westminster Cable Network are required.

**BC 303 Remote & Field Production (4 SH).** Studies the techniques required for producing live or recorded programs outside of the radio or TV studio setting. Planning, set-up, use of portable equipment and a remote truck, and teamwork are emphasized. Extensive lab work outside of class is required.

**BC 304 Programming & Promotion (4 SH).** Provides an analysis of fundamental programming and promotion strategies at radio, cable and TV stations. Includes the designing of television and radio program formats and designing promotional materials. Prerequisite: BC 111 or consent of instructor.



**BC 305 Media Management (4 SH).** The techniques and strategies required to manage broadcasting and cable operations. A good portion of the course deals with basic management principles such as planning, organizing, problem solving, training, and human relations as they relate to broadcast management. Prerequisites: two hours of BC 120 and junior status.

**BC 308 TV News Producing (4 SH).** Advanced study of the skills needed to be a producer of in-studio television productions. Students will produce news and public affair programs. Extensive work is required at Westminster Cable Network facilities. Prerequisites: BC 101 or 102, BC 111, and BC 251

**BC 309 Sports Broadcasting (4 SH).** Instruction and experience producing and delivering broadcast sports reports for radio and television newscasts and the Web. Emphasis is on sports writing, sports photography and videography, and sports reporting for broadcast and the Web. Prerequisites: BC 101 or 102 and BC 251 or consent of instructor.

**BC 311 Broadcast Journalism I (4 SH).** This class builds on the fundamentals of broadcast and electronic news writing from previous courses including practical, ethical and legal considerations. Students learn and advance their skills in news gathering, interviewing, writing, producing, reporting and presenting content on Titan Radio, WCN and wcn247.com. The course engages study and exploration by students in all aspects of the newsroom operations including the convergence of the broadcast side of the newsroom to the online product. Prerequisites: BC 101 or 102 and BC 111.

**BC 312 Broadcast Journalism II (4 SH).** Students engage in the study and practice of broadcast and online journalism as it relates to television news, including practical, ethical and legal considerations involved in news gathering, writing, shooting, editing and reporting. Students generate story ideas, make contacts with sources, conduct interviews, shoot, write and edit local news stories for target audiences via the Westminster Cable Network, Titan Radio and www.wcn247.com. Students polish and advance their writing, production and storytelling skills adhering to established, professional standards. Students who wish to specialize in sports broadcasting may cover sports stories and events for class assignments. Prerequisites: BC 101 or 102, BC 111, and BC 251.

**BC 410 Advanced Topics (4 SH).** Broadcast Advanced Topics

**BC 411 Advanced Topics: Sports Radio (4 SH).** Broadcast Advanced Topics

**BC 601 Capstone I (4 SH).** This course (two hours per semester) requires the student to research and produce a documentary linked to service learning goals established by the College. BC 601 focuses on the research and production of the projects. BC 602 engages students in the production, post-production and presentation and assessment of the documentaries. Each student must participate in a documentary showcase and apply best practices when it comes to writing, interviewing and audio and production techniques. These documentaries become the newest element to the student's e-portfolio capping off their journey in the Broadcast and Digital Communications curriculum. Prerequisites: completion of the departmental comprehensive exam, BC 101 or 102, BC 111, and BC 251 and at least three semester hours of BC 120/Practicum.

**BC 602 Capstone II (4 SH).** This course (two hours per semester) requires the student to research and produce a documentary linked to service learning goals established by the College. BC 601 focuses on the research and production of the projects. BC 602 engages students in the production, post-production and presentation and assessment of the documentaries. Each student must participate in a

documentary showcase and apply best practices when it comes to writing, interviewing and audio and production techniques. These documentaries become the newest element to the student's e-portfolio capping off their journey in the Broadcast and Digital Communications curriculum. Prerequisites: completion of the departmental comprehensive exam, BC 101 or 102, BC 111, and BC 251 and at least three semester hours of BC 120/Practicum.

**BC 620-624 Independent Study (1-4 SH).**

**Business Administration (BA)**

**BA 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**BA 140 Introduction to Business (4 SH).** An introduction to the nature of work and organizations. The course will explore the functions of managers in work environments, and the issues that shape contemporary management such as global competition and information technology. This course cannot be taken for credit if you have received credit for BA 310 (or are currently enrolled). This course is not open to junior or seniors except by permission.

**BA 160 Personal Financial Decisions (4 SH).** An introductory course on the basics of financial decision making and personal finance. Topics will include basic accounting concepts, investment alternatives, budgeting, and the nature of risk and insurance. This course does not carry credit for any major in the Department of Economics and Business. Sophomore standing is recommended.

**BA 220 Statistics (4 SH).** An introductory course in the analysis and interpretation of quantitative data. Attention is given to the binomial distribution, the normal distribution, sampling, introductory probability theory, and hypothesis testing. Real world applications are used with computer software for statistical analysis. Not available to students with credit in BIO 206, MTH 335, PSY 201, PS 301, SSC 251, or SSC 252. Prerequisite: MTH 130 or 131 (or concurrent enrollment in MTH 131). (Also listed as ECO 220.)

**BA 221 Marketing Research Methods (4 SH).** A course in the commonly used statistical methods. Broad coverage is given to research design and hypothesis testing. Included are chi-square test of independence, analysis of variance, multiple regression and correlation analysis, and non-parametric statistics. Applications are used with computer software for statistical analysis. Prerequisites: BA/ECO 220 (or equivalent) and MTH 131.

**BA 225 Management Information Systems (4 SH).** The course provides a basic understanding of how organizations develop, use, manage, and secure their information systems. The course examines the impact of information systems at the strategic and operational levels of an organization. Key system applications, such as electronic commerce and enterprise information systems, are examined as well as the technological infrastructure that supports them. Prerequisites: ACC 201 or BA 140 or ECO 150.

**BA 240 Entrepreneurship (4 SH).** This course addresses theory and practice fundamental to launching a new business venture. Students will be introduced to the nature of entrepreneurship, opportunity analysis, entry strategy, and financing and marketing problems related to business start-ups in the formative years. Each student will prepare and defend a comprehensive business plan commonly used in attracting investor interest and financing. Prerequisites: BA 140 or ACC 201.

**BA 250 Principles and Practices of Project Management (4 SH).** This course provides students with a practical understanding of project management and highlights the roles and responsibilities of the project manager. Project managers are

expected to break down complex projects into manageable segments, lead diverse project teams, and use effective tools and techniques to ensure that the project is completed within budget and on schedule. By completing a comprehensive real-life-scenario project plan, students will gain valuable experience with relevant project management tools, practices, techniques, and software applications.

**BA 260 Foundations of Leadership and Development (4 SH).** This is a foundational course providing students with an analytical examination and reflection of core leadership concepts and practices. Students will explore various leadership styles, create positive environments, develop key soft skills crucial to effective leadership, and will deal with individual, team-based, and organizational obstacles. Effective communication and ethical decision-making are key success drivers associated with the foundations of leadership and professional development. Prerequisite: sophomore standing.

**BA 300 Cost Accounting (4 SH).** Development and use of financial information for management purposes. Coverage includes cost determination, analysis and control, budgeting, decision making, and performance evaluation. Prerequisites: ACC 201, ACC 202 and MTH 131. (Also listed as ACC 300.)

**BA 305 Marketing (4 SH).** A study of the process by which products or services are brought to targeted consumers. The discussion includes consumer behavior, formation of a marketing plan and strategy, and marketing ethics. The approach is from the position of a business; however, consumer issues and concerns will also be discussed. Prerequisites: BA 140 or PR 101 or ECO 150.

**BA 310 Organizations and Management (4 SH).** A course that studies the behavior of people in a work organization. Topics include motivation, leadership, group processes, job and organizational design, communications, effectiveness and ethics in the workplace. Prerequisites: Junior standing.

**BA 326 E-Commerce Marketing (4 SH).** The course examines fundamental areas of e-commerce: the economic and strategic implications of the Internet; the uses of Internet technology to manage and redesign a business's value chain; financing and valuing e-commerce organizations; the economic, regulatory and technical environment of e-commerce; risk management issues associated with e-commerce. A number of case studies will be employed to illustrate the principles discussed. Prerequisites: BA 140 and ECO 150.

**BA 330 Business Forecasting (4 SH).** Introduction to econometric modeling; estimation and testing economic relationships, forecasting; detailed analysis of classical linear regression models; discussion of serial correlation, collinearity, specification errors, and dummy variables. Popular computer software packages are used in real world applications. Prerequisites: ECO 150, two other ECO courses (except ECO 220), MTH 131, and BA/ECO 220 (or equivalent). (Also listed as ECO 601.)

**BA 335 Sports/Event Planning & Management (4 SH).** A study of the principles involved in successful sports/event planning and management including facility operations, risk management, stakeholder management, accounting and financial planning, planning and designing the environment, sponsorships, promotion and atmospherics. Analysis of current and future trends in sports management will also be addressed. Prerequisites: SMT 110 and Sports Management or Marketing and Professional Sales major.

**BA 345 Sales, Business Development, and Big Data (4 SH).** For businesses to thrive, they must effectively sell their products and services and strategically pursue business development opportunities. Competent, ethical sales and business development professionals make this happen every day. This course will explore the sales

and business development concepts of building successful relationships and rapport, developing effective sales strategies, understanding what consumers want from a professional salesperson, utilizing sales psychology, learning how to effectively prospect and maximize a thriving pipeline, and creating win win solutions. The theory of big data will also be covered as a mechanism to prospect, cultivate and screen sales leads and create business development opportunities. Prerequisites: BA 305 and COM 303.

**BA 350 Finance (4 SH).** A study of the financial principles involved in operating a business enterprise. Topics include asset management, creditor relationships, owners' equities, budgeting for future capital needs and cash requirements, and the management of income and expenses. Prerequisites: ECO 150, ACC 201, ACC 202, BA/ECO 220 (or equivalent), and MTH 131.

**BA 360 Human Resources Management (4 SH).** A study of activities necessary for the recruitment, retention, development, and motivation of an organization's human resources. The course covers typical personnel functions as well as theory on human behavior in organizational settings. Prerequisite: BA 140 or consent of instructor.

**BA 361 Compensation & Benefits (4 SH).** An examination of financial reward systems in organizations and the study of relevant theoretical and legal perspectives. Topics will include job evaluation, wage surveys, equity, individual and group motivational programs, benefits, and compensation strategies. Prerequisites: ECO 150, ACC 201, and BA 360.

**BA 362 Employment and Labor Law (4 SH).** Examines the development and current operations of labor unions, the process and outcomes of collective bargaining and the impact on society and businesses, and law regarding workplace rights. Practical insights from National Labor Relations Board rulings and grievance cases will be addressed. Prerequisites: ECO 150, BA 360.

**BA 365 International Finance (4 SH).** An introduction to theories and policies concerning international trade, open economy macroeconomics, and international finance. Topics include traditional and modern theories of international trade, trade policies in advanced and developing countries, the balance of payments, fixed and flexible exchange rates, arbitrage and hedging, monetary and fiscal policies, currency areas, international debt, and the global capital market. Prerequisites: ECO 150. (Also listed as ECO 365.)

**BA 370 Business Law (4 SH).** A study of law as it pertains to business. Legal principles pertaining to a variety of topics, including the Uniform Commercial Code, will be presented and applied to business entities. Text and case study will emphasize legal reasoning processes.

**BA 380 Investments (4 SH).** A course which presents a realistic picture of investment problems and the means for their successful solution. Description of the basic investment instruments is provided. Prerequisites: ACC 201 and ACC 202. BA 350 is strongly recommended.

**BA 385 Financial Economics (4 SH).** The course presents the Black-Scholes theory of options, futures markets, the time value of money, the rate of return on investment, cash flow sequence, utility functions, expected utility maximization, mean-variance analysis, value at risk, optimal portfolios, and the capital asset pricing model. Prerequisites: ECO 150 and BA/ECO 220 (or equivalent). (Also listed as ECO 385.)

**BA 388 Corporate Credit Analysis (4 SH).** This course provides a working knowledge of corporate credit analysis and its practical implementation. Topics

include: financial statement and credit-related ratio analysis; qualitative analysis; cash flow forecasting; valuation methods; structuring and restructuring; legal documentation review; and use of ratings as a measure of credit risk. Prerequisites: ACC 201 and 202. (Also listed as ECO 388.)

**BA 390 Buyer Behavior (4 SH).** Study of major theories of consumer and industrial buying behavior, consumerism, and the ethics of marketing. Prerequisites: BA 220 and 305

**BA 410 Global Marketing Management (4 SH).** An introduction to the complexities of marketing goods and services to international consumers. The environment of international marketing will be addressed from conceptual and applied perspectives. Topics include the various economic, social, political and legal dimensions confronted in international marketing. Prerequisites: junior standing and BA 305.

**BA 601 Strategic Management (4 SH).** A capstone course that focuses on general management skills involved in choosing an organizational strategy, committing critical resources to implementation, and appropriately reevaluating that strategy as internal and external organizational environments change. The course integrates the major business functions using top management's generalist view. The primary method of instruction is case analysis. Prerequisites: BA/ECO 220, BA 305, BA 310 and senior standing.

**BA 610 Enactus (1 SH).** A study of relevant topics and techniques pertaining to the current business and economics environment. Solution processes and problem defining are stressed. Prerequisite: consent of School of Business.

**BA 611 Advanced Topics (4 SH).** A study of relevant topics and techniques pertaining to the current business and economics environment. Solution processes and problem defining are stressed. Prerequisite: consent of School of Business.

**BA 620-624 Independent Study (1-4 SH).** Prerequisites: six courses in accounting, economics and/or business, with at least a 3.250, junior or senior standing, and consent of School of Business.

**BA 660, 670, 680, 690 Honors Project (1-4 SH).**

## Chemistry (CHE)

**CHE 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**CHE 101 Our Chemical World (SD) (4 SH).** An investigation of a number of areas of everyday life and some chemical factors that have significant effects on our lives. Chemistry interacts with other scientific, social, political and economic factors. Examples include our use of energy, pharmaceutical drugs, water, use of non-renewable resources, and waste disposal. The laboratory emphasizes investigation of systems, collection of data and observations, and devising logical explanations. (This course cannot be used as part of a chemistry major or minor. PreK-4 early childhood education/PreK-8 special education majors may use this course to meet the physical science requirement.) Meets Scientific Discovery Intellectual Perspective requirement (SD).

**CHE 102 Chemistry in Your Kitchen (SD) (4 SH).** This course will cover the chemistry and biochemistry behind the foods and beverages that we consume. Molecular details on the make-up of our food as well as the chemical processes that occur when we prepare food and/or beverages (preserving, marinating, cooking, brewing) will be discussed. The laboratory section will involve the investigation of food preparations as well as chemical analysis of certain foods. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**CHE 105 Introduction to Environmental Chemistry (SD) (4 SH).** This course uses environmental themes in the study of the language of chemistry, atomic and molecular structure, chemical reactions and their energy changes, and mathematical relationships. Relationships between chemistry and society are explored through the concepts of sustainability and green chemistry. The laboratory program will involve investigation of environmental chemistry, analysis and interpretation of both qualitative and quantitative data, as well as communication of the results. CHE 105 can serve as a prerequisite for CHE 117 for students who have not had a previous course in chemistry or who have demonstrated the need for additional preparation in chemistry. (This course cannot be used as part of a chemistry major or minor. PreK-4 early childhood education/PreK-8 special education majors may use this course to meet the physical science requirement.) Offered Fall Semester. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**CHE 111 Foundations of Chemistry (SD) (4 SH).** A study of the properties and the particulate nature of matter, the language of chemistry, the periodic table, atomic and molecular structure, and the energy changes that accompany chemical reactions. The laboratory program will involve investigation of chemical systems, analysis and interpretation of both qualitative and quantitative data, as well as communication of the results. CHE 111 is for students who have not had a previous course in chemistry or whose performance on a placement test has demonstrated the need for additional preparation in chemistry prior to taking CHE 117. (This course cannot be used as part of a chemistry major or minor.) Offered Fall Semester. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**CHE 117 Principles of Chemistry (SD) (4 SH).** A course emphasizing stoichiometry, chemical equilibria, acids and bases, chemical kinetics, thermodynamics, electrochemistry, nuclear phenomena, and interactions of science and society. In the laboratory program students will investigate chemical systems, analyze observations and data, devise explanations, and communicate results. Prerequisites: High school chemistry and sufficient academic preparation or completion of CHE 105, CHE 111, or ES 160 with a grade of C- or better. Offered Fall and Spring semesters. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**CHE 180 Inorganic Chemistry (4 SH).** A study of the energetics of the bonding and reactions of inorganic compounds. Emphasis is given to the periodicity of the chemical and physical properties of the elements. Major themes of the course include effective nuclear charge, lattice energy, charge density, acid/base theories, and the descriptive chemistry of all of the elements. The laboratory includes the investigation of the energetics of reactions, the synthesis and analysis of coordination compounds, qualitative chemistry, and the communication of results. Prerequisite: CHE 117 with a grade of C- or better. Offered Fall and Spring semesters.

**CHE 230 Chemical Analysis (4 SH).** A study of the theoretical foundation and skills necessary for the solution of problems encountered in the area of quantitative chemical analysis, including classical and modern methods. Emphasis is given to the evaluation and presentation of data, sampling, equilibrium dynamics of analytically important reactions, experimental design, volumetric techniques, absorption and emission spectroscopy, electrochemical methods, and analytical separations. Examples and laboratory exercises will include environmental air, soil and water systems. Prerequisites: CHE 117, and MTH 135, MTH 150 or BIO 206 (may be co-requisite) with grades of C- or better. Offered Fall and Spring semesters. (Also listed as ES 230.)

**CHE 231 Environmental Analysis (4 SH).** A study of the theoretical foundation and skills in the area of quantitative chemical analysis, including classical and modern methods, as applied to environmental measurements. Emphasis is given to



the evaluation and presentation of data, sampling, equilibrium dynamics of analytically important reactions, experimental design, volumetric techniques, absorption and emission spectroscopy, electrochemical methods, analytical separations, and field measurements. All examples and laboratory exercises will focus on environmental applications of chemical analysis. Prerequisites: CHE 117, and MTH 131, 135, 150, or BIO 206. (Also listed as ES 231.)

**CHE 261 Organic Chemistry I (4 SH).** An overview of organic chemistry. Organic molecules are compared by their functional group, focusing on nomenclature, physical properties, and the major chemical reactions used in synthesis and identification. Emphasis is also given to the areas of acidity, basicity, stereochemistry, aromaticity, and spectroscopy. Laboratory activities involve techniques for determination of physical and chemical properties, and methods of purification. Prerequisite: CHE 117 with a grade of C- or better. Offered Fall and Spring semesters.

**CHE 262 Organic Chemistry II (4 SH).** A study of organic reactivity. This course details organic molecules by reactivity and emphasizes the differences between organic reactions. Specifically, organic reactions will be surveyed by type of reaction keying on the movement of electrons, molecular orbitals, and energetics. Spectroscopy is employed to monitor structural changes. Laboratory activities also probe the reactivity of molecules and explore the relationship between structure and reactivity. Prerequisite: CHE 261 with a grade of C- or better. Offered Spring Semester.

**CHE 320 Solid State Chemistry (4 SH).** A detailed study of the chemistry of solid state materials. In particular, this course will reinforce the concepts of crystal lattices, packing in solids, and bonding in solids. The course will also introduce the concepts of synthesis and characterization of solid materials; the electronic, magnetic, and optical properties of solids; defects and nonstoichiometry in solids; mesoporous, microporous, and nanostructured solids; and superconductivity. A research project involving the synthesis and characterization of solids materials will also be part of this course. Prerequisite: CHE 180 and MSE 231 (with a C- or higher).

**CHE 331 Biophysical Chemistry (4 SH).** Biophysical chemistry is a study of the macroscopic and microscopic behavior of matter, with a focus on biochemical systems. Topics include the application of the laws of thermodynamics, kinetics, quantum mechanical models, and spectroscopy in the context of modern biochemistry/molecular biology.

**CHE 336 Quantum Chemistry & Spectroscopy (4 SH).** Quantum chemistry and spectroscopy is the study of the microscopic behavior of matter and its interaction with electromagnetic radiation. Topics include the formulation and application of quantum mechanical models, atomic and molecular structure, and various spectroscopic techniques. Laboratory activities demonstrate the fundamental principles of physical chemistry. Methods that will be used during the laboratory portion include: polarimetry, UV-Vis and fluorescence spectroscopies, electrochemistry, and computational/molecular modeling. Prerequisites: C- grade in CHE 117 and MTH 152 and PHY 152.

**CHE 337 Thermodynamics & Kinetics (4 SH).** Thermodynamics and kinetics is a study of the macroscopic behavior of matter. Topics include the application of the laws of thermodynamics, the thermodynamic behavior of pure substances and mixtures, as well as the kinetic theory behind time-dependent processes and mechanisms. Prerequisites: CHE 117, MTH 152, and PHY 152.

**CHE 340 Instrumental Analysis (4 SH).** A study of modern instrumentation used in the investigation of chemical systems. The theory, design, and application of spectroscopic, electrochemical, and surface analysis techniques are discussed. Basic

electronics and the relationship between signal and noise are also discussed. Prerequisites: CHE 230 and PHY 142 or 152. Offered Fall Semester, alternate years.

**CHE 360 Polymer Chemistry (4 SH).** Synthetic polymers can be found in nearly every facet of human life. The applications of organic polymers have extended from clothing to construction materials and from biomedical devices to drug delivery systems. As a result, nearly 50% of all chemists will work in polymer science in some capacity over their career. This course will educate students on multiple aspects of polymer chemistry from molecular structures to macromolecular properties to bulk applications. Focus of this course will be on nomenclature, procedures for polymer synthesis, and methods of polymer characterization. This course will also discuss polymer processing and current applications of polymeric materials. A weekly three-hour lab is included. Prerequisite: CHE 261 or MSE 231 with a grade of C- or better. Offered Fall Semester, alternating years. (Also listed as MSE 360).

**CHE 375 Green Chemistry (4 SH).** A study of the principles, concepts, and applications of green chemistry. Particular attention will be given to industrial processes, catalysis, waste management, and renewable resources. Discussions will focus on the current literature on green chemistry. While the course does not include a laboratory, students will participate in a project that applies the principles of green chemistry to a laboratory experiment used in the chemistry curriculum. This project will serve as the culminating experience for the course. Prerequisites: CHE 230 and CHE 261.

**CHE 381 Biochemistry Principles (4 SH).** A study of proteins, carbohydrates, lipids and nucleic acids in a biological context. Emphasis is placed on the relationship between the structure and function of these biomolecules. Other topics include methodologies to analyze biomolecules, membranes, transport, kinetics, and biosignaling. Prerequisites: CHE 261 and BIO 201. Offered most semesters.

**CHE 382 Metabolic Biochemistry (4 SH).** A course examining the metabolism of carbohydrates, lipids, proteins, and nucleic acids, and the flow of biological information in organisms in detail. Specific metabolic pathways and genetic informational flow in plants and animals will be addressed. Prerequisite: CHE 381. Offered Spring Semester, alternate years. Offered Spring Semester, alternate years.

**CHE 383 Biochemistry Methods (4 SH).** A laboratory approach to understanding biochemistry. The course uses methodologies including molecular cloning, protein expression, protein purification, enzyme characterization, and kinetics. Chromatography, spectroscopy, and electrophoresis techniques are utilized. Prerequisite: CHE 381 or CHE 384. Offered Spring semesters.

**CHE 384 Biological Chemistry (4 SH).** A study of the chemistry involved in biological processes and biomolecules. Emphasis is placed on the building of biomolecules from organic chemistry precursors. Biological function is introduced as a product of chemical structure. Prerequisites: CHE 261 and CHE 230. Offered once every four semesters.

**CHE 391 Advanced Inorganic Chemistry (4 SH).** A study of symmetry and group theory with applications to molecular orbital theory, the analysis of electronic and vibrational spectra, and reaction mechanisms. Organometallic chemistry, catalysis, and materials chemistry are also discussed. Prerequisites: CHE 180, CHE 330. Offered Spring Semester, alternate years.

**CHE 451 Advanced Lab: Synthesis & Analysis (4 SH).** A project-oriented course that integrates advanced synthetic and analytical methodologies. Projects may include inorganic synthesis, multi-step organic synthesis, and analysis of samples using various spectroscopy and chromatography instrumentation. This course includes



participation in a weekly seminar. Prerequisites: CHE 180, 230, 261. Offered fall semesters.

**CHE 452 Advanced Lab: Research Methods (2 SH).** A writing intensive course that teaches students to write like a chemist. This included writing a scientific research paper, a research proposal, and a research poster. Students participate in a pilot project to initiate their senior project and then write a proposal and poster based on this pilot project. This course includes participation in a weekly seminar. Prerequisites: CHE 180, CHE 230, and CHE 261. Offered Spring semesters.

**CHE 590 Field Experience/Internship (1-4 SH).** Prerequisites: CHE 117 and program approval.

**CHE 600 Senior Research (2 SH).** An independent senior project that integrates previously learned techniques in the investigation of a chemical problem. After conducting the project and completing data collection, the term ends with the preparation of the senior thesis. Prerequisite: CHE 352.

**CHE 601 Capstone I: Professional Development (2 SH).** Activities and discussions centered on the transition of students to chemical professionals. This experience includes journal readings, exploration of careers and graduate and professional schools, field trips, summary papers and a service project. Additionally, each student creates a portfolio of chemical accomplishments. Prerequisite: senior standing. Offered Fall Semester

**CHE 602 Capstone II: Professional Perspectives (2 SH).** A discussion-centered course focusing on the development of science as a way of knowing; the role of chemistry in changing scientific paradigms; and the moral and ethical responsibilities of chemists. Students are also expected to articulate their thoughts through various short writing assignments. Additionally, students will take comprehensive chemistry examinations and participate in the weekly department seminar. Prerequisite: CHE 600 or CHE 620-624. Offered Spring Semester.

**CHE 610, 611 Advanced Topics (4 SH).** Subject may be advanced biochemistry, coordination chemistry, electrochemistry, environmental chemistry, green chemistry, heterocyclic molecules, macromolecules, nuclear and radiochemistry, polymers, or solid state chemistry. Prerequisites: major standing and permission of professor.

**CHE 620-624 Independent Study (1-4 SH).** Prerequisites: CHE 117 and program approval.

**CHE 660, 670, 680, 690 All-College Honors Program (1-4 SH).** Prerequisites: honors status and program approval.

## Communication (COM)

**COM 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**COM 151 Voice & Diction (4 SH).** Theory and practice in the basic techniques of developing a clear and expressive speaking voice. Breath control, proper phonation, full resonance and projection, and articulation will be covered as well as exercises for improving use of pitch, timbre, and vocal quality. (Also listed as THE 151.)

**COM 200 Social Media Literacy (4 SH).** The growing presence of technology is changing the way people communicate. This course examines how technology and social communication are creating a new paradigm of human interaction. Students will develop a plan for managing their personal brand/reputation and use online tools such as LinkedIn and blogs for professional enhancement.

**COM 201 Interpersonal Communication (ST) (4 SH).** Designed to examine

communication between two people. This class provides opportunities to understand the dynamics of human communication, to assess your own weaknesses and strengths as a communicator, and to learn to make good communication choices as you encounter challenging real-life situations. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**COM 202 Small Group Communication (ST) (4 SH).** This course examines effective small group communication. Topics include member characteristics, roles, norms, cohesiveness, leadership, problem solving, conflict resolution, and decision making. The course requires students to complete group projects and exercises and present them in a variety of possible forms, including panel discussions, forums, and symposia. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**COM 203 Professional Presentations (4 SH).** This course offers students the opportunity to develop presentations in their field (business, public relations, education, etc.).

**COM 205 Mass Communications (HC) (4 SH).** An introductory analysis of problems, criticisms, and structure of mass media in the United States. Emphasis will be placed on the nature, impact, consequences, and roles of print media, broadcasting, motion pictures, advertising, and auxiliary media. (Also listed as BC 253.) Meets Humanity and Culture Intellectual Perspective requirement (HC).

**COM 207 Business and Professional Communications (4 SH).** An analysis of communication in organizations, this course material focuses on interviewing skills, office communication media and choice-making, and sensitivity to evolving standards of “appropriate” behavior in the workplace. A variety of communication contexts are examined, including: interviews; written, electronic, and oral correspondence; and meetings, lunches, and parties. Intercultural theories and practice will receive special attention, and be explored in depth.

**COM 225 Communication Ethics (ST) (4 SH).** This course is designed to introduce the interrelationship of communication and free speech. The course will provide the opportunities to understand ethical communication in various contexts, assess weaknesses and strengths as an ethical communicator, and apply theories of communication ethics to the major course of study. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**COM 230 Social Media & Web Planning (4 SH).** The design and implementation of a Web site is primarily a communication activity. An individual or organization has a message to send to an intended audience. The course will focus on the Web site pre-design activities of audience definition, objective setting, determining information architecture, feature definition, storyboard design, plus usability and interface testing procedures.

**COM 251 Oral Interpretation (VP) (4 SH).** A study of the methods of creating for a listening audience an interpretation of the printed page. Attention is focused upon literary form, imagery, inflection, word stress, and other factors which influence listener response and understanding, and also which aid in the effective expression of one’s own ideas. (Also listed as THE 251.) Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**COM 301 Applied Social Media (4 SH).** This course allows the student the ability to examine how organizations can effectively use social media to communicate with various constituencies. Not only will there be opportunity to learn about social media theory but the application of this theory will be an integral part of the course experience.

**COM 303 Sales Communication (4 SH).** This course adapts sales and persuasion theories through practical sales exercises. Students make actual sales calls as part of class. Sales theories are then adapted to other persuasive opportunities such as selling your ideas to others in a business setting or selling yourself in a job interview. Also listed as BC 301 Broadcast Sales and Advertising. May not get credit for both BC 301 and COM 303.

**COM 320 Strategic Sports Communication (4 SH).** This course covers a variety of topics in the field of sport communication—which ranges from newspaper sports sections and all-sport cable channels to sports satellite radio and sports blogs. Students will explore topics ranging from communication skill enhancement and sports writing to Web site management and sport media relations. This macro analysis of sport communication is accomplished through an examination of the field from interpersonal, intra- and inter-organizational, and external perspectives. The class is organized to provide students with a foundation for pursuing a career in the field or simply for acting as prudent consumers of sport communication.

**COM 405 Political Communication (4 SH).** This course will introduce students to advanced rhetorical theory, explore historical uses of political communication, and examine how political communication has evolved under the influence of new media.

**COM 410 Advanced Topics (4 SH).** The Advanced Topics course provides in-depth study of communication regarding a particular issue. Specialized topics include such areas as health-care communication, communication in teaching, free speech and censorship, communication and personality, environmental communication, semantics, family communication, and intercultural communication.

**COM 450 Communication Theory (4 SH).** Analysis of the nature of the communication process in contexts ranging from intrapersonal through mass communication. The course includes coverage of a broad range of theories, from classical to postmodern, that attempt to explain communication phenomena.

**COM 590 Field Experiences/Internship (1-4 SH).**

**COM 601 Capstone (4 SH).** The capstone course requires students to develop a project that explores a topic in communication studies. Students present their work to the campus community.

**COM 620-624 Independent Study (1-4 SH).**

**COM 660, 670, 680, 690 Honors Research (1-4 SH).**

## Comparative Literature & Culture (CLC)

**CLC 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**CLC 101-119 Studies in World Literature and Culture (4 SH).** The study of a variety of works and genres from both Western and non-Western cultures.

**CLC 120-129 Studies in French and Francophone Literature and Culture (4 SH).** The study of French and Francophone texts exemplifying various themes, topics, and/or periods, viewed in the context of the culture that produced them.

**CLC 140-159 Studies in Hispanic Literature and Culture (4 SH).** The study of Spanish and Hispanic American texts exemplifying various themes, topics, and/or periods, viewed in the context of the culture that produced them. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**CLC 160-169 Studies in Classical Literature and Culture (4 SH).** The study of Classical Greek and/or Roman texts exemplifying certain themes, topics, and/or

periods, viewed in the context of the culture that produced them.

## Computer Science (CS)

**CS 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**CS 102 Introductory Programming (QR) (4 SH).** Study of an introductory programming language. Development of complete software systems will be stressed. Debugging, editing, and string processing will also be included. Not available to students who have credit for CS 151. (Offered Fall semester). Meets Quantitative Reasoning Intellectual Perspective requirement (QR).

**CS 103 Information Technology (4 SH).** An introduction to computer tools and techniques for the organization, processing, and presentation and communication of information. Topics may include spreadsheets, design of World Wide Web pages, Web 2.0 tools and other software. Some attention will be given to foundational concepts, elementary programming and the use of a computer operating system, to provide a basis for understanding the tools and techniques covered in the course. This course is directed to the career goals of non-majors. Not available to students who have credit for CS 151. (Offered Spring semester, even years.)

**CS 104 Applied Database (4 SH).** Topics in this second course in the IS concentration include database systems and applications using ACCESS. Database concepts will be discussed to provide a solid undergirding for study of the tools and activities in the course. A term project will complete the course. Not available to students who have credit for CS 321. (Offered on demand.)

**CS 110 Introduction to Python (2 SH).** This course presents an introduction to programming for math, science and technology-oriented students, using Python. The syntax and semantics of the language will be covered, with emphasis on mathematical and scientific applications. Object-oriented design, development and debugging will be covered.

**CS 111 Introduction to Ruby (2 SH).** This course presents an introduction to programming for math, science and technology-oriented students, using Ruby. The syntax and semantics of the language will be covered, with emphasis on mathematical and scientific applications. Object-oriented design, development and debugging will be covered.

**CS 112 Introduction to R (2 SH).** This course presents an introduction to programming for math, science and technology-oriented students. The syntax and semantics of the language will be covered, with emphasis on mathematical and scientific applications. Object-oriented design, development and debugging will be covered.

**CS 115 Introduction to Robotics (QR) (4 SH).** Students will design, build and program robots to autonomously complete various tasks. This course covers the fundamentals of robot design including understanding robot sensors, motion, and manipulators. These principles are put to practice as students are taught to build robots from off-the-shelf components. Students are introduced to the fundamentals of computer programming and they employ this skill to write software that controls their robot as it completes various tasks. Students will study the role of robots in society and explore ethical concerns surrounding their increased use. Meets Quantitative Reasoning Intellectual Perspective requirement (QR).

**CS 130 Data Visualization (4 SH).** Data visualization is the communication of information using graphical representations. Graphics, imaging, and basic principles of visual design will be used to transform raw data into a visual form. Visualizations,

the tangible end products of this course will enable the viewer to observe, browse, make sense, and understand the information contained in the data.

**CS 151 Principles of Computer Science I (QR) (4 SH).** A broad introduction to the discipline of computer science, with attention given to many components of the field. Topics include an examination of subfields of computer science, computer representation of data, an introduction to hardware structure, and fundamentals of programming languages. Special emphasis is given to techniques for problem solving and algorithm development, designing and implementing computer programs, and software analysis and verification methods. Prerequisite: prior programming experience recommended. (Offered Fall semester). Meets Quantitative Reasoning Intellectual Perspective requirement (QR).

**CS 152 Principles of Computer Science II (4 SH).** A continuation of CS 151 using application development as a vehicle to teach more advanced programming skills. Topics may include mobile application development (especially for Android and iOS), an introduction to data structures, recursion, object-oriented programming patterns, software testing, graphical user interfaces, elementary graphics and game development, network programming.

**CS 201 Web Design (4 SH).** This two-credit course provides the student with an understanding of the concepts and technologies used on the Internet to support Web pages and electronic commerce. Some of the topics covered in this course include the concepts of the Internet and WWW, the various protocols used - http, ftp, telnet - browsers and tools, and searching for information on the WWW. The course considers Web site design, development and management, as well as HTML document design and construction. HTML topics will include basic syntax or tags used to create HTML documents. Some specific items will be the syntax for tables and forms, image maps, frames, and cascading style sheets. Other topics will include the design and creation of images (including design theory and color theory, as well as cultural influences), and ethical and legal issues will be explored. (Offered Spring semester, even years.)

**CS 202 Integrating Technology in Classroom (2 SH).** This two-credit course provides the student with an understanding of the concepts and technologies used in academic classrooms. This course expands upon a student's existing knowledge of computer technology (e.g., word processing, spreadsheets, multimedia presentations and using the Internet). It will examine technology as a medium for helping educators communicate with their students. Using technology for the sake of technology will fail – it must be integrated into the classroom based on both learning theory and teaching practice. The course will help students assess various types of technology and software to evaluate their match for specific teaching and learning needs. (Offered spring semester, odd years)

**CS 230 Introduction to Data Science (4 SH).** An introduction to extracting knowledge from data. Students are introduced to working with and analyzing big data. Topics include scraping and cleaning data, data wrangling (manipulation of large data sets), data visualization, and creating reproducible results. Prerequisite: one course in statistics or four credit hours in programming or permission of instructor.

**CS 238 Machine Learning (4 SH).** In this course students will apply Machine Learning techniques to extract information from data. Topics covered will be relevant to modern “Big Data” problems. Students will master basic concepts and an intuitive understanding of machine learning techniques and their application to a variety of problems. Topics covered include classification and regression, Bayes’ Theorem and Bayesian Statistics, Neural Networks, Decision Trees, K-Nearest Neighbors

analysis and Support Vector Machines.

**CS 251 Data Structures (4 SH).** A course on the use, implementation and analysis of data structures and algorithms. Data structures to be studied include balanced search trees, hash tables, priority queues and disjoint sets. Advanced sorting algorithms and recursive techniques are also studied, along with mathematical techniques for algorithm analysis. Students will also be introduced to a second programming language. Prerequisite: CS 152. Co-requisite: MTH 241. (Offered Fall semester.)

**CS 252 The Internet (4 SH).** This course focuses on the technology and software of the Internet. Since these rapidly change, the specific topics covered will vary each time the course is taught, but will include fundamental Internet technology components, applications of these technologies, and use of some of the latest Web tools. This is a cluster course; therefore, students must also register for The Internet: Psychology (PSY 251). (Offered on demand.)

**CS 271 Neural Networks: The Computing Perspective (4 SH).** A study of the structure, construction and capabilities of computational devices including neural networks, and their practical application to solving real-world problems. This is a cluster course; therefore, students must also register for Neural Networks: The Biopsychological Perspective (PSY 261). (Offered on demand.)

**CS 310 Human-Computer Interaction (4 SH).** This course stresses the importance of good interfaces and the relationship of user design to human-computer interaction. Other topics include: human information processing models and their role; interface quality and methods of evaluation; inter design examples; dimensions of interface variability; dialogue tools and techniques; user-centered design and task analysis; prototyping and the iterative design cycle; user interface implementation; prototyping tools and environments; basic computer graphics and sound. Prerequisite: CS 151 or CS 102. (Offered Fall semester, odd years.)

**CS 311 Computer Architecture (4 SH).** A study of the organization of computer systems at the hardware level, along with advanced concepts and techniques for programming in assembly language. Co-requisite: CS 152. (Offered Spring semester, odd years.)

**CS 321 Database Theory & Design (4 SH).** The design and implementation of systems for managing large integrated collections of data. Database system architecture; the relational and object-oriented models; security and integrity; and commercial database systems are studied. Included also is computer laboratory experience with one specific database system. Co-requisite: CS 251. (Offered Spring semester, odd years.)

**CS 325 Information Security (4 SH).** This course examines management issues and practical implications related to securing information systems. A clear theoretical understanding supports a large practical component where students learn to audit information systems and use contemporary security software. It focuses on the threat environment, security policy and planning, cryptography, secure networks, access control, firewalls, host hardening, application security, data protection, incident response, networking and review of TCP/IP. Prerequisite: CS 151 and 152.

**CS 331 Advanced Data Structures & Algorithms (4 SH).** This course continues the study of data structures and algorithms begun in CS 251. Major topics for this course are dynamic programming techniques and graph algorithms. Other topics will include string matching, geometric algorithms and number theoretic algorithms. Prerequisite: CS 251. (Offered Spring semester, even years.)

**CS 341 AI and Machine Learning (4 SH).** The fundamentals of artificial intelligence (AI), including problem solving techniques, search, heuristic methods, knowl-



edge representation, planning and machine learning. Prerequisite: CS 251. (Offered on demand, Spring semester.)

**CS 351 Software Engineering (4 SH).** Methodology for development and implementation of complete software systems. The course integrates concepts and methods from earlier courses and emphasizes program maintenance, file processing, debugging, and documentation. Software engineering concepts are discussed and a system project is completed. Prerequisite: CS 152 or permission of instructor. (Offered Spring semester, odd years.)

**CS 383 Advanced Mobile App Development (4 SH).** Application development for mobile (phone and tablet) platforms. Topics covered include: advanced user interface construction, graphics and sound in applications, interfacing with device services including cameras, contacts, data storage, GPS and accelerometer. An emphasis will be given to the proper software design, master of tools, and software testing. Prerequisite: CS 152.

**CS 411 Language Design & Implementation (4 SH).** An introduction to the principles underlying the design of programming languages and their compilers. Included are models from automata and formal language theory as they apply to the definition and processing of programming languages. Co-requisite: CS 251. (Offered Fall semester, even years.)

**CS 421 Operating Systems (4 SH).** The design, implementation and use of operating systems components is studied. Topics covered include: memory management, process management, device and file management, network protocols and interfaces, and basic systems administration. An emphasis is placed on systems programming including: standard low-level APIs, multi-threaded/concurrent programming, shared memory and other interprocess communication related topics, low-level device interfaces, and an introduction to network programming. Prerequisite: CS 311. (Offered Fall semester, even years.)

**CS 431 Data Communications/Networks (4 SH).** This course combines two important topics which aid in the link between human and machine. Techniques for transmitting data between machines will be emphasized, including local area networks, modem and satellite telecommunications and terminal interfacing. Independent student projects will be used to illustrate topics covered. Prerequisite: CS 152 or permission of instructor. (Offered on demand.)

**CS 441 Computer Graphics (4 SH).** A study of the basic concepts related to computer graphics and how images are produced and displayed by the computer. The course covers both theory and applications. Existing software is utilized to provide a background for more in-depth study of underlying principles. Theoretical concepts are reinforced through development of graphics software. Students need a solid foundation in mathematics, structured programming, and data structures. Prerequisite: CS 251. (Offered on demand, Spring semester.)

**CS 451 Project Management (4 SH).** Project management is the discipline of applying knowledge, skills, tools, and techniques to projects; in this case, information systems projects. Organizations typically have a limited number of resources and time that must be used carefully to produce a product or service that meets the desired goals. The course covers a systematic methodology for initiating, planning, executing, controlling, and closing a project. Project management is a complex team-based activity, where various types of technologies (including project management software as well as software to support group collaboration) are an inherent part of the project management process. Prerequisite: CJS 151 and CS 351 or permission of instructor.

**CS 590 Field Experience/Internship (1-4 SH).** Prerequisites: 24 semester hours in computer science, including CS 151, 152, 251, junior or senior standing and prior approval of program.

**CS 601 Computer Science Capstone I (2 SH).** In the first half of the semester, students perform a literature review phase towards creating a research thesis. They will select a thesis adviser from the Computer Science faculty who will provide guidance in selecting an area for exploration and locating review materials. After approval of the research thesis, students use the remaining time in the semester to work on their project, meeting weekly with other students in the course to discuss their progress. Prerequisites: CS 151, 152, 251, plus four additional CS courses that count for the major. (Offered Fall semester.)

**CS 602 Computer Science Capstone II (2 SH).** Students continue their research related work towards producing a research thesis. This will culminate in the writing of a thesis which and an oral presentation either on or off campus. Prerequisite: CS 601. (Offered Spring semester.)

**CS 61(x) Advanced Topics (1, 2 or 4 SH).** This special topics course focuses on relevant topics and techniques pertaining to current computer science or computer information systems. The course(s) will explore cutting-edge issues, technology and methods. A description of the topic will be distributed prior to registration. Prerequisites: CS 251 and major standing or consent of the instructor. (Offered on demand, Spring semester).

**CS 620-624 Independent Study (1-4 SH).**

**CS 660, 670, 680, 690 Honors Project (1-4 SH).**

## Criminal Justice Studies (CJS)

**CJS 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**CJS 102 Deviance (ST) (4 SH).** An exploration of norm-breaking behavior and its consequences. Traditional and contemporary theories of deviance will be examined, as will particular areas of deviant behavior. The change in definitions of what is regarded as deviant will be dealt with at length. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**CJS 200 Studies in Criminology & Criminal Justice (4 SH).** This course will deal with specific aspects of criminology and the criminal justice system not included in the regular curriculum. Topics will be announced prior to registration.

**CJS 201 Juvenile Delinquency & Justice (ST) (4 SH).** An exploration of juvenile misconduct and its legal consequences. Theories explaining juvenile delinquency from a variety of perspectives will be examined. The emergence and present state of the juvenile justice system will be covered as well. Offered Spring Semester. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**CJS 202 Criminology (4 SH).** This course covers the workings of the criminal justice system. Students will explore how we define and respond to crime, how the institutions of the criminal justice system (police forces, criminal courts and prisons) have developed and functioned, and the reasons criminal justice policies are adopted and the effects those policies have. Offered Fall Semester.

**CJS 203 Victimology (2 SH).** This course provides an introduction to the study of criminal victimization. We will investigate patterns of criminal victimization using empirical data, apply theoretical concepts to empirical patterns, analyze specific forms of victimization (e.g. intimate partner violence, child maltreatment, property victimization), consider the impact of crime on victims and society (e.g. fear of



crime), the role of victims within the criminal justice system, specific remedies, and victim rights and services.

**CJS 204 Police (2 SH).** This course explores the history, development, current practices and future of the police at the local, state, federal and, at times, global level. Students will receive a basic introduction to the role of the police in a diverse and democratic society, with a focus on police discretion, types of policing and use of force.

**CJS 205 Criminal Courts (2 SH).** This course focuses on America's criminal courts. We will discuss the major players in the criminal justice system—defense attorneys, prosecutors, and judges—and the ways in which their behavior is influenced by their roles, their experiences on the job and the small group environment. We will also discuss controversial policies in the criminal justice field, paying particular attention to the motivation behind the adoption of such policies and the degree to which the effects of such policies have fulfilled or conflicted with those motivations.

**CJS 206 Corrections (2 SH).** This course explores the history, development, current practices and future of correctional systems at the local, state, federal and, at times, global level. This course takes a multi-disciplinary view of selected areas and issues relevant to correctional goals (general/specific deterrence, incapacitation, rehabilitation, restitution, retribution and restorative justice) for offenders in secure confinement (jails and prisons) and community-based alternatives to jails and prisons (probation, parole, restitution, community service, intensive probation/parole, electronic monitoring, boot camps and community-corrections programs).

**CJS 207 The Death Penalty (2 SH).** This course explores the death penalty, the ultimate penalty meted out by the state. The class will address a series of important questions: Which societies have used capital punishment and in what circumstances? Which countries besides the US continue to use the penalty? What methods of execution do states use? What legal standards are applied to the death penalty in the US? Does the death penalty deter crime? What do Americans think about the death penalty? What impact does being on death row have for inmates and their families? What issues of injustice and reform are raised by the use of capital punishment?

**CJS 215 Drugs and Society (ST) (4 SH).** In this class we examine drug-related issues in an objective manner, as informed by historical context, medical research, social scientific theory and data, policy analysis and, briefly, comparative perspectives. We pay special attention to the treatment of drug use and abuse within the criminal justice system. We consider questions that include: Do more lenient drug use laws necessarily produce greater drug use? How does the harm to society of the War on Drugs compare to that of drug use? What general costs and benefits surround drug regulation, and what unintended consequences does it produce? While both alcohol and tobacco are medically and legally considered to be drugs, given the broad scope of this topic we focus our attention on substances usually or sometimes considered to be illicit drugs.

**CJS 302 Sociology of Law and Legal Systems (4 SH).** This course takes a broad perspective on such questions as the origins of law and the development of systems of dispute settlement. Special emphasis is placed on the relationship between law and social change, and law and social control in the areas of criminal and civil law. Prerequisite: SOC 101 or CJS 102. Offered Spring Semester.

**CJS 303 Management & Leadership (4 SH).** This course analyzes the organization, management, and administration of local, state, and federal criminal justice agencies with emphasis on how the structure and functions of such agencies, as well as culture, affect the administration of justice. Prerequisite: 4 semester hours of CJS coursework or permission of instructor.

**CJS 304 Crime and Law Enforcement in Rural Communities (4 SH).** This course explores crime and law enforcement in rural contexts. Rural areas are often seen as peaceful, orderly places, but they present a range of geographic and economic opportunities for crime and injustice. The course will include topics such as rustling and poaching, meth production, and sex trafficking, as well as special challenges faced by law enforcement in rural areas. Offered every other year.

**CJS 405 Critical Issues in Policing (4 SH).** This course offers an in-depth investigation of the evolution of law enforcement in the United States, leading into inquiry of a number of current, critical issues shaping policing locally, nationally and internationally. Critical issues examined include: the militarization of U.S. police forces, policing post-conflict cities, technological advances in policing, policing the drug trade in rural and urban America as well as abroad and the increased role of police forces in homeland security.

**CJS 590 Field Experience/Internship (1-4 SH).**

**CJS 620-624 Independent Study (1-4 SH).**

**CJS 660, 670, 680, 690 All-College Honors Program (1-4 SH).**

## Early Childhood Education (ECE)

**ECE 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**ECE 201 Issues and Trends in Early Childhood Education (3 SH).** This course will focus on the current trends and practices of early childhood education programs which serve children from birth to age nine. Professional development, history and theories, programming, development and learning, and the special needs of young children will be addressed as they relate to early childhood education.

**ECE 203 Diversity within Family-School-Community Partnerships (3 SH).** The focus of this course is on understanding how families and communities are significant contexts for children's development and school success. Based upon these insights, students will collaboratively explore ways to build bridges of understanding between diverse schools, families, and communities. Student engagement with diverse families at a Family Reading Night as well as in field experiences will allow the student to critically reflect on a family's funds of knowledge in light of different cultural ways of knowing. The students will use these discoveries to develop culturally responsive explorations for their future classrooms.

**ECE 321 Math for Preschool Years (2 SH).** This course is an introduction to the content and methods of teaching mathematics in the PreK years which meets the PA Early Childhood Education standards. Instructional strategies are based on a constructivist approach emphasizing problem solving, estimation and making sense of mathematics. The role of technology in instruction, modern trends in mathematics education, research, and application of skills are included. The use of age-appropriate manipulative materials in a laboratory situation and group problem solving are developed as classroom models of instruction. Practicum experience required.

**ECE 322 Math for Primary Grades (2 SH).** This course is an introduction to the content and methods of teaching mathematics in the primary grades which meets the PA Academic and National Council of Teachers of Mathematics standards. Instructional strategies are based on a constructivist approach emphasizing problem solving, estimation and making sense of mathematics. The role of technology in instruction, modern trends in mathematics education, research, and application of skills are included. The use of age-appropriate manipulative materials in a laboratory situation and group problem solving are developed as classroom models of instruction.

tion. Practicum experience required.

**ECE 331 Language Development Pre-K (2 SH).** This course is designed to examine the developmental sequence of language acquisition and knowledge of phonics from PreK-4. It will also examine the language arts receptive and productive categories of oral, written, and visual language as part of a classroom curriculum.

**ECE 332 Language Development K-4 (2 SH).** This course is designed to examine the developmental sequence of language acquisition and knowledge of phonics from grades K-4. It will also examine the language arts receptive and productive categories of oral, written, and visual language as part of a classroom curriculum.

**ECE 341 Emergent Literacy (2 SH).** An introductory study of various theories of emergent literacy and literacy development. Students examine how children's literacy roots evolve from their home and community lives. The role of comprehension and phonics instruction within guided and shared reading experiences is studied. Emphasis is placed upon building family-school partnerships. Practicum experience required.

**ECE 342 Literacy in the Primary Classroom (2 SH).** An introductory study of various literacy theories. Emphasis is placed on exploring how literacy curriculum, instruction, and assessment inform each other. Systematic evaluation tools for proficient and struggling readers are explored. Practicum experience required.

**ECE 352 Teaching Social Studies PreK-8 (4 SH).** Social Studies PreK-8 is a required course with the goal of equipping prospective PreK-4 Early Childhood teachers with tools for teaching social studies to children. This course requires that the student works to develop initial ideas of social studies teaching which include methods of content selection, methods of teaching, and be able to explain the critical role of social studies education in the school curriculum. Students will develop a social studies unit that will be taught during practicum.

**ECE 362 Observation and Assessment PreK-4 (2 SH).** This course is designed to provide pre-service teacher candidates with hands-on experiences in observing and assessing children. In PreK-4 settings, students will teach lessons, administer assessment instruments, use curriculum based measurement, and evaluate and interpret the results for instructional purposes.

**ECE 605/SED 605 Early Childhood PreK-4 and Special Education PreK-8 Capstone (6 SH).** Student teaching (12 SH) is a supervised dual student teaching experience open to Early Childhood PreK-4 and Special Education PreK-8 majors who have completed the pattern of required courses. Students are required to participate in related seminars.

## Economics (ECO)

**ECO 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**ECO 150 Economic Reasoning (ST) (4 SH).** Fundamental economic concepts and theories of supply and demand, resource allocation, taxation, international trade, externalities, public goods, market models, and labor markets. An emphasis on applications in both public policy and individual decision making will be recurrent throughout the course. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**ECO 220 Statistics (4 SH).** An introductory course in the analysis and interpretation of quantitative data. Attention is given to the binomial distribution, the normal distribution, sampling, introductory probability theory, and hypothesis testing. Real world applications are used with computer software for statistical analysis. Not avail-

able to students with credit in BIO 206, MTH 335, PSY 201, PS 301, SSC 251, or SSC 252. Prerequisite: MTH 130 or 131 (or concurrent enrollment in MTH 131). (Also listed as BA 220.)

**ECO 310 Managerial Economics (4 SH).** An intensive theoretical examination of specific economic units and of the determination of product and factor prices under various market structures. The course also includes applications of the theory to contemporary economic problems. Prerequisites: ECO 150 and MTH 131 (or equivalent).

**ECO 340 Money & Banking (4 SH).** A study of the role of money in an economic system, the operation and evolution of central banking systems, and the functioning of financial institutions. Among the topics presented are the nature and function of money and credit, classes and functions of commercial banks and their operations, the structure and operation of the Federal Reserve System, theories of the value of money, credit control, and monetary policy.

**ECO 350 Economic Development & Growth (4 SH).** A theoretical and empirical analysis of the causes of lack of development in the Third World. The course focuses on the major problems currently confronting developing countries, including agricultural development and food production, population growth, income distribution, employment, education, and international economic relationships. The causes of the problems and alternative policy solutions for them are analyzed. Prerequisites: ECO 150 and 152.

**ECO 365 International Finance (4 SH).** An introduction to theories and policies concerning international trade, open economy macroeconomics, and international finance. Topics include traditional and modern theories of international trade, trade policies in advanced and developing countries, the balance of payments, fixed and flexible exchange rates, arbitrage and hedging, monetary and fiscal policies, currency areas, international debt, and the global capital market. Prerequisites: ECO 150 and 152. (Also listed as BA 365.)

**ECO 385 Financial Economics (4 SH).** The course presents the Black-Scholes theory of options, futures markets, the time value of money, the rate of return on investment, cash flow sequence, utility functions, expected utility maximization, mean-variance analysis, value at risk, optimal portfolios, and the capital asset pricing model. Prerequisites: ECO 150 and BA/ECO 220 (or equivalent). (Also listed as BA 385.)

**ECO 388 Corporate Credit Analysis (4 SH).** The course provides a working knowledge of corporate credit analysis and its practical implementation. Topics include: financial statement and credit-related ratio analysis; qualitative analysis; cash flow forecasting; valuation methods; structuring and restructuring; legal documentation review; and use of ratings as a measure of credit risk. Prerequisites: ACC 201 and 202. (Also listed as BA 388.)

**ECO 590 Field Experience/Internship (1-4 SH).** All grading S/U. Prerequisites: Must be School of Business major, have four courses completed toward the major, sophomore, junior or senior standing, consent of School of Business, and a GPA of at least 2.0.

**ECO 601 Business Forecasting (4 SH).** The course will survey common methods of forecasting sales, share prices and other variables using techniques that include univariate and multivariate time series, regression and data mining. Prerequisites: BA/ECO 220 (or equivalent), ECO 150, two other ECO courses (except BA/ECO 220), MTH 131. (Also listed as BA 330.)

**ECO 610, 611 Seminar/Advanced Topics (1-4 SH).** A study of relevant topics

and techniques pertaining to the current business and economics issues.

**ECO 620-624 Independent Study (1-4 SH).** Prerequisites: six courses in accounting, economics and/or business with at least a 3.250, junior or senior standing, and consent of program.

**ECO 660, 670, 680, 690 Honors Project (1-4 SH).**

## Education (EDU)

**EDU 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**EDU 203 Multicultural Education (2 SH).** The class provides pre-service teachers with opportunities to explore ways to understand and appreciate their own culture and elementary students' diverse cultures. Since learning occurs in a multicultural world with many ways of knowing, opportunities are needed to critically examine beliefs and classroom practices that value each student's unique cultural background. Literacy experiences with multicultural children's literature between pre-service teachers and elementary students build a foundation for future interactions with students.

**EDU 204 Educational Technology (2 SH).** The Education Department with assistance from Westminster Library Technology Services will offer a seven week course that will help you get the experience you need to drive the 21st century classroom. Students will become familiar with various technologies and strategies for effectively integrating them into the K-12 curriculum. Topics that will be covered include: Smart Board use, class web pages/blogs, collaboration tools, video and productivity applications. Students will relate content area to technology and also examine PA Common Core standards and ISTE standards regarding best practices in integrating technology into the classroom.

**EDU 220 Teaching of Literature and Grammar in Secondary Schools (4 SH).** A course in teaching secondary literature and grammar for senior English majors/secondary education minors. Students wishing to teach at the secondary school level survey required course texts and develop strategies for teaching literature, grammar, and writing. In the process, students share research into secondary sources in these areas. They also design group projects and present them to their peers. This course allows future secondary English teachers to combine their experience studying texts, grammar and writing as English majors with their assignments in education courses, preparing them more completely for classroom experience. Prerequisites: Declared English major/secondary education minor and senior standing. (Also listed as ENG 220.)

**EDU 231 Educational Psychology (4 SH).** A study of the teaching and learning process for students preparing to teach children and adolescents. The units of the course include learning, instruction, human development, motivation, management, assessment and the learner. A practicum with children and/or adolescents is included.

**EDU 266 Exploring Literacy Connections (2 SH).** Children's literature can be dream making. . .inspiring, captivating and informing. This course will provide a broad understanding of the many genres in children's literature and a contemporary view of strategies and techniques for involving children with this literature. It will also include a review of the current research on issues related to children's literature. Children's literature appropriate for PreK4 children will be emphasized.

**EDU 311 Teaching Science (4 SH).** Introduction to the content and methods of science in the PreK-8 schools. Careful attention is given to the organization and

conduct of meaningful science learning experiences at the various age levels. The roles of inquiry and discovery teaching, hands-on-learning activities, and current research are studied as they relate to children's acquisition of science concepts. Special attention is given to the treatment of values in science. Prerequisites: life science and physical science or permission of instructor. For Early Childhood PreK-4/ Special Education PreK-8 majors.

**EDU 351 Reading Content Area (4 SH).** This course is an overview of the reading and writing processes with an emphasis on assessment and the application of the strategies used to teach reading and writing in the content area. This course includes a tutoring component with middle and high school students in reading and writing in the content areas.

**EDU 450 Teaching Areas of High Need (2 SH).** This course will address the racial, cultural and economic needs of school districts trying to narrow the achievement gap. During the semester, students will analyze the historical, political, and socioeconomic factors that high-need school districts confront. Students will identify effective instructional and organizational practices, examine school and home connections, and discover disparities in available resources for urban and rural schools. Students will participate in an in-depth practicum in a high-need school under the mentorship of qualified educators.

**EDU 451 Teaching in Secondary School (4 SH).** The senior level course in preparing the student for student teaching and for professional experiences seeks to develop competencies in the following: formulation of instructional objectives; organization and evaluation of learning experiences; preparation of lesson plans; use and preparation of instructional materials; use of educational media; development of techniques for whole class, small group, and individual instruction, including strategies for inclusion; videotaped experiences in microteaching; methods of teaching applied to academic areas; the role of the teacher; development of a philosophy of education; study of the role of the professional organizations; and the ethics of the teaching profession. Graded S/U.

**EDU 452 Student Teaching Secondary (16 SH).** A supervised course in student teaching open to secondary education majors who have completed the pattern of required courses. Students are required to participate in evening/Saturday morning seminars. In addition to the regular tuition and fees, there is a student teaching fee. Prerequisite: Completion of all certification courses.

**EDU 562 PreK-8 Field Experience (2 SH).** This course is an off-campus experience in PreK-8 school setting intended to provide the student with opportunities to participate with teachers and children in classrooms. For Early Childhood PreK-4/ Special Education PreK-8 majors. Prerequisites: Must have completed at least one semester and one education course at Westminster College and have a GPA of at least 2.800. Graded S/U.

**EDU 572 Secondary Field Experience (2 SH).** An off-campus experience in secondary school with opportunities to participate with teachers and adolescents in grades 7-12. For secondary education minors. Prerequisites for first field experience: completed at least one semester and one education course at Westminster College and have at least a 2.500 GPA. Graded S/U.

**EDU 600 Student Teaching Seminar (2 SH).** The student teaching seminar is a required course that is concurrent with the student teaching semester. Its purpose is to provide opportunities for the student teacher to process the experiences that are occurring in the classroom and to strengthen professional growth. Broad topic areas for seminars include: design of instructional material, behavioral management, assessment and professional tools for exploring the job market. Emphasis is placed on

guiding students from theory to the world of the professional, practicing educator.

**EDU 610, 611 Advanced Topics (4 SH).**

**EDU 620-624 Independent Study (1-4 SH).**

**EDU 660, 670, 680, 690 Honors Project (1-4 SH).**

## English (ENG)

**ENG 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**ENG 101–198 Studies in Literature (HC) (4 SH).** Studies in English, American, world or comparative literature, or in specific literary genres and themes. Individual sections experiment with different approaches and topics. The times and a brief description of each course is provided each semester. These courses are designed primarily for non-English majors. More than one ENG 101–198 may be taken for credit, as long as each course is different. Meets Humanity and Culture Intellectual Perspective requirement (HC).

ENG 101/FS 142C	Biography/Autobiography
ENG 102/FS 142F	Children's Literature
ENG 104/FS 104	War Literature
ENG 105	Who Am I?
ENG 107/FS 107	Detective Fiction
ENG 108	American Playwrights
ENG 109/FS 109	The Sporting Spirit
ENG 110	Holocaust Literature
ENG 111	Women Writers
ENG 112/FS 212	Adaptation of Literature/Film
ENG 113	Shakespeare
ENG 114	The Study of the Short Story
ENG 116/FS 116	It's Monstrous
ENG 119/FS 142G	Arthurian Legend
ENG 120/FS 142L	Law Literature & Film
ENG 122	The Study of Poetry
ENG 123/FS 140	Queer Literature
ENG 124/FS 124	African American Drama
ENG 127	British Drama
ENG 128	Freud, Fantasy, & Interpretation
ENG 129	Hispanic American Literature
ENG 131	Nature Writing
ENG 133	Adolescent Literature
ENG 136/FS 136	Classic Greek Literature
ENG 137	Genetics in Literature
ENG 138	19th Century Literature
ENG 139	Literature of 18th Century England
ENG 140	Utopian/Dystopian
ENG 142	Fantasy, Fairytales, and Folklore
ENG 144	Contemporary Literature
ENG 145	African Literature
ENG 146	Mind Reading: Literature & Psychology
ENG 147/FS 147	Disability in Literature
ENG 148/FS 148	Sexuality on Film
ENG 149	Rebels/Deviants
ENG 152	London Novel



ENG 153/FS 212	Italy in Literature and Film
ENG 154	Landscape and Literature
ENG 156	Literature & Medicine
ENG 157/FS 142D	Science Fiction
ENG 158/FS 101	Reading the Film Text
ENG 159/FS 102	History of the Film Text
ENG 160	Magical Realism
ENG 161	Family and Literature
ENG 162	The Novel

**ENG 201 English Grammar (4 SH).** A study of contemporary approaches to grammatical terminology and analysis, designed primarily for prospective elementary and secondary teachers.

**ENG 220 Teaching of Literature and Grammar in Secondary Schools (4 SH).** A course in teaching secondary literature and grammar for senior English majors/secondary education minors. Students wishing to teach at the secondary school level will survey required course texts and develop strategies for teaching literature, grammar, and writing. In the process, students will share research into secondary sources in these areas. They will also design group projects and present them to their peers. This course allows future secondary English teachers to combine their experience studying texts, grammar and writing as English majors with their assignments in education courses, preparing them more completely for classroom experience. Prerequisites: Declared English major/secondary education minor and senior standing. (Also listed as EDU 220).

**ENG 240 Introduction to Literary Studies (HC) (4 SH).** This course is designed to immerse entering English majors and minors in the materials, methods, and current issues of the discipline. Engaging in close analysis of literary texts, students complete a variety of written and oral assignments. Required of all English majors and minors. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**ENG 250 Writing About Literature (HC) (4 SH).** This course improves students' ability to write clear, engaging, and analytical prose about a variety of literary texts. Focusing on argument and the successful integration of secondary sources into analytical essays about literature, students will have the opportunity to complete several writing assignments. Required of all English majors and minors. Meets Humanity and Cultural Intellectual Perspective requirement (HC).

**ENG 350 Critical Approaches and Major Authors (4 SH).** In this course, students will gain an understanding of literary criticism by studying different approaches to evaluating literature. These approaches include structuralism, feminism, Marxism, post-structuralism, psychological criticism, and cultural criticism. These approaches will be applied to the work of one or more major authors.

**ENG 401-499 (4 SH).** These seminars study literary texts from several critical and theoretical stances. The courses help students develop strategies for assessing the ways that meaning becomes evident in texts, in readers, and in writers. In addition to reading and interpreting texts within contexts, the 400s seminars regard works through or in the light of perspectives offered by critical theories. Not only do students in these seminars complete a higher degree of creative and critical thinking, but they also participate more fully in leading the courses. The inquiry into theory, and when appropriate, its application, stresses independent assessment, peer evaluation, and assertion of ethical choices as they pertain to meaning and contexts. Prerequisite: successful completion of ENG 240, ENG 250, and one ENG 300.

ENG 401            Drama Criticism



ENG 402	Narrative Theory
ENG 403	Cultural Criticism
ENG 404	Film Criticism
ENG 405	Feminism
ENG 406	Poetics
ENG 407	Autobiography/Biography
ENG 408	Reader Response
ENG 409	Textual Criticism
ENG 410	Art & the Artist
ENG 411	Ecocriticism
ENG 412	Shakespeare & Co.
ENG 413	American Landscape
ENG 414	Tragedy
ENG 415	John Irving
ENG 416	Gender in Literature
ENG 417	The Epic
ENG 418	Shakespeare: The History Plays
ENG 419	Shakespeare: The Tragedies
ENG 420	The Victorians
ENG 421	American Fiction Since 1945
ENG 422	Psychoanalysis, Gender, and Culture
ENG 423	Hemingway & Faulkner
ENG 424	Social Drama
ENG 425	Modern American Poets
ENG 426	Medieval Literature
ENG 427	Empire Revisited
ENG 428	Shakespeare
ENG 429	Tragic Vision
ENG 430	Jane Austen
ENG 431	The Brontes
ENG 432	Romancing the Court: Tudor Lit
ENG 433	Visiting with Writers
ENG 434	The Romantics
ENG 435	Women Writers
ENG 436	Children's Literature
ENG 437	Pan American Literature
ENG 438	Traditions
ENG 439	African-American Literature
ENG 440	After Crusoe
ENG 441	Emerson & Thoreau
ENG 442	Whitman & Dickinson
ENG 443	World Fiction
ENG 444	Contemporary Poetry
ENG 445	British Drama
ENG 446	The Empire Writes Back
ENG 447	American Gothic
ENG 448	The Roaring Twenties
ENG 449	Confessions
ENG 450	London Novel
ENG 451	Science Fiction
ENG 452	Modernism
ENG 453	The Short Story
ENG 454	Best Sellers
ENG 455	Keats in Context

**ENG 520 Travel (1-4 SH).**

**ENG 590 Field Experience/Internship (1-4 SH).** These courses are designed to foster on-campus or off-campus participation in a variety of areas. Students select experiences under the guidance of an adviser and are encouraged to consider community service projects as well as more traditional internships and field experiences related more closely to the English major. Prerequisite: junior standing.

**ENG 601 English Capstone: Advanced Study I (4 SH).** A course concentrating on the advanced bibliographical tools available to students of literary texts. Students will review, expand, deepen, and broaden their familiarity with library resources and research methods suited particularly to the creation and study of literary texts. The course will culminate in each student's production of a comprehensive proposal for the final independent study project to be completed as part of the requirement for ENG 602. (See also guidelines for College Honors in English). Prerequisites: two ENG 300's and one ENG 400.

**ENG 602 English Capstone: Advanced Study II (4 SH).** An independent study, supervised by a program member, which completes the research proposal developed in ENG 601. The student produces a major paper and creative work and presents the results to the program in an appropriate forum. Prerequisites: successful completion of ENG 601 and senior standing.

**ENG 620-624 Independent Study (1-4 SH).**

**ENG 660, 670, 680, 690 Honors Project (1-4 SH).**

**English Language Learners (ELL)**

**ELL 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**ELL 206 English Language Learners (3 SH).** The exploration of language, culture, standards-based instruction, assessment, and professionalism to understand and teach linguistically diverse learners effectively. Careful attention is given to the design of learning environments and curriculum to meet the teacher competencies related to fulfilling the instructional needs of English language learners. Certification students PreK-2 are required to take this course.

**Environmental Science (ES)**

**ES 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**ES 122 Introduction to Environmental Inquiry (2 SH).** Students participating in this course study a local/regional environmental issue of interest. When appropriate, the study is a service learning project, done in collaboration with a non-profit organization to provide meaningful community service. The approach is inquiry-based, in which students are mentored on the design and implementation of a study based on a question that they have developed in consultation with a faculty mentor and/or collaborating professionals. The study includes field work, lab work, library research, and/or other data collection methods, performed with guidance by the faculty member and/or collaborating professionals. Scientific data and/or other information from the inquiry is compiled and analyzed in consultation with the faculty mentor and/or collaborating professionals to draw conclusions regarding the original question of interest. The faculty member facilitates student learning the context of the environmental issue of interest including scientific, societal, political and economic factors. The project culminates in a public presentation of the environmental inquiry given by the students and a written reflection on the experience.

**ES 160 Concepts Environmental Science (SD) (4 SH).** An investigation of the

effect of humans on the Earth's environment and on the other species that inhabit our planet. The course will look at the impact that an increasing human population has on the resource utilization, pollution production, habitat degradation, and the extinction of species. It will include a brief look at the policies and laws that specifically relate to environmental problems. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**ES 170 Project-Based Environmental Science (SD) (4 SH).** A survey of the major environmental issues facing our planet, with an in-depth focus on one environmental issue of local/regional interest. The course emphasizes the science of environmental issues but also explores the social, political, and economical factors that are involved. The first half of the course involves traditional lab and field experiences, while the laboratory portion of the second half of the course is dedicated to a research project related to the environmental issue of local/regional interest. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**ES 230 Chemical Analysis (4 SH).** A study of the theoretical foundation and skills necessary for the solution of problems encountered in the area of quantitative chemical analysis, including classical and modern methods. Emphasis is given to the evaluation and presentation of data, sampling, equilibrium dynamics of analytically important reactions, experimental design, volumetric techniques, absorption and emission spectroscopy, electrochemical methods, and analytical separations. Examples and laboratory exercises will include environmental air, soil and water systems. Prerequisites: CHE 117, and MTH 135 or MTH 150 or BIO 206 (may be co-requisite). (Also listed as CHE 230.)

**ES 231 Environmental Analysis (4 SH).** A study of the theoretical foundation and skills in the area of quantitative chemical analysis, including classical and modern methods, as applied to environmental measurements. Emphasis is given to the evaluation and presentation of data, sampling, equilibrium dynamics of analytically important reactions, experimental design, volumetric techniques, absorption and emission spectroscopy, electrochemical methods, analytical separations, and field measurements. All examples and laboratory exercises will focus on environmental applications of chemical analysis. Prerequisites: CHE 117, and MTH 131, 135, 150, or BIO 206. (Also listed as CHE 231.)

**ES 251 Introduction to GIS (4 SH).** This course is an introduction to the theory and use of Geographic Information Systems, including the fundamental concepts of GIS, capabilities of GIS, and applications for dealing with spatial data. Key issues for discussion will include data input, data models, database design and database queries, sources of information for spatial databases, spatial analysis, computational algorithms, and information presentation. Other issues such as the nature of geographic phenomena to be represented in a GIS, comparisons of different GIS representational schemes, and appropriate use of geographic information will also be covered. These topics will be discussed within an environmental context using ArcView, a PC-based GIS software package.

**ES 360 Ecology (4 SH).** A study of the structure of ecological populations, communities, and ecosystems, and the processes that affect them. Topics include population growth, regulation, and dynamics, population interactions, food webs, species diversity, succession, biogeography, and energy flow and nutrient cycling. Laboratories stress experimental design and data analysis. Prerequisite: C- or better in BIO 203. (Also listed as BIO 360.)

**ES 590 Internship (1-4 SH).** Prerequisites: ES 160 and consent of the Environmental Science Committee for proposed internship.

**ES 601 Environmental Science Capstone: Problem Analyses in Environmen-**

**tal Science (4 SH).** Interdisciplinary senior research project designed to study an environmental problem from an integrated, multidisciplinary viewpoint. Students work collectively to develop testable hypotheses, design and implement experiments to test their hypotheses, and present their results in comprehensive written and oral reports. Prerequisite: C- or better in ES 160, CHE/ES 230, MTH 135 or BIO 226 and BIO/ES 260.

**ES 620-624 Independent Study (1-4 SH).** Prerequisites: completion of an acceptable proposal of an original experimental or observational project dealing with an environmental topic; minimum GPA 2.750 in the major; completion of ES 160; and consent of the ES committee.

**ES 660, 670, 680, 690 Honors Research (1-4 SH).** (Additional requirements and due dates should be obtained from the program coordinator. Four additional semester hours of research may count as an elective).

## Environmental Studies (ENV)

**ENV 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**ENV 201 Contemporary Environmental Issues (ST) (4 SH).** This course investigates complex, real-world environmental issues facing our world today. Students will use case studies to explore environmental issues from multi-disciplinary perspectives and contexts including scientific, economic, political, social, historical, and cultural. Stakeholder identification and analysis, environmental justice, and risk assessment are additional themes considered in this communication-intensive course. A major component of this course will be a project in which students will have the opportunity to engage in in-depth research on the many nuanced perspectives, positions, and stances of a specific environmental issue. Students will communicate findings and advocate for a particular viewpoint as well as suggest possible solutions. Research projects may include topics such as climate change, hydraulic fracking, loss of biodiversity, habitat destruction, deforestation, water and air pollution, natural resource distribution, and sustainable food supplies. Prerequisite: ES 160 or ES 170.

**ENV 601 Environmental Studies Seminar Capstone (4 SH).** The Environmental Studies Seminar is an integrative experiential and project-based course that is a capstone experience for ENV majors and minors. Students are expected to bring their discipline-specific expertise to the group and collaborate on a class project that identifies a problem, examines it from a multidisciplinary perspective and provides practical solutions. Prerequisites: ENV 201, at least 16 hours of additional core environmental studies courses, and a 300-level or higher course from a discipline combined for the major.

## Film Studies (FS)

**FS 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**FS 101 Introduction to Film Studies (HC) (4 SH).** This course focuses on the major language systems of film: photography, mise en scene, movement, editing, sound, acting, sets and costumes, writing and narrative structure, and ideology. Emphasis is on how formalist and realist filmmakers use these language systems to create meaning. Through lecture, reading, discussion, and screening of films, the students will become informed, sophisticated, active observers of cinema. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**FS 102 History of Film: A Survey (HC) (4 SH).** This course is designed for students to develop a greater comprehension of the historical evolution of cinematic art. Though the course focuses primarily on cinema in the United States, some

important and representative films from other countries will be studied. In addition, emphasis will be given to films that represent the development of film as an industry and how this corresponds to (and conflicts with) artistic endeavor. Students will write analyses of both films they watch for the course and films they choose to watch on their own. In keeping with the goals of the course, these analyses will require the students to fit the films into the context of cinema as a greater whole and to demonstrate an understanding of film as both art and industry. In addition, mid-term and final exams will require students to analyze certain films and their contributions to the development of cinema. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**FS 104-198 Selected Topics in Film Studies (4 SH).** (May be cross-listed with other disciplines). Selected topics courses study films in a more specific fashion than a survey course would do; for example, a student might examine the work of a particular director; films united by a particular theme, philosophy, or discipline; or films produced during a specific historical period. They will help students develop strategies and skills for assessing the accomplishments of filmmakers and their films and to understand how film may fit into a larger context. Thus, the Topics courses may be taught from the point of view of any discipline or theoretical approach so as to view the infinite possibilities of film. Students will apply and further develop skills they have learned in introductory courses to achieve a higher level of critical thinking regarding their comprehension of the film text.

FS 104 War Literature and Film (Also listed as ENG 104).

FS 105 Alfred Hitchcock

FS 107 Detective Fiction: Novels and Film (Also listed as ENG 107).

FS 109 The Sporting Spirit (Also listed as ENG 109).

FS 116 It's Monstrous (Also listed as ENG 116).

FS 124 African American Drama and Film (Also listed as ENG 124).

FS 134 Shake, Rattle, & Roll: Natural Disasters on Film (Also listed as ENG 134)

FS 136 Classic Greek Literature and Film (Also listed as ENG 136).

FS 140 Gay & Lesbian Film and Literature (Also listed as ENG 123).

FS 141 The Journalist in Film

FS 142 Film Genres

FS 147 Disability in Literature and Film (Also listed as ENG 147).

FS 148 Sexuality in Film and Literature (Also listed as ENG 148).

FS 152 Political Films (Also listed as PS 252A).

**FS 212 Film Adaptation (HC) (4 SH).** Students will study the challenging process of adapting literature, drama, and true-life stories to film—what goes, what stays, and what changes. By working closely with different types of texts, students discover how the texts complement each other and how they often resist each other. (Also listed as ENG 112.) Meets Humanity and Culture Intellectual Perspective requirement (HC).

**FS 356 Screenwriting (4 SH).** This workshop gives students the knowledge and tools necessary to write original screenplays from the story concept to the final draft. Students will have two or three completed short film scripts or one feature-length script by the end of the semester. Elements covered in the course include the three-act structure, main plot, subplots, scene writing, cohesiveness and momentum, transitions and turning points, conflict, character functions and development, dialogue and description, and theme. Students will also learn to use the Final Draft software program. (Also listed as WRI 356.)

**FS 404 Film Criticism (4 SH).** This course teaches the basic concepts and critical approaches of film analysis. Some of these analytical methods include humanism, auteurism, genre studies, social science criticism, cultural criticism, semiology,

structuralism, psychoanalytic criticism, Marxism, and feminism. Looking at the films through a critical lens while incorporating an analysis of its basic language systems offers students a better understanding of what filmmakers are saying as well as how they are saying it.

**FS 501-502 Film Studies Practicum (2 SH).** The purpose of the Film Studies Practicum is to give students an opportunity to learn more about international films, directors, and cultures. Students may direct the International Film Series: researching films for each semester's lineup, presenting background information for the audiences, and leading group discussions after the films. Students will also be responsible for developing promotional material for the series and sending out reminders for each viewing. The practicum experience is a tutorial setting each semester and will culminate in a research paper. Students will take the practicum for two semesters and receive two credits per semester.

**FS 590 Field Experience/Internship (1-4 SH).**

**FS 620-624 Independent Study (1-4 SH).**

## French (FR)

**FR 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**FR 101 Elementary French I (4 SH).** A course designed for students who have had less than one year of French in high school, or who wish to study French as a new language. All four basic language skills – speaking, listening, reading, and writing – are addressed, with particular emphasis on satisfying immediate communicative needs in the language.

**FR 102 Elementary French II (4 SH).** A continuation of the skills and emphases stated for FR 101. Prerequisite: FR 101 or consent of instructor.

**FR 201 Intermediate French I (FL) (4 SH).** A course designed for students who have a basic background in French. All four basic language skills — speaking, listening, reading, and writing— are addressed, with particular emphasis on developing oral proficiency. Prerequisite: FR 102 or consent of instructor. Meets Foreign Language Intellectual Perspective requirement (FL).

**FR 202 Intermediate French II (FL) (4 SH).** A continuation of the skills and emphases stated for FR 201. Prerequisite: FR 201 or consent of instructor. Meets Foreign Language Intellectual Perspective requirement (FL).

**FR 301 French Advanced Conversation and Composition I (4 SH).** A course in oral and written practice at the advanced level, designed to develop fluency in speaking and writing French. The emphasis is on the reading of cultural and literary texts, as well as current periodicals, which serve as the basis for group discussion and for writing short essays. Prerequisite: FR 202 or consent of instructor.

**FR 302 French Advanced Conversation and Composition II (4 SH).** A continuation of the skills and emphases stated for FR 301. Prerequisite: FR 301 or permission of instructor.

**FR 303 Commercial French (4 SH).** An introduction to the technical vocabulary of international business, including the writing of business letters and the translation of magazine articles using the computer. Authentic documents and videos are used. The course also studies advertising images, immigration, and business ethics in their cultural and historical context. A competency examination is given at the end of the course. Prerequisite: FR 302 or consent of instructor.

**FR 351 French Culture (HC) (4 SH).** An introduction to major French social in-

stitutions in their historical context. The course examines the various factors (historical, social, economic, artistic) that have shaped contemporary cultural identity. The arts and popular culture are included. Prerequisite: FR 302 or consent of instructor. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**FR 401 The Age of Louis XIV (4 SH).** An examination of the works of such Baroque and Neoclassical authors as De LaFayette, Racine, and Moliere. Prerequisite: FR 302 or consent of instructor.

**FR 402 Studies in 19th Century France (4 SH).** A study of 19th century French literature within its cultural and artistic context. Authors such as Balzac, Sand, and Flaubert are included. Prerequisite: FR 302 or consent of instructor.

**FR 403 France in Modern Era (4 SH).** An introduction to 20th century French literature that studies texts in their relationship to the society and artistic movements out of which they emerge. Authors such as Gide, Camus, and DeBeauvoir are included. Prerequisite: FR 302 or consent of instructor.

**FR 408 Topics in French (4 SH).** An in-depth study of the literature of a specific area, genre, or time period, as determined by the instructor. Topics often focus on gender and/or cultural issues. Prerequisite: FR 302 or consent of instructor.

**FR 409 Topics in French (4 SH).** An in-depth study of the literature of a specific area, genre, or time period, as determined by the instructor. Topics often focus on gender and/or cultural issues. Prerequisite: FR 302 or consent of instructor.

**FR 590 Field Experience/Internship (1-4 SH).** Prerequisite: FR 301 or consent of instructor.

**FR 620-624 Independent Study (1-4 SH).** Courses designed for advanced students who are capable of undertaking individual projects in French language or literature. A comprehensive report or scholarly paper in French is required. Prerequisites: completion of at least three French courses numbered 351 or higher and consent of the program coordinator.

**FR 660, 670, 680, 690 Honors Project (1-4 SH).**

## Geography (GEO)

**GEO 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**GEO 101 World Geography (4 SH).** An introductory course in world regional geography. The study of our “place” on the planet is related to the National Geography Standards. The course will consider such topics as factors in development and lack of development, economics, plate tectonics, topography, climate, and population. Economics strand included.

## Geology (GEL)

**GEL 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**GEL 121 Introduction to Geology (SD) (4 SH).** An introductory study of the earth, its materials, its structure, the forces which act upon it and modify it, human interactions with the earth, and the earth’s history. The laboratory includes field work in the area, as well as in Pennsylvania, Ohio, and/or West Virginia. (PreK-4 early childhood education/preK-8 special education majors may use this course to meet the physical science requirement). Meets Scientific Discovery Intellectual Perspective requirement (SD).



## German (GER)

**GER 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**GER 101 Elementary German I (4 SH).** A course designed for students who have had less than one year of German in high school, or who wish to study German as a new language. All four basic language skills – speaking, listening, reading, and writing – are addressed, with particular emphasis on satisfying immediate communicative needs in the language.

**GER 102 Elementary German II (4 SH).** A continuation of the skills and emphases stated for GER 101. Prerequisite: GER 101 or consent of instructor.

**GER 201 Intermediate German I (FL) (4 SH).** A course designed for students who have a basic background in German. All four basic language skills — speaking, listening, reading, and writing — are addressed, with particular emphasis on developing oral proficiency. Prerequisite: at least two years of high school German. Meets Foreign Language Intellectual Perspective requirement (FL).

**GER 202 Intermediate German (FL) (4 SH).** A continuation of the skills and emphases stated for GER 201. Prerequisite: GER 201 or consent of instructor. Meets Foreign Language Intellectual Perspective requirement (FL).

## Greek (GR)

**GR 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**GR 101 Fundamentals Ancient Greek I (4 SH).** An introduction to the morphology and syntax of the ancient Greek language, designed for students who have never previously studied it. Although the primary emphasis is on learning the written form of the language, some attention is given to pronunciation.

**GR 102 Fundamentals Ancient Greek II (4 SH).** A continuation of the skills and emphases stated for GR 101. Prerequisite: GR 101 or equivalent.

**GR 201 Fundamentals Ancient Greek III (FL) (4 SH).** A continuation of the skills and emphases stated for GR 101 and 102. Upon successful completion of GR 201, students will be prepared to progress to the reading of either Koine (New Testament) or Attic (Classical) Greek literature. Prerequisite: GR 102 or equivalent. Meets Foreign Language Intellectual Perspective requirement (FL).

**GR 251 New Testament Readings and Exegesis (4 SH).** The reading of selected portions of the New Testament, accompanied by further study of the distinctive features of the Koine Greek dialect and an introduction to textual criticism and exegesis. Prerequisite: GR 201 or equivalent.

**GR 590 Field Experience/Internship (1-4 SH).** Prerequisites: GR 201 and consent of the instructor and program coordinator.

**GR 620-624 Independent Study (1-4 SH).** Courses designed for individual advanced students. These involve guided readings in Greek literature and/or an individual research project resulting in a scholarly paper. Prerequisites: GR 201 and consent of the program coordinator.

## History (HIS)

**HIS 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**HIS 101 Civilization to 1715 (HC) (4 SH).** A study of the development of civilization with emphasis on ancient, medieval, and early modern societies. The course includes political, economic, socio-cultural, and religious perspectives on



major historical personalities and events. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**HIS 102 Civilization since 1715 (HC) (4 SH).** A study of civilization from the death of Louis XIV to the present. The course emphasizes the political and cultural developments of Western society, including the influences of rationalism, industrialism, and nationalism. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**HIS 105 America to 1877 (HC) (4 SH).** This course covers the birth of America in Europe, and traces the development of a new society based on the encounter of Native American Indians, European-American settlers, and African-Americans. The course includes a detailed examination of the American Revolution, the creation of a new nation under the Constitution, westward expansion, Jacksonian democracy, sectionalism, slavery, economic development, changes in family and women's roles, Romanticism, religion, reform, and the Civil War. The interplay of economic development, demographics, and social structure are highlighted. This course seeks to put U.S. history within a global context, while also exposing students to historiographical questions in an introductory fashion. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**HIS 106 America since 1865 (HC) (4 SH).** A survey of American history from the end of the Civil War until the present. Major topics addressed include Reconstruction, immigration, urbanization and the rise of large-scale industry, World War I, the Great Depression, World War II, the Cold War, and de-industrialization. Major themes include the changing role of women; the changing place of African Americans in US society; the interplay of economic development, demographics, and social structure; and the role of the United States in the world. This course seeks to put US history within a global context, while also exposing students to historiographical questions in an introductory fashion. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**HIS 210 History of Pennsylvania (2 SH).** This course will examine the social, economic, and political lives of Pennsylvanians from the period of European's first encounter with Native American Indians to the recent economic and social changes resulting from the demise of large-scale manufacturing and the rise of the service economy. Particular attention will be paid to the region of western Pennsylvania and the interplay of local and global events/developments. Prerequisite: History major or minor with junior or senior standing or permission of instructor.

**HIS 222 Social & Intellectual History of the US (ST) (4 SH).** A study of the major currents of the intellectual and social development of the United States. Topics include the development of public and private education, American philosophers and their thought, the relationship between religion and science, the evolution of social behavior, technological development and its consequences, and main currents within the arts. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**HIS 223 African-American History (HC) (4 SH).** A survey course beginning with the African background and tracing African-American history to the present. Emphasis is placed on understanding the development of an African-American culture through the words and experiences of contemporaries. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**HIS 225 American History 1945-1974 (HC) (4 SH).** This course will focus on the politics and culture of America from the end of 1945 to the resignation of Richard M. Nixon. Through lectures, reading, discussion, research, and presentations, students will explore this fascinating period. Special topics will include the

Civil Rights movement, the war in Vietnam, campus unrest, the various liberation movements, and the many other significant transformations of the period. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**HIS 226 The American Civil War (4 SH).** A study of the causes, events, and consequences of the American Civil War, with emphasis on the comparative strategy and tactics of the North and the South and the major personalities that shape the results. The course also covers the social and cultural conditions during the war. The reading of novels about the period, both contemporary and modern enhances the study of both military and non-military aspects of war, and helps us appreciate the current meaning of the war for Americans.

**HIS 228 Disease in US History (HC) (4 SH).** An introductory level history course which seeks to provide, for students of all majors, the opportunity to study the nature, course and impact of disease on and in the history of the United States. Attention also will be given to the shifting definitions and perceptions of disease. The majority of the semester will address the history of disease chronologically from colonial settlement through the present. The final weeks of the class will be devoted to the study of particular disease histories as detailed case studies of previously identified patterns. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**HIS 229 History of the US & the World (ST) (4 SH).** An examination of the nature of American foreign policy from the Revolution to the present with emphasis on the rise of the United States as a world power. What influence did individual policy makers, domestic events, and perceptions about foreign cultures have on diplomacy? Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**HIS 232 Ancient Greece (HC) (4 SH).** A study of the political and cultural history of ancient Greece to the end of the Hellenistic age. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**HIS 233 Rome (HC) (4 SH).** A study of Roman political and cultural history to 565 A.D. Special attention is given to the development of Roman political, social, and religious institutions. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**HIS 234 Early Christianity: Christ & Caesar (RP) (4 SH).** An examination of the history of the Christian Church within the environment of the Roman Empire during the first five centuries of its existence, and of the interaction of the Church with that environment in its political, socioeconomic, religious, and cultural aspects. (Also listed as REL 167.) Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**HIS 235 The Middle Ages, 300-1300 (HC) (4 SH).** A socio-cultural examination of the development of early European society. Beginning with a basic definition of medieval society, the course emphasizes the emergence of feudalism, the middle classes, urban centers, and the earliest forms of the nation-state. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**HIS 240 Renaissance & Reformation (HC) (4 SH).** A study of the emergence of modern European civilization. Beginning with a review of early European society and institutions, then traces their replacements by the national state, capitalism, and the reformed churches. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**HIS 241 Early Modern France (ST) (4 SH).** This period in European history witnesses the radical changes in politics, thought, society, and warfare. Special em-

phasis is given to absolutism, enlightenment, the French Revolution, Napoleon, the rise of the middle class, and the importance of science and technology. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**HIS 242 England: Age of Elizabeth (HC) (4 SH).** A study of the transition from medieval to modern forms of political and economic life from circa 1485-1714. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**HIS 243 England: The Age of Empire (4 SH).** A study of the emergence of modern England, with emphasis on the development of political democracy, the rise and fall of the British Empire, and the social and cultural history of the Victorian Age.

**HIS 245 19th Century Europe (HC) (4 SH).** A study of the political, social, economic, and diplomatic background of Europe from the Napoleonic Era to the close of the century. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**HIS 246 Twentieth-Century Europe (HC) (4 SH).** A study of the political, economic, and cultural development of Europe from the opening of the century to the present. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**HIS 251 Medieval & Early Mod Russia (HC) (4 SH).** A study of the political, economic, and cultural development of Russia from the earliest times to 1860. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**HIS 252 Modern Russia (HC) (4 SH).** A study of the late Imperial structure and an analysis of the origin, development, and character of the Soviet state and society. Particular attention will be paid to the post-Soviet period (since the collapse of the USSR in 1991). Meets Humanity and Culture Intellectual Perspective requirement (HC).

**HIS 253 History of Religion in Russia (RP) (4 SH).** An introduction to the Eastern Orthodox tradition, with particular attention to how it evolved and was celebrated in Russia. Students will explore the dogmas, liturgy, iconography, and history of the Orthodox Church, and attention will be paid to the relationship between the Church and the State, particularly under communism. Attention will also be given to a comparison of Orthodoxy with Western Christian faiths. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**HIS 261 China (ST) (4 SH).** A study of the civilization and institutions of China from the earliest times to the present, with special attention to revolutionary change in 20th century China. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**HIS 262 Japan (ST) (4 SH).** A survey of the cultural, political, social, and economic history of Japan from the earliest times to the present. Particular attention will be paid to the period since the Meiji Revolution. Topics will include: the Shogunate and the imperial system; Buddhism and Shintoism; Japanese militarism; and Japan as a modern economic power. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**HIS 271 Latin America to 1825 (HC) (4 SH).** A study of Latin America from its indigenous beginnings, through the colonial period, to the conclusion of the wars for independence. The influences of the indigenous and Iberian cultures on the development of the region are compared. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**HIS 272 Latin America from 1825 (HC) (4 SH).** A study of Latin America from 1825 to the present with emphasis upon its political, cultural, and economic

importance in world affairs. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**HIS 281 Africa to 1800 (HC) (4 SH).** A survey of African history from the earliest times until 1800. The course examines major political, economic and cultural developments across the continent, including human origins, the great civilizations of the first millennium, and the slave trade. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**HIS 282 Africa since 1800 (HC) (4 SH).** A survey of African history from 1800 to the 21st century. The course traces the major political, economic, and cultural developments on the continent, including European imperialism, African independence, and Africa in the age of globalization. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**HIS 301-399 Explorations in History (4 SH).** This series of courses broadens the history curriculum by offering a challenging, yet accessible historical analysis and by providing an intermediate course between the introductory courses and those with prerequisites. Special topics will be taught by individual faculty members in areas of interest to them and incorporate new research material, in-depth analysis, and stimulating readings. The topics will demand that students build up an appreciation for the continuities in one area of analysis. Finally, these courses will give students an opportunity to work beyond the introductory course level.

Since Explorations in History courses are intended primarily for majors and minors in history who have already taken some lower-level courses, enrollment will normally be limited to declared majors and minors in history who have at least junior standing. However, with instructor's permission, other students may enroll in these courses, as space permits.

**HIS 301 America in the 1960s (4 SH).** This course will focus on the politics and culture of America from the election of John F. Kennedy to the resignation of Richard M. Nixon. Through reading, discussion, research, and presentations, students will explore this fascinating period. Special topics will include the Civil Rights movement, the war in Vietnam, campus unrest, the various liberation movements, and the many other significant transformations of the period.

**HIS 305 Marriage, Family, Sex in History (ST) (4 SH).** A study of family over time, using legal, cultural, and socio-historical resources. Students will examine the historical roots of current social controversies, including abortion, divorce, child-rearing, family structures, and women's roles in society. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**HIS 306 America in the Age of Revolution (4 SH).** The course explores the American Revolution and the creation of the American republic in the context of global conflict and change in the period from 1763-1825.

**HIS 307 Monarchs & Dynasties (ST) (4 SH).** This course examines the role dynasties have played in the development of the modern nation-state. To accomplish this objective, students will examine not only institutions such as the royal court, but also will look at the family structure and anthropology of dynasties. The interplay between the private and the public roles of monarchical rulers is the central concern of this course, which will focus in particular on Russia, the Habsburg Empire, France and Britain. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**HIS 308 Cold War (4 SH).** The second half of the 20th century was dominated by the rivalry of the United States with the Soviet Union. This course will research such questions as the following: How did this almost deadly confrontation start?

How and why did it end? Where were the “hot spots” of the cold war, and why were they there? The course will also look at the domestic impact of the American-Soviet confrontation and explore such questions as how anti-communism affected American culture, Americans’ view of themselves, and ultimately America’s identity.

**HIS 309 History of American Institutional Care and Control (ST) (4 SH).**

As with most societies, Americans, since our earliest beginnings, have “put people away.” This course will examine both the changing understanding of why people should be institutionalized and the nature, structure, and operations of such institutions. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**HIS 310 Slavery in the Americas (ST) (4 SH).** Slavery is one of the most heavily studied subjects in U.S. history. This course will review the extensive historiography of slavery in the western hemisphere with particular emphasis on the demographics, economics, and social repercussions of “the peculiar institution.” Slavery’s changing nature, from both sides of bondage, will be examined and compared with bound labor in other temporal and geographic settings. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**HIS 311 South Africa (4 SH).** This course will explore the question of how South Africans can negotiate their past, which was marked by racial inequality and injustice, and form a new non-racial, democratic nation. To answer this question, the interactions of race, class, gender, and culture in South Africa from the 17th century to the present will be examined. Primary documents, films, music, and literature will help to illuminate the interplay between history and memory in South Africa.

**HIS 312 Advanced Topics in History & Film (4 SH).** This course explores, on a rotating basis, advanced themes in history (e.g., nationalism, war and other types of conflict, religion and society, etc.) through the viewing and study of films on historical subjects. The focus of the course is on both the cinematography of the films (i.e., the art and craft of filmmaking) and on matters of the historical accuracy and the historical context of the films. It is strongly recommended that students who are not history majors or minors take HIS 101 or 102 before taking this course.

**HIS 314 Disease in US History (4 SH).** This course seeks to provide advanced students of history the opportunity to study the nature, course, and impact of diseases on and in the history of the United States. Attention will also be given to the definition and perception of disease and change over time in both. After reviewing the history of disease across the whole of U.S. history, the course will examine the nature, course, and impact of a series of particular diseases in substantial depth along with the historiography of those diseases.

**HIS 316 Belief & Power in US Religious History (4 SH).** This course on American religious history examines the changing nature of the religious landscape in the United States from the colonial period to the present. Students will critically analyze primary and secondary sources to study the religious history of the United States, including the key themes of the diversity of religious experience in a pluralistic country, the relationship between religion and the state, and the interplay of belief and power.

**HIS 410 Historical Methods & Analysis (4 SH).** An introduction to the research methods of the historian. This course will examine the nature and use of historical sources (primary and secondary), develop mastery of presentation and reference conventions, and introduce the ancillary historical disciplines (e.g., paleography, numismatics, vexillology, etc.). Although the emphasis is on skills, the course is topical, examining the history of a selected period, event, or culture. Required of history

majors (normally taken in the sophomore year), but open also to interested history minors.

**HIS 420 Historiography (4 SH).** This course will expose students to classic works of history and introduce various schools of thought (e.g., Marxist, structuralist, analogistic, economic, feminist/gender) that characterize modern historical knowledge. Required of history majors (normally taken in the junior year). Prerequisite: C- or better in HIS 101, 102, and 410 or permission of instructor.

**HIS 450 Teaching Social Studies in Secondary Schools (2 SH).** This course is meant to help majors preparing to teach social studies in middle and high schools better integrate the knowledge and skills that they have acquired in their courses with the tools and concepts they have learned in their education classes. Students will consider national and state standards, curriculum development, and teaching and assessment strategies relevant to teaching social studies. Pedagogical, theoretical, and practical themes will be discussed. Prerequisites: EDU 231 and SED 201.

**HIS 520 Travel Course (1-4 SH).**

**HIS 601 History Capstone I (2 SH).** The first course in the capstone sequence for history majors, this course will guide students in selecting topics, developing research questions, establishing methodological approaches and research plans, crafting bibliographies, and considering the historiographical context of their topics. This course is required of senior history majors who are not enrolled in the All-College Honors Program. Prerequisite: C- or better in HIS 101, 102, 410, and 420 or permission of instructor.

**HIS 602 History Capstone II (2 SH).** The second course in the capstone sequence for history majors, this course will guide students in completing original historical research on a topic selected in HIS 601. Students will use primary and secondary sources to write a final capstone paper. This course is required of senior history majors who are not enrolled in the All-College Honors Program. Prerequisite: C- or better in HIS 601 or permission of instructor.

**HIS 620-624 Independent Study (1-4 SH).** An opportunity for majors and other qualified students to do independent reading or research in a selected area. Prerequisites: permission of the instructor and the program coordinator.

**HIS 660, 670, 680, 690 All-College Honors Program (1-4 SH).**

## Honors (HON)

**HON 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**HON 201C Ancient Greek Justice (RP) (4 SH).** This course focuses on the ancient world and changing ideas of justice and human flourishing from the Bronze Age Mycenaean Civilization recounted in Homer's Iliad and Odyssey to concepts of legal justice and democracy as developed during the golden age of Athens with the teachings of Socrates and Plato. We trace the ancient world's changing ideas of justice through literature, drama, and philosophical texts, as well as through its archaeological history. In May we travel to Greece (HON 520) for two weeks and visit many of the key archaeological sites featured in our readings, including Mycenae, Delphi, the theatre at Epidaurus, and the centers of citizen justice in Athens—the Areopagus, Parthenon, and Agora. Meets Religious and Philosophical Thought (RP) IP.

**HON 202 Renaissance & Scientific Discovery (HC) (4 SH).** This course will focus on the transformative cultural and intellectual movements in Europe that spanned the 14th to 17th centuries. Understanding perspective and human anatomy



transformed art and gave way to masterpieces such as Michelangelo's David, Botticelli's Venus and da Vinci's Last Supper. The printing press allowed for the dissemination of information to a wide audience and encouraged discoveries in science and mathematics. New thinking about the self and authority led to the reformation of the Western church by Protestant leaders, such as Luther and Calvin. Advances in navigation led to the investigation of new worlds. This course studies contributions to the ongoing quest for knowledge, and includes the works of Shakespeare, Dante, Francis Bacon, Descartes, Galileo and Copernicus. Prerequisite: HON 201. Meets Humanity & Culture Intellectual Perspective requirement (HC).

**HON 203 The Battle for Public Memory (ST) (4 SH).** History is not just what happened prior to now - it is the way we choose to tell the story of past events. Creating public memories is a complicated and highly contentious process during which societies choose to highlight some events and ignore others. Students will study myriad expressions of public memory in different contexts, including obituaries, public memorials, museum exhibits, nationalism and the selective preservation and destruction of ancient artifacts. We will investigate how individuals, communities, and nations have wrestled with the past in order to shape the present and the future. Meets Social Thought & Tradition Intellectual Perspective requirement (ST).

**HON 208 Quantum Mechanics & Society (ST) (4 SH).** This course combines philosophical inquiry with scientific approaches in order to understand and explore the impact that quantum mechanics has had on society. The first half of the semester will focus on the history and philosophy, emphasizing the development of the scientific method within Western civilization. The second half of the course will look at the specific development of quantum theory, from the early disputes between Einstein and Bohr to modern measurements of the phenomenon of quantum entanglement. The material will include some mathematics, at a level that any student in the honors program can handle, in order to illuminate the probabilistic nature of the theory. Together, the course will examine how quantum mechanics overturned our view of fundamental reality, how the development of quantum mechanics fits within the understanding of how our society develops knowledge through the process of science, and how the effects of quantum theory rippled throughout modern culture. Meets Social Thought & Tradition Intellectual Perspective requirement (ST).

**HON 209 Narrative Medicine (SD) (4 SH).** This honors seminar represents the burgeoning field of the medical humanities, which advocates a mingling of the arts and humanities with medical education and practice and explores how science and the humanities benefit one another. Biology lectures will present the molecular underpinnings of cancer biology, HIV infection and resistance, and rare diseases. In laboratory sessions, students will explore techniques related to diagnosing disease, as well as interpreting and assessing the overwhelming online content available regarding human disease. The English portion of the course will focus on human experience of the illnesses covered in biology lectures. Students will analyze literary texts spanning the seventeenth century through the present, research the cultural contexts of illnesses represented, and study the roles of patients, families, and caregivers. Together, the class will explore how a combination of scientific and literary knowledge deepens our understanding of illness and its treatment. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**HON 520C Honors Travel (1-4).** Must also take HON 201C.

**HON 660-690 Honors Project (1-4 SH).** These units of project credit are for use by students who are pursuing the Honors Project in an interdisciplinary area. (Students who are pursuing the Honors Project in a single discipline should use the Honors Project numbers listed for that discipline).

## Inquiry (INQ)

**INQ 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**INQ 111 Introduction to Liberal Arts Education (4 SH).** This course introduces Westminster students to the philosophy and practice of a liberal arts education. Students investigate classic and emerging questions which arise out of current social and intellectual concerns and exchange ideas within a supportive learning community. In the first part of the course, students evaluate traditional and contemporary discussions of liberal education and examine the ways liberal education is practiced at Westminster College. In the second part of the course, students apply the methods of a liberal education by investigating issues from multiple disciplinary and cultural perspectives. Instruction in information literacy and technology supports student research.

**INQ 211 Introduction to Liberal Arts Education (4 SH).** INQ 211 is a course with outcomes and objectives similar to Inquiry 111, but is designed for students who have more college or life experience than traditional first-year students, including transfer students with 34 or fewer credit hours accepted for Westminster credit, students who are more than one academic year from their high school graduation, and students who begin their Westminster College experience in the spring semester.

## Intercultural Studies (IC)

**IC 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**IC 101 The World of Language (ST) (4 SH).** A study of the world of language from a multicultural perspective. Students will explore language origins, first and second language acquisition, and cross-cultural differences. The course will also cover such topics as body language, gesture, the relationship between language and perception, anthropological foundations, attempts to create a “universal language,” computer language, artificial intelligence, and animal communication. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**IC 102 Reading The World (ST) (4 SH).** An introduction to the study of culture in countries where French, German, and Spanish are spoken. The course uses texts in the broadest sense, including literature, film, advertising, and cultural theory, in order to explore culture from an interdisciplinary perspective. This course examines the specific content and form of these four kinds of texts and the role of gender, race, and social class in shaping them. Special emphasis is given to texts by and about women, minorities, and the Third World. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

## International Studies (IS)

**IS 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**IS 101 Introduction to International Studies (HC) (4 SH).** An introduction to the interdisciplinary field of international studies. This course explores contemporary regional and global issues by examining human relations across cultural, economic, geographic, political, and social boundaries. Conflict and conflict resolution is an integral theme of the course. Course readings are drawn from disciplines including (but not limited to) criminal justice studies, economics, history, modern languages, political science, psychology and sociology. Meets Humanity and Culture Intellectual Perspective requirement (HC).

## Language (LAN)



**LAN 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**LAN 101, 102 Elementary Language Study (4 SH).** Introductory-level courses in a language not regularly taught in the curriculum (parallel to the courses in French and Spanish numbered 101 and 102).

## Latin (LAT)

**LAT 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**LAT 101 Fundamentals of Latin I (4 SH).** An introduction to the Latin language, designed for students who have had less than one year of Latin in high school, or who wish to study Latin as a new language. Although the main emphasis is on the written form of the language, some attention is given to oral Latin and to vocabulary-building, both in Latin and in English.

**LAT 102 Fundamentals of Latin II (4 SH).** A continuation of the skills and emphases stated for LAT 101. Prerequisite: LAT 101 or at least one year of high school Latin.

**LAT 201 Fundamentals of Latin III (FL) (4 SH).** A rapid review of basic Latin morphology and syntax, followed by the study of more complex Latin syntax, reinforced by the reading of adapted Latin prose texts. Prerequisite: LAT 102 or at least two years of high school Latin. Meets Foreign Language Intellectual Perspective requirement (FL).

**LAT 202 Introduction to Latin Literature (4 SH).** The reading of short selections from various genres, including both prose and poetry. Prerequisite: LAT 201 or at least three years of high school Latin.

**LAT 301 Latin Composition Skills (4 SH).** Practice both in translating short selections of English prose into idiomatic Latin and in writing original Latin prose, accompanied by a further study of Latin syntax. This course is designed for Latin majors and minors, but is open to other interested and qualified students. Prerequisite: LAT 201 or equivalent.

**LAT 351 Roman Civilization (4 SH).** A survey of the most prominent aspects of imperial Roman civilization, such as political and civic life, social structure, lifestyles of the various social classes, popular entertainments, religion, and education. Although most readings are done in English, students will also read, in either original or adapted Latin, selected texts (both literary and inscriptional) that illustrate various aspects of Roman civilization. Prerequisite: LAT 201 or equivalent.

**LAT 401 Pre-Augustan Literature I (4 SH).** The reading of selections from one or more of the following authors of the 2nd and 1st centuries B.C.: Plautus, Terence, Catullus. Prerequisite: LAT 201 or equivalent.

**LAT 402 Pre-Augustan Literature (4 SH).** The reading of selections from one or more of the following authors of the 2nd and 1st centuries B.C.: Cicero, Sallust, Julius Caesar. Prerequisite: LAT 201 or equivalent.

**LAT 403 Literature of the Augustan Age I (4 SH).** The reading of selections from one or more of the following authors of the Augustan Age: Horace, Ovid, Vergil (pastoral lyric). Prerequisite: LAT 201 or equivalent.

**LAT 404 Literature of the Augustan Age II (4 SH).** The reading of selections from Livy and Vergil (the Aeneid). Prerequisite: LAT 201 or equivalent.

**LAT 405 Post-Augustan Literature I (4 SH).** The reading of selections from one or more of the following authors of the 1st and 2nd centuries A.D.: Martial, Juvenal, Petronius. Prerequisite: LAT 201 or equivalent.

**LAT 406 Post-Augustan Literature II (4 SH).** The reading of selections from one or more of the following authors of the 1st and 2nd centuries A.D.: Pliny the Younger, Suetonius, Tacitus. Prerequisite: LAT 201 or equivalent.

**LAT 590 Field Experience/Internship (1-4 SH).** Prerequisites: at least one Latin course numbered 202 or higher and consent of the instructor and the program coordinator.

**LAT 601 Latin Capstone (4 SH).** This course is required of senior Latin majors who are not enrolled in the All-College Honors Program.

**LAT 620-624 Independent Study (1-4 SH).** Courses designed for advanced Latin students. These involve guided readings in Latin literature and/or an individual research project resulting in a scholarly paper. Prerequisites: completion of at least two Latin courses numbered 301 or higher and consent of the program coordinator.

**LAT 660, 670, 680, 690 All-College Honors Program (1-4 SH).**

## Law (LAW)

**LAW 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**LAW 590 Law Internship (1-4 SH).** Prerequisites: sophomore standing, a 2.500 GPA, and approval of Law PAC. See the pre-law adviser (Dr. Edward S. Cohen) for further information.

## Materials Science & Engineering (MSE)

**MSE 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**MSE 211 Statics & Mechanics of Materials (4 SH).** A study of rigid and deformable bodies in static equilibrium, considering both the external forces that lead to the state of static equilibrium and the internal forces responsible for the deformations of solid bodies. Prerequisite: PHY 151. Co-requisite: MTH 152. Offered Fall Semester, alternate years.

**MSE 221 Principles of Electrical Engineering (4 SH).** An introductory course covering basic principles and applications of electrical engineering. Topics covered include steady-state and transient analysis of electrical networks, frequency response, op-amps, diodes, and transistors. A laboratory is included. Prerequisite: PHY 152. Offered Fall Semester, alternate years.

**MSE 231 Science & Engineering of Materials (4 SH).** A survey of fundamental concepts and approaches in the study of materials, dealing with atomic structure, mechanical properties, and thermodynamics of materials, along with analysis of specific categories of materials. Prerequisite: PHY 151 OR CHE 117. Offered Spring Semester, alternate years.

**MSE 241 Semiconductor Physics (4 SH).** An introduction to the fundamentals of solid state physics as applied to semiconductor materials and devices.

**MSE 320 Solid State Chemistry (4 SH).** A detailed study of the chemistry of solid state materials. In particular, this course will reinforce the concepts of crystal lattices, packing in solids, and bonding in solids. The course will also introduce the concepts of synthesis and characterization of solid materials; the electronic, magnetic, and optical properties of solids; defects and nonstoichiometry in solids; mesoporous, microporous, and nanostructured solids; and superconductivity. A research project involving the synthesis and characterization of solids materials will also be part of this course. Prerequisite: CHE 180 and MSE 231 (with a C- or higher).

**MSE 360 Polymer Chemistry (4 SH).** Synthetic polymers can be found in nearly every facet of human life. The applications of organic polymers have extended from clothing to construction materials and from biomedical devices to drug delivery systems. As a result, nearly 50% of all chemists will work in polymer science in some capacity over their career. This course will educate students on multiple aspects of polymer chemistry from molecular structures to macromolecular properties to bulk applications. Focus of this course will be on nomenclature, procedures for polymer synthesis, and methods of polymer characterization. This course will also discuss polymer processing and current applications of polymeric materials. A weekly three-hour lab is included. Prerequisite: CHE 261 or MSE 231 with a grade of C- or better. Offered Fall Semester, alternate years. (Also listed as CHE 360.)

**MSE 601 Materials Science Capstone I: Professional Preparation (2 SH).** MSE 601 is designed to help students transition into professionals. This experience includes exploration of careers including graduate and professional schools, creating professional documents, conducting a pilot research project, and preparing a formal research proposal. Prerequisite: MSE 321 and MSE 320 or MSE 360, both with a grade of C- or better. Offered Fall Semester.

**MSE 602 Materials Science Capstone II: Senior Research (2 SH).** Students in this course will complete an independent project that integrates previously learned techniques in materials research. After conducting the project and completing data collection and analysis, the term ends with the preparation of the senior thesis. Prerequisite: MSE 601 with a grade of C- or better. Offered Spring Semester.

## Mathematics (MTH)

**MTH 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**MTH 110 Mathematical Perspectives (QR) (4 SH).** An introduction to quantitative concepts and skills, which enable students to interpret and reason with quantitative information. While each section of the course fulfills the quantitative reasoning requirement, the topics covered may vary from section to section. (Offered every semester.) Meets Quantitative Reasoning Intellectual Perspective requirement (QR).

**MTH 124 Mathematical Perspectives II (2 SH).** This course continues the development of concepts and skills that will enable students to interpret and reason with quantitative information. This course is only open to education majors and secondary education minors. Prerequisite: C- or higher in MTH 110 or MTH 131 or MTH 135 or appropriate advanced placement credit. (Offered every semester).

**MTH 130 Pre-Calculus (4 SH).** A pre-calculus course for those who need a better foundation in algebraic concepts, functions and graphing. Topics of study include algebra fundamentals, linear and quadratic equations, systems of equations, functions and their graphs. Open only to students who plan to enroll in MTH 131 or MTH 150. This course does not fulfill the all college quantitative reasoning requirement. (Offered every semester.)

**MTH 131 Applied Calculus (QR) (4 SH).** A one-semester study of applications of differential and integral calculus with emphasis on polynomials, exponential functions, logarithmic functions, business and economics applications. This course is for individuals with a good high school background in mathematics. This course does not provide the background for a student to continue on to Calculus II. Not available to students who have credit for MTH 150, MTH 152, or MTH 250. Prerequisites: C or better in MTH 130 or permission of the instructor or department chair. (Offered every semester.) Meets Quantitative Reasoning Intellectual Perspec-

tive requirement (QR).

**MTH 135 Concepts of Statistics (QR) (4 SH).** An introduction to the concepts of statistics. Topics include graphical and numerical summaries of data, confidence intervals and significance tests about hypotheses. Emphasis is placed on conceptual understanding and interpretation of data and statistics. Not available to students who have credit for BA/ECO 220, PSY 201, SSC 251, BIO 206. (Offered Spring semester.) Meets Quantitative Reasoning Intellectual Perspective requirement (QR).

**MTH 150 Calculus I (QR) (4 SH).** This course will focus on the fundamentals of differential calculus. Topics considered include functions, limits, continuous functions, differentiation and integration of functions with one real variable, applications of differentiation and the Fundamental Theorem of Calculus. Students will be introduced to some basic calculus proofs. This course is suggested for all students who expect to continue for any advanced degree including finance, law, and medicine. (Offered every semester.) Meets Quantitative Reasoning Intellectual Perspective requirement (QR).

**MTH 152 Calculus II (QR) (4 SH).** This course will focus on the fundamentals of integral calculus, including techniques and applications of integration. Other topics include infinite series and introductory topics from differential equations. Prerequisite: C- or better in MTH 150 or the permission of the instructor. (Offered every semester.) Meets Quantitative Reasoning Intellectual Perspective requirement (QR).

**MTH 241 Discrete Mathematics (4 SH).** An introduction to discrete mathematics. Topics covered include logic, sets, functions, relations, counting, mathematical induction, recurrence relations, and graphs. The topics are tied together through an emphasis on proof techniques and mathematical writing. Prerequisite: C- or better in MTH 150 or a higher-level math course, or permission of the instructor. (Offered every semester).

**MTH 250 Calculus III (QR) (4 SH).** An introduction to the calculus of several variables. Topics include the geometry of three-dimensional space, partial derivatives, multiple integrals, and vector calculus. Prerequisite: C- or better in MTH 152. (Offered Fall semester.) Meets Quantitative Reasoning Intellectual Perspective requirement (QR).

**MTH 253 Differential Equations (4 SH).** The study of differential equations and their applications in the natural sciences. Topics include linear differential equations, series solutions, Laplace transformations, systems of equations, an introduction to partial differential equations, boundary value problems and application of differential equations. Prerequisite: C- or better in MTH 250. (Offered Spring semester, odd years.)

**MTH 261 Linear Algebra (4 SH).** An introduction to matrix algebra and general vector spaces. Topics include systems of linear equations, matrix operations and properties, determinants, vector spaces and subspaces, linear transformations, linear independence and span, bases, coordinate systems, eigenvalues and eigenvectors, inner product spaces, and orthogonality. Prerequisite: C- or better in MTH 250. (Offered Spring semester.)

**MTH 302 Probability (2 SH).** An introduction to the mathematics of basic probability theory. Topics include general probability concepts, random variables, and discrete and continuous probability distributions. Prerequisite: C- or better in MTH 241 and in MTH 250. (Offered Spring semester, odd years.)

**MTH 310-319 Special Topics in Mathematics (4 SH).** This elective course will investigate an area of mathematics outside of the core mathematics curriculum. A

description of the topic will be distributed prior to registration. Prerequisite: C- or better in MTH 241. (Offered Fall semester, odd years).

**MTH 321 Numerical Analysis (4 SH).** This course explores the development of methods to approximate the solutions to differential equations, zeros of functions, solutions to linear systems of equations, as well as analysis of errors involved in using these methods. Prerequisites: MTH 250 and CS 151. (Offered on demand.)

**MTH 331 College Geometry (2 SH).** An examination of the axiomatic foundations of non-Euclidean and Euclidean geometry. Prerequisites: C- or better in MTH 241 and in MTH 250. (Offered Spring semester, odd years.)

**MTH 335 Statistics (4 SH).** An introduction to statistics. Topics include exploratory data analysis, descriptive and inferential statistics. Both classical, and bootstrapping and randomization approaches to inferential analysis are taken. Prerequisites: C- or better in MTH 152 and in MTH 241. (Offered Fall semester.)

**MTH 341 Operations Research (4 SH).** An introduction to the major mathematical methods of operations research. Included are linear programs and methods of solutions, network flow models, markov chains and game theory. Prerequisites: C- or better in MTH 261. (Offered Spring semester, odd years.)

**MTH 361 Abstract Algebra (4 SH).** A study of algebraic structures and their properties with an emphasis on mathematical writing and the construction of proofs. Topics include groups, rings, fields, homomorphisms, cosets, and quotients. Prerequisites: C- or better in MTH 261 and in MTH 241. (Offered Fall semester.)

**MTH 431 Teaching Mathematics in the Secondary School (4 SH).** Educational theory, methodologies and instructional models pertaining to the teaching of mathematics on the secondary level, teaching strategies for specific mathematical concepts, recognition and awareness of necessary problem-solving and cognitive skills. The National Council of Teachers of Mathematics standards will be perused and discussed. Much of this will be embedded in the mathematics of geometry. This course is open only to those junior and senior mathematics majors who plan to student teach. Prerequisites: MTH 261 and SED 201 or by permission of instructor. (Offered Fall semester, odd years.)

**MTH 451 Real Analysis (4 SH).** A study of the analytic properties of real functions and sequences. Topics include set theory, the real number system, limits, continuous functions, differentiation, Riemann integration, sequences, and series. Prerequisite: MTH 361. (Offered Fall semester.)

**MTH 481 Topology (4 SH).** An introductory course covering set theory, continuous mappings, homeomorphisms, connectedness, compactness, metric spaces, product spaces and quotient spaces. Co-requisite: MTH 361. (Offered on demand.)

**MTH 590 Field Experience/Internship (1-4 SH).** Prerequisites: MTH 261, junior or senior standing and consent of program.

**MTH 601 Mathematics Capstone (4 SH).** This capstone course, designed for all mathematics majors, offers the opportunity for students to review and integrate their knowledge. The format of the course includes a major presentation. Prerequisite: MTH 361. (Offered Fall semester).

**MTH 610-619 Advanced Topics (4 SH).** This course will investigate a new topic in mathematics or provide a deeper study of an existing topic in the mathematics curriculum. A description of the topic will be distributed prior to registration. Minimum prerequisite: MTH 261. (Offered on demand).

**MTH 620-624 Independent Study (1-4 SH).**

**MTH 660, 670, 680, 690 Honors Research (1-4 SH).**

## **Multimedia Journalism (MJ)**

**MJ 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**MJ 111 Writing for Electronic Media (4 SH).** This class introduces students to the fundamental techniques of broadcast news writing along with writing for online platforms. Students gain skills and experiences in interviewing, writing, editing news on the air and online in short and long formats. (Also listed as BC 111).

**MJ 120 Broadcast Practicum (1 SH).** Students engage in experiential learning and professional development in multi-media content and programming with the campus radio and cable television stations and WCN 24/7. Hands-on experience may include radio on-air or news anchor shifts, television news anchoring or reporting, serving on television and remote crews, news writing, videography or similar approved activities. On-air radio and television positions require an audition. Practicum requires each student to demonstrate best practices, competency and advancement of audio, video and writing skills. Students cannot receive practicum credit for work done for other BC classes, labs or assignments, or count work study hours as part of the practicum. Students must be involved at the stations a minimum of seven hours per week. Early morning, evening and weekend work with our stations, remote truck and online media is required. Prerequisites: BC 101 or 102 or consent of instructor. (Also listed as BC 120).

**MJ 150 Digital Media Essentials (4 SH).** This course provides fundamental for building best practices skills when using smartphones and other consumer-based products to produce digital media content to document and share one's story or the story of an academic or professional project. Students learn how to critically review aesthetics of quality digital photography, audio and video and transition from critiquing to producing original content. The student will share the content via social media and other platforms while creating materials for a digital portfolio. This course requires you to create and maintain a professional presence on social media. You will share positions and experiences publicly with an online audience. (Also listed as BC 150).

**MJ 201 Journalism I (4 SH).** News reporting and writing, focusing on developing journalistic style and news judgment. Students will learn techniques of researching, interviewing, quoting, editing, beginning makeup and design, and rewriting the "handout," or news release. This course also includes an introduction to press law, ethics and broadcast news. All students are expected to submit stories for print consideration. Prerequisite: successful completion of WRI 111. (Also listed as WRI 301).

**MJ 202 Journalism II: Converged Journalism (4 SH).** Advanced news, feature, and editorial writing course designed to take students beyond the inverted pyramid. The focus is on the convergence of news gathering and content. Students learn to write for TV, radio, newspaper, and the web and collaborate on story production. The course includes a closer study of press law and responsibilities. Prerequisite: successful completion of WRI 301. (Also listed as WRI 302).

**MJ 311 Broadcast & Digital Journalism (4 SH).** This class builds on the fundamentals of broadcast and electronic news writing from previous courses including practical, ethical and legal considerations. Students learn and advance their skills in news gathering, interviewing, writing, producing, reporting and presenting content on Titan Radio, WCN and wcn247.com. The course engages study and exploration by students in all aspects of the newsroom operations including the convergence of



the broadcast side of the newsroom to the online product. Prerequisites: BC 101 or 102 and BC 111. (Also listed as BC 311).

**MJ 312 Broadcast Journalism II (4 SH).** Students engage in the study and practice of broadcast and online journalism as it relates to television news, including practical, ethical and legal considerations involved in news gathering, writing, shooting, editing and reporting. Students generate story ideas, make contacts with sources, conduct interviews, shoot, write and edit local news stories for target audiences via the Westminster Cable Network, Titan Radio and [www.wcn247.com](http://www.wcn247.com). Students polish and advance their writing, production and storytelling skills adhering to established, professional standards. Students who wish to specialize in sports broadcasting may cover sports stories and events for class assignments. Prerequisites: BC 101 or 102, BC 111, and BC 251. (Also listed as BC 312).

**MJ 590 Internship (1-4 SH).** Only four credits may be used to meet the minimum requirements in the major or minor. Internships must be off campus at a radio, TV, cable, online, publication, or production facility. Prerequisites: completion of three one-hour credits of MJ 120/Practicum, extensive prior experience at campus broadcast facilities, and approval of the program. S/U grading. (Also listed as BC 590).

**MJ 601, 602 Digital Journalism Capstone I & II (4 SH).** These courses require the student to research and produce a documentary linked to service learning goals established by the College. MJ 601 focuses on the research and production of the projects. MJ 602 engages students in the production, post-production and presentation and assessment of the documentaries. Each student must participate in a documentary showcase and apply best practices when it comes to writing, interviewing and audio and production techniques. These documentaries become the newest element to the student's e-portfolio capping off their journey in the Broadcasting and Media Production curriculum. Prerequisites: completion of the program comprehensive exam, BC 101 or 102, BC/MJ 111, and BC 251 and at least three semester hours of BC 120/Practicum.

**MJ 620-624 Independent Study (1-4 SH).**

## Music (MUS)

**MUS 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**MUS 101 Introduction Western Music (HC) (4 SH).** An historical study of the basic elements and major periods of 2,000 years of Western music, major composers and their works, with emphasis on the development of listening skills. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**MUS 102 Introduction Ethnomusic (VP) (4 SH).** Historic survey of music of non-Western societies as it relates to the different cultures. Study of development of instruments, vocal practices and performance media within the specific cultures. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**MUS 103 Introduction to Classic Jazz (VP) (4 SH).** An historical survey of the unique development of jazz from its origins as an African-American art form to its present status as an American art form. The course will be taught in conjunction with HIS 223 (African-American History) course as an approved cluster. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**MUS 104 Introduction to American Music (4 SH).** A study of the panorama of American music tracing the origins of indigenous Indian tribal music, to the psalm-singing colonials, to the African slaves. Folk music, opera, popular song,

marches, and dance tunes are viewed in their historical contexts. The Singing School movement, shaped-note hymnody, classical music, jazz, and rock are also considered.

**MUS 105 Introduction to Opera (4 SH).** A study of opera as an art form showing how the various elements (music, dance, drama) come together to form a whole. An introduction to opera including its history, cultural importance, and sociological implications will be presented before an in-depth study of individual works.

**MUS 121 Music Theory I (4 SH).** Music Theory 1 is the first of four semesters of the music theory sequence. Topics to be covered will include: pitch, pitch class, scales, the basics of rhythm, intervals, triads, seventh chords, two-voice counterpoint, and notation and scoring. Students will also be introduced to technologies used in the study of music theory. In addition, a progressive program for developing aural, sight-reading, and keyboard skills will be initiated, which will be continued through the remainder of the required theory courses. Also included is an introductory study of the rhythmic procedures in the music of Africa. This course is prerequisite for all other theory courses and may be waived only upon satisfactory performance on the music theory diagnostic exam. There is no prerequisite for this course. Co-requisite: Students must also register for the practicum MUS 121P. A letter grade of at least C- must be attained in MUS 121 in order for the course to count toward the music major.

**MUS 121P Music Theory I Aural Skills Practicum (0 SH).** Music Theory I Aural Skills Practicum is the first of four semesters of the music theory practicum sequence. Topics to be covered will include: pitch, pitch class, scales, the basics of rhythm, intervals, triads, seventh chords, two-voice counterpoint, and notation and scoring. Students will apply their knowledge of these topics by demonstrating their aural skills through melodic, harmonic, and rhythmic dictation, sight-singing, performance, composition, and improvisation. Students will also be introduced to technologies used in the study of aural skills. There is no prerequisite for this course. Co-requisite: Students must also register for the course MUS 121. Note: A letter grade of at least C- must be attained in MUS 121 (theory and aural skills combined) in order for the course to count toward the music major.

**MUS 122 Music Theory 2 (4 SH).** Music Theory 2 is the second of four semesters of the music theory sequence. Topics to be covered will include: SATB voicing, non-chord tones, common-practice harmonic function, phrase and cadence structure, sequences, and secondary dominants. Students will continue to use appropriate technologies for the study of music theory. Also included is an introductory study of the music of China. This course is prerequisite for all other theory courses except MUS 121 and may be waived only upon satisfactory performance on the music theory diagnostic exam. Prerequisite: MUS 121 Music Theory 1. Co-requisite: students must also register for the lab MUS 122L. Note: A letter grade of at least C- must be attained in MUS 122 in order for the course to count toward the music major.

**MUS 122P Aural Skills Practicum (0 SH).** Music Theory II Aural Skills Practicum is the second of four semesters of the music theory lab sequence. Topics to be covered will include: non-chord tones, common-practice harmonic function, phrase and cadence structure, sequences, and secondary dominants. Students will apply their knowledge of these topics by demonstrating their aural skills through melodic, harmonic, and rhythmic dictation, sight-singing, performance, composition, and improvisation. Students will continue to use technologies in the study of aural skills. Prerequisite: MUS 121: Music Theory 1 or satisfactory completion of the Music Theory Diagnostic Exam. Co-requisite: must also register for the course MUS 122. Note: A letter grade of at least C- must be attained in MUS 122 (theory and aural



skills combined) in order for the course to count toward the music major.

**MUS 123P Music Theory 3 Aural Skills Practicum (0 SH).** Music Theory III Aural Skills Practicum is the third of four semesters of the music theory lab sequence. Topics to be covered will include: a review of secondary dominants and leading-tone chords, modulations by common chord, other modulatory techniques, mode mixture, the intensification of the predominant with Neapolitan and augmented sixth chords, enharmonic spellings and modulations, further elements of the harmonic vocabulary, and a brief introduction to the analysis of musical form. Students will apply their knowledge of these topics by demonstrating their aural skills through melodic, harmonic, and rhythmic dictation, sight-singing, performance, composition, and improvisation. Students will also continue to use computer assisted instruction in the study of aural skills. Prerequisite: MUS 122. Co-requisite: students must also register for the course MUS 123. Note: A letter grade of at least C- must be attained in MUS 123 (theory and aural skills combined) in order for the course to count toward the music major.

**MUS 124 Music Theory IV (4 SH).** Music Theory IV is the fourth of four semesters of the music theory sequence. Topics to be covered will include: new approaches to tonal or centric writing, analysis of non-serial atonal music, analysis of twelve-tone music, neoclassicism, post-1945 serialism, expansion of approaches to rhythm, aleatoric music, sound mass, post-modernism and the use of quotation, minimalism, and present directions in compositional practice. Students will continue to use appropriate technologies for the study of music theory. Also included is an introductory study of the musics of India and Indonesia, particularly as they relate to exoticism in 20th-century European compositions. Prerequisite: a grade of C- or higher in MUS 123: Theory 3. Co-requisite: students must also register for practicum MUS 124P. Note: A letter grade of at least C- must be attained in MUS 124 in order for the course to count toward the music major.

**MUS 124P Music Theory 4 Aural Skills Practicum (0 SH).** Music Theory 4 Aural Skills Lab is the fourth of four semesters of the music theory lab sequence. Aural skills topics to be covered will include: modal and pentatonic scales; centric and symmetrical constructions; atonal cells; atonal relationships; tertian, quartal, and quintal constructions; serial atonality; tonal and atonal hybrids; as well as the aural identification of significant twentieth-century compositions. Students will apply their knowledge of these topics by demonstrating their aural skills through pitch and rhythmic dictation, sight-singing, performance, composition, and improvisation. Students will also continue to use computer assisted instruction in the study of aural skills. Prerequisite: MUS 123. Co-requisite: students must also register for the MUS 124. Note: A letter grade of at least C- must be attained in MUS 124 (theory and aural skills combined) in order for the course to count toward the music major.

**MUS 125 Form & Analysis (4 SH).** This course is a comprehensive introduction to the study of form in music. The course is based on the premise that form must be perceived aurally, and that the most effective analysis is based on critical listening. Topics covered are the general structural aspects of music, small-scale units of form, and larger-scale units of form. Evaluation will be based on the student's ability to describe, analyze, and evaluate the function of formal units in various pieces of music in class and in written prose. Prerequisite: MUS 124 and 124L, or permission of the instructor. Note: A grade of at least C- is required for this course to count toward any major in music.

**MUS 126 Orchestration (4 SH).** Study of the timbres, ranges, transposition, technical characteristics, and idiomatic uses of the instruments of the orchestra. Orchestral families of sound are examined in their individual sound colors and in their contribution to orchestral sound. Prerequisite: MUS 124, or permission of

instructor. Note: A letter grade of at least C- must be attained in MUS 126 in order to count for graduation as a music education major.

**MUS 127 Modal and Tonal Counterpoint (4 SH).** This course begins with an overview of basic species counterpoint. It turns to multiple-part settings of music in the various polyphonic forms of the Renaissance. Following that, stylistic innovations in counterpoint from the Baroque era are introduced. Forms such as the chorale prelude, invention, and fugue are studied. Evaluation is based on counterpoint exercises and larger-scale projects in which students create their own compositions based on the rules of counterpoint. Prerequisite: MUS 124 and MUS 124L or permission of the instructor. Note: A grade of C- or higher is required in this course to count toward any major in music.

**MUS 129 Seminar in Music Theory (4 SH).** Topics to be determined. Prerequisite: permission of instructor.

**MUS 130 Psychology of Music (ST) (4 SH).** This course considers human behavior from both the psychological and musical perspectives. The course is an introduction to understanding why music exists, why people listen to music, how people understand music, and how social relationships influence musical tastes. In particular, MUS 130 covers theories on the evolutionary origins of music, musical development, music and the brain, music and emotion, the role of music in our everyday lives, social influences on musical tastes, composers with psychological disorders, and a brief introduction to music therapy. This is an introductory course in music cognition; no musical talent or experience is necessary. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**MUS 141 History Western Music to 1750 (HC) (4 SH).** A historical survey of the development of Western music from primitive sources through the Baroque, with emphasis on composers, styles, and performance practices in relation to the cultural backgrounds. Satisfies IP credit in Humanity and Culture. Prerequisite: All except double majors must have had MUS 121, 122, and 123, or permission of instructor. Note: A letter grade of at least C- must be attained in MUS 141 in order to count for graduation as a music major. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**MUS 142 History Western Music fr 1750 (HC) (4 SH).** A continuation of MUS 141. An historical survey of the development of Western music from the pre-Classical to the present, with emphasis on composers, styles, and performance practices in relation to the cultural backgrounds. Also included is an in-depth study of the historical significance and development of the music of African, Middle Eastern, and Far Eastern cultures. Satisfies IP credit in Humanity and Culture. Prerequisite: All except double majors must have had MUS 121, 122, and 123, or permission of instructor. Note: A letter grade of at least C- must be attained in MUS 142 in order to count for graduation as a music major. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**MUS 143 Women in Music (4 SH).** This course will examine the history, contributions, and social issues surrounding the role of women in the field of music, from the 10th to the 21st centuries. The acceptance of women as contributors in the field of music has coincided with the acceptance of women as participants and leaders in church and society. The class will examine the music and the lives and surrounding culture of women composers, as well as the lives and contributions of female musicians as performers.

**MUS 149 Seminar in Music History (HC) (4 SH).** Topics to be determined. Prerequisite: permission of instructor. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**MUS 161 Piano Literature (4 SH).** A chronological survey of music for piano and harpsichord, from the Renaissance through the 20th century.

**MUS 163 Vocal and Opera Literature (4 SH).** A chronological survey of music for solo voice and small vocal ensembles, from the late Middle Ages through the 20th century.

**MUS 164 Choral Literature (4 SH).** A chronological survey of music for choirs. An examination of sacred and secular choral music of the Renaissance through the 20th century.

**MUS 167 Symphonic Literature (4 SH).** A chronological survey of symphonic music, from the pre-Classical period through the 20th century with emphasis on both the aural and analytical understanding of this repertoire.

**MUS 168 Band Literature (4 SH).** A chronological survey of music for bands and wind ensembles, from the Renaissance through the 20th century.

**MUS 182 General Music Methods (4 SH).** Study of philosophies, principles and practices related to general music instruction in elementary and secondary schools. Examination of contemporary approaches to teaching general music. Analysis of skills, concepts, and materials appropriate to elementary and secondary general music programs. Practice in planning and implementing elements of a comprehensive general music curriculum. Prerequisite: MUS 181 or permission of instructor.

**MUS 183 Choral Methods (4 SH).** Emphasis on methods and materials for developing comprehensive musicianship through the vocal program of the public school; consideration of the child voice, the changing voice, and the adolescent voice; budgeting and administering the program; planning and preparing for public performance; repertoire for choral groups; preparation of a philosophy of music education. Prerequisites: MUS 181 and 182, or permission of instructor.

**MUS 184 Instrumental Methods (4 SH).** Emphasis on methods and materials for developing comprehensive musicianship through the instrumental program of the public school; techniques for recruiting and organizing performing ensembles; scheduling, budgeting and administering the instrumental program; organizing trips, developing music and equipment inventories, dealing with parent groups and administrators, planning and preparing for public performance; repertoire for beginning and advanced ensembles and soloists; preparation of a philosophy of music education; teaching techniques. Prerequisites: MUS 181 and 182, or permission of instructor.

**MUS 185 Integrating the Arts for the Developing Child (VP) (4 SH).** Learning about music and other art forms through the performance of various techniques as they relate to the developing child, focusing on pre-K through 4th grade. Students will experience elemental music concepts through singing, playing instruments (including the keyboard lab), moving, active listening, and creating music. Through role playing as both teachers and children, students will learn about music, plus learn how music may be used in conjunction with additional areas of the curriculum, such as the visual arts. Theatre (pretending, dramatization) will be incorporated into class activities, as well. Students will also learn about the elements of visual art, and explore a variety of media as they pertain to early childhood. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**MUS 189 Seminar in Music Education (4 SH).** Topics to be determined. Prerequisite: permission of instructor.

**MUS 195 Elementary Student Teaching (8 SH).** Observation and directed teaching of vocal and instrumental and general music at the elementary level of the

public schools, supervised by music personnel of the College and the cooperating schools. Participation in weekly student teaching seminars throughout the semester of student teaching. Prerequisite: see “Eligibility Requirements for Admission into Student Teaching” found on p. 122. Note: A letter grade of at least B must be attained in MUS 195 in order to count for graduation as a music education major.

**MUS 196 Secondary Student Teaching (8 SH).** Observation and directed teaching of vocal and instrumental and general music at the secondary level of the public schools, supervised by music personnel of the College and the cooperating schools. Participation in weekly student teaching seminars throughout the semester of student teaching. Prerequisite: see “Eligibility Requirements for Admission into Student Teaching” found on p. 122. Note: A letter grade of at least B must be attained in MUS 196 in order to count for graduation as a music education major.

**MUS 200 Woodwind Pedagogy I (1 SH).** Two hours of class instruction per week on woodwind instruments (flute, clarinet, and saxophone) with emphasis on the development of performance skills, repertoire, teaching methods, and instrument maintenance. Required of all students wishing to teach flute, clarinet, or saxophone private lessons in the Music Intern Teaching Program. Participation in weekly 45-minute Performance Lab required. Co-requisite: must also register for MUS 600L. Note: A letter grade of at least C- must be attained in MUS 200 in order to count for graduation as a music education major.

**MUS 201 Woodwind Pedagogy II (1 SH).** A continuation of MUS 200, covering double reeds. Required of all students wishing to teach oboe or bassoon private lessons in the Music Intern Teaching Program. Participation in weekly 45-minute Performance Lab required. Prerequisite: MUS 200. Co-requisite: must also register for MUS 600L. Note: A letter grade of at least C- must be attained in MUS 201 in order to count for graduation as a music education major.

**MUS 202 Brass Pedagogy (1 SH).** Two hours of class instruction per week on brass instruments (trumpet, horn, trombone, euphonium, and tuba) with emphasis on the development of performance skills, repertoire, teaching methods, transpositions, basic arranging, and instrument maintenance. Required for all students wishing to teach brass private lessons in the Music Intern Teaching Program. Participation in weekly 45-minute Performance Lab required. Co-requisite: must also register for MUS 600L. Note: A letter grade of at least C- must be attained in MUS 202 in order to count for graduation as a music education major.

**MUS 203 Percussion Pedagogy (1 SH).** Two hours of class instruction per week on percussion instruments (snare, timpani, xylophone, and set) with emphasis on the development of performance skills, repertoire, teaching methods, and instrument maintenance. Required of all students wishing to teach percussion private lessons in the Music Intern Teaching Program. Participation in weekly 45-minute Performance Lab required. Co-requisite: must also register for MUS 600L. Note: A letter grade of at least C- must be attained in MUS 203 in order to count for graduation as a music education major.

**MUS 204 String Pedagogy 1 (1 SH).** Two hours of class instruction per week on violin and viola with emphasis on the development of performance skills, repertoire, and instrument specific teaching methods. Required of all students wishing to teach string private lessons in the Music Intern Teaching Program. Participation in weekly 45-minute Performance Lab required. Co-requisite: must also register for MUS 600L. Note: A letter grade of at least C- must be attained in MUS 204 in order to count for graduation as a music education major.

**MUS 205 String Pedagogy 2 (1 SH).** A continuation of MUS 204, with students learning to play the cello and bass and additional emphasis on maintenance, ability

to recognize and choose differing levels of instruments, and classroom teaching skills. Required of all students wishing to teach string private lessons in the Music Intern Teaching Program. Participation in weekly 45-minute Performance Lab required. Prerequisite: MUS 204. Co-requisite: must also register for MUS 600L. Note: A letter grade of at least C- must be attained in MUS 205 in order to count for graduation as a music education major.

**MUS 206 Vocal Pedagogy (1 SH).** A study of the specific principles of teaching voice, and the fundamentals of phonetics through study of the International Phonetic Alphabet (IPA), articulation, and pronunciation of English vocal and dramatic literature. Required of all students wishing to teach voice private lessons in the Music Intern Teaching Program. Note: A letter grade of C- must be attained in MUS 206R in order to count for graduation as a music education major.

**MUS 207 Latin & Italian Diction (1 SH).** A study of the fundamentals of pronunciation and articulation of Latin and Italian vocal and dramatic literature.

**MUS 208 German Diction (1 SH).** A study of the fundamentals of pronunciation and articulation of German vocal and dramatic literature.

**MUS 209 French Diction (1 SH).** A study of the fundamentals of pronunciation and articulation of French vocal and dramatic literature.

**MUS 210 Keyboard Pedagogy, Improvisation, Harmony (2 SH).** A study of the specific principles of teaching piano and its literature. Required of all students wishing to teach piano private lessons in the Music Intern Teaching Program. Prerequisite: permission of instructor. May be repeated.

**MUS 212 Woodwind and Brass Repair (2 SH).** Prepare instrumental music teachers to diagnose repair needs, evaluate quality of repair technician's work, replace and adjust pads, and perform minimal emergency repairs on woodwind instruments.

**MUS 214 Marching Band Techniques (1 SH).** This course may be selected as one of the three music electives required by the Music Education curriculum. This course fulfills a significant skill-set for most instrumental music teaching position in the public schools: marching band. Students will: (1) Learn and demonstrate knowledge of planning, budgeting and administration of band camps and marching band; (2) Work with and demonstrate the understanding of the primary technology involved in marching and drill writing; (3) Chart actual marching band drill using music and the three-dimensional functions of the technology; and (4) Develop an understanding and be able to create marching drill in the four primary styles of marching band – Corps Style, Squad Style, Block Band, Show Band, thus preparing them to be adaptable for any style used by school districts following their hiring.

**MUS 215 Introduction to Professional Development for Musicians (1 SH).** This course will introduce students to the most crucial aspects of musical professional development, including developing resumes, biographies, cover letters, communicating effectively in writing and orally, constructing five-year career development plans, building and maintaining a network of arts industry professionals, branding themselves and/or their projects, building a website and maintaining social media pages, and giving an "elevator speech." A focus of this course will be on helping students to identify their personal values, interests, and skills as related to their career path. Teaching methods will include lectures, classroom discussions, creative workshops, and simulation exercises.

**MUS 242 Piano Class Level 1 (1 SH).** Designed to prepare students to take the piano proficiency exam. This is a remedial and introductory course in piano technique for non-piano majors. May be repeated innumerable times, but will not count

towards graduation

**MUS 261 Music Technology (1 SH).** To make the students familiar with the multi-dimensional uses of technology available in music composition, music education, analysis and MIDI capabilities. Music students need not only to understand the music specific software, they must also reinforce their understanding of the capabilities of computer technology in organization and administration necessary for their careers. Prerequisite: major or minor in music or permission of the instructor.

**MUS 271 Basic Conducting (1 SH).** Introduction to basic conducting techniques, including basic frames, baton technique, cueing, score reading and interpretation. Participation in weekly 45-minute Instrumental Performance Lab required. Note: A letter grade of B- must be attained in MUS 271 in order to count for graduation as a music education major.

**MUS 272 Choral Conducting (1 SH).** Choral conducting techniques, including cueing, score reading and interpretation, preparation and delivery of choral rehearsals and performances, with emphasis on organization and techniques of conducting choral groups. Introduction to survey of choral literature. Practice in score reading, rehearsal techniques and conducting performances. Prerequisite: MUS 271 with a minimum grade of B-. Note: A letter grade of B- must be attained in MUS 272 in order to count for graduation as a music education major.

**MUS 273 Instrumental Conducting (1 SH).** Instrumental conducting techniques, including cueing, score reading and interpretation, preparation and delivery of instrumental rehearsals and performances, with emphasis on organization and techniques of conducting instrumental groups. Practice in score reading, rehearsal techniques and conducting performances. Participation in weekly 45-minute Instrumental Performance Lab required. Prerequisite: MUS 271 with a minimum grade of B-. Co-requisite: must also register for MUS 600L. Note: A letter grade of B- must be attained in MUS 273 in order to count for graduation as a music education major.

**MUS 274 Advanced Conducting (1 SH).** Advanced techniques of conducting, including score reading, rehearsal techniques, etc. Both the musical and psychological roles of the conductor will be examined. Prerequisites: MUS 272 and 273.

**MUS 300-399 Private Lessons (1 or 2 SH).**

**MUS 397 Junior Recital (2 SH).** Students will write analyses of all pieces on recital, prepare program notes, prepare language translations (where appropriate), and pass a Recital Hearing by the faculty. Prerequisite: permission of program coordinator. Note: will count towards graduation for music performance majors only.

**MUS 401 Band (1 SH).** A marching band during the first half to two-thirds of the Fall Semester and a symphonic band during the remainder of the fall and all of the Spring Semester. The Marching Band performs both corps and traditional style half-time shows at all home and some away football games. The Symphonic Band performs a diverse and challenging repertoire in two concerts each year. Membership in the fully instrumented organization(s) is open to all students of the College. Students desiring partial Intellectual Perspectives (IP) credit in Visual & Performing Arts should register for MUS 401V. Prerequisites: audition and permission of the instructor.

**MUS 401V Band (VP) (1 SH).** Same as 401, except that students earn Intellectual Perspectives (IP) credit in Visual & Performing Arts after 4 semesters of 401V.

**MUS 402 Instrumental Jazz Ensemble (1 SH).** The Jazz Ensemble features improvisation solos by different students at each of several performances each year.



Membership in the fully instrumented organizations is open to all students of the College. This course does not fulfill the large ensemble requirement for music majors. Prerequisite: permission of the instructor.

**MUS 406 Percussion Ensemble (1 SH).** Opportunities for participation in percussion chamber ensembles (duets, trios, quartets, quintets, etc.), as student enrollment dictates. This course does not fulfill the large ensemble requirement for music majors. Prerequisite: permission of the instructor.

**MUS 407 Wind Ensemble (1 SH).** The Wind Ensemble is a select ensemble of approximately 35 woodwind, brass and percussion players, all of whom also play in the Symphonic Band. This ensemble, which is basically one on a part, is dedicated to performing the very best in modern Wind Ensemble literature. This course does not fulfill the large ensemble requirement for music majors. Prerequisite: permission of the instructor. Co-requisites: enrollment in MUS 401 or 401V and participation in Symphonic Band.

**MUS 407V Wind Ensemble (VP) (1 SH).** Same as 407, except that students earn Intellectual Perspectives (IP) credit in Visual & Performing Arts after 4 semesters of 407V.

**MUS 410 Chamber Music (1 SH).** Chamber ensembles such as Flute Choir, Saxophone Quartet, Horn Ensemble, Woodwind or Brass Ensembles, or mixed instrument groups may be formed by students and run under this course. Students will be coached by a faculty member and will rehearse independently. This course does not fulfill the large ensemble requirement for music majors. Prerequisite: permission of the program coordinator.

**MUS 421 Concert Choir (1 SH).** The Concert Choir sings traditional, contemporary, and ethnic choral pieces, as well as teaches musicianship and vocal education to its members. The choir participates in the College Vesper services, in the annual Christmas Vesper service, and presents several choral concerts through the year. The Concert Choir tours annually throughout part of the United States or Europe. Students desiring partial Intellectual Perspectives (IP) credit in Visual & Performing Arts should register for MUS 421V. Prerequisites: audition and permission of the instructor.

**MUS 421V Concert Choir (VP) (1 SH).** Same as 421, except that students earn Intellectual Perspectives (IP) credit in Visual & Performing Arts after 4 semesters of 421V. Students may accumulate 4 semester hours from the following courses, MUS 421V, MUS 423V and MUS 424V to meet the VP requirement.

**MUS 422 Chamber Singers (1 SH).** A select, mixed ensemble which sings small ensemble music such as madrigals, chansons, motets, vocal jazz, etc. Performances are both on and off campus. This course does not fulfill the large ensemble requirement for music majors. Prerequisites: audition and permission of the instructor.

**MUS 425 Opera Workshop (1 SH).** Study and performance of oratorio and/or opera scenes. Emphasis is on vocal production and acting. This course does not fulfill the large ensemble requirement for music majors. Prerequisites: audition and permission of the instructor.

**MUS 426 Musical (1 SH).** Study and performance of a selected musical, co-produced by the departments of music and theatre. Emphasis is on acting, speaking, staging, scenery, costuming, and singing. This course does not fulfill the large ensemble requirement for music majors. Prerequisites: audition and permission of the instructor.

**MUS 430 Westminster College Voices (1 SH).** Westminster College Voices is a

choral ensemble of men and women comprised of music and non-music majors that will essentially function as three vocal entities: an SATB chorus, a men's chorus, and a women's chorus. Repertoire will include selections for all three choral types that will perform Western art music, multicultural music, and popular music. The ensemble will participate in the College Vesper services, in the annual Christmas Vesper service, and in additional choral concerts throughout the year. Students desiring partial Intellectual Perspectives (IP) credit in Visual & Performing Arts should register for MUS 430V. Prerequisite: permission of the instructor.

**MUS 430V Westminster College Voices (VP) (1 SH).** Same as MUS 430, except that students earn Intellectual Perspectives (IP) credit in Visual & Performing Arts after four semesters of 430V. Students may accumulate four semester hours from MUS 421V and MUS 430V to meet the VP requirement. Prerequisite: permission of the instructor.

**MUS 441 Orchestra (1 SH).** A study of representative Baroque, Classical, Romantic, and Modern literature for chamber and symphony orchestra. Several performances are presented each year, one or more of which may utilize student soloists or choral organizations. The orchestra is open to all string players with the director's permission. Wind and brass musicians must audition. Students desiring partial Intellectual Perspectives (IP) credit in Visual & Performing Arts should register for MUS 441V. Prerequisite: audition and/or permission of the instructor.

**MUS 441V Orchestra (VP) (1 SH).** Same as 441, except that students earn Intellectual Perspectives (IP) credit in Visual & Performing Arts after four semesters of 441V.

**MUS 501, 502, 506, 507, 510, 521-526, 530, 541 (0 SH).** Zero-credit options for MUS 401, 402, 406, 407, 410, 421-426, 430, and 441 respectively. Prerequisites: permission of the instructor and program coordinator.

**MUS 590 Field Experience/Internship (1-4 SH).** May be taken in Music Theory, Music History, Music Performance, Music Composition, Music Literature, Sacred Music, Music Education, or in some aspect of the Music Business. May be repeated for credit. Prerequisite: permission of instructor.

**MUS 600 Music Colloquium (0 SH).** Required of all students taking private lessons on primary instruments or voice. Meets twice each week. Co-requisite: must also register for private lessons. Grading is S/U only. May be repeated.

**MUS 600P Instrumental Performance Practicum (0 SH).** For instrumental pedagogy and conducting classes, this lab meets once each week. Performance skills are cultivated. Note: The grade for MUS 600P will be incorporated into the grade of the appropriate pedagogy or conducting class. May be repeated.

**MUS 600M Master Class, Lab for Private Lessons (0 SH).** Meets once each week. Performance skills are cultivated. Students of like instruments or voice meet together to perform for and be critiqued publicly by a master teacher. Co-requisite: must also register for private lessons. Note: The grade for MUS 600M will be incorporated into the grade of the appropriate private lesson. May be repeated.

**MUS 601 Capstone Recital (4 SH).** Students will write a comprehensive capstone document, prepare program notes, prepare language translations (where appropriate), pass a Recital Hearing by the faculty, and perform a Capstone Recital. The Capstone Document will conform to Option A or Option B. Option A is a standard document that includes historical background, theoretical analysis, and a discussion of the interpretive challenges inherent in the recital material. Option B enables students to propose their own Capstone topic that is a deeper investigation into a topic in Music Education, Music Performance, Music Theory, Ethnomusicology,



the Psychology of Music, Original Composition, or some other recognized sub-discipline of Music. This topic must present original research or composition. Such a topic must be proposed to and approved by three members of the full-time faculty by a deadline set by the faculty in the semester prior to the semester in which the Capstone Document is written. Students performing Capstone Recital within three weeks of the end-of-semester jury will be exempt from performing the jury, except that they must perform their independently prepared piece for the jury. Prerequisite: permission of program coordinator.

**MUS 602 Capstone Lecture Recital (4 SH).** Students will prepare a portfolio, write a comprehensive capstone document that conforms to the course description in MUS 601, prepare program notes, prepare language translations (where appropriate), and pass a Lecture Recital Hearing by the faculty. Students performing Capstone Lecture Recital within three weeks of the end-of-semester jury will be exempt from performing the jury, except that they will must perform their independently prepared piece for the jury. Prerequisite: permission of instructor.

**MUS 620-624 Independent Study (1-4 SH).** May be taken in Music Theory, Music History, Music Performance, Music Composition, Music Literature, Sacred Music, or Music Education. Prerequisite: permission of instructor and program coordinator.

**MUS 660, 670, 680, 690 Honors Research (1-4 SH).**

## Neuroscience (NS)

**NS 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**NS 100 Research Experience in Neuroscience (1 SH).** This course aims to introduce students to basic processes in Neuroscience/Psychology research and help them become active and engaged members in the Neuroscience/Psychology community. You will participate in a broad Neuroscience/Psychology research project and become familiar with research ethics, laboratory techniques, basic scientific inquiry, the research process, and scientific communication.

**NS 300 Critical Thinking and Writing in Neuroscience (2 SH).** This course serves as a means for you to understand and contribute to scholarly work processes in the field of neuroscience/psychology. You will contribute to completion of a neuroscience/psychology project under the leadership of a peer mentor. You will also critically investigate the neuroscience literature surrounding an identified topic and complete a comprehensive written review using appropriate style and format, with a final presentation of that review to your peers.

**NS 341 Behavioral Neuroscience (SD) (4 SH).** Analysis of how nervous system activity underlies sensory, perceptual and higher cognitive activities including motivation, memory, language, thought, and mental illness. A laboratory is included. Prerequisite: PSY 101 or BIO 201. (Also listed as PSY 341 and BIO 433.) Meets Scientific Discovery Intellectual Perspective requirement (SD).

**NS 434 Neurobiology (4 SH).** This course is an exploration of advanced topics in the field of neurobiology, with the focus being the nervous system as the central control and integrating system in animals. It reviews fundamental neuroanatomy and neurophysiology, as well as more specific topics such as sensory systems, neuroendocrinology, and nervous system development and disease. Recent advances published in the field of neurobiology will also be discussed. The lab component will be complementary to material covered during lectures. Prerequisite: BIO 334 or consent of instructor. (Also listed as BIO 434.)

**NS 590 Field Experience/Internship (1-4 SH).** An opportunity for students to work in a research or applied setting. Regular contact with the Westminster College internship instructor is required. A reading list developed prior to actual internship activities, a journal and a paper integrating the readings, internship experience and other college course work are also required. Prerequisite: junior level standing.

**NS 600 Senior Neuroscience Scholarship Experience (4 SH).** This course serves as a means for you to contribute novel scholarly work to the field of neuroscience through leadership of a team engaged in work on a designated topic. This work may include empirical research, written contributions, analysis of data relevant to new information, development of new research methodology, outreach, or educational research projects, and more.

**NS 650 Research Scholars (1-4 SH).** The research scholars program is for those exceptional students who choose to do a more extensive, three-semester capstone research project in neuroscience. Students eligible for this program must have a 3.5 GPA overall, a 3.5 GPA in neuroscience courses, have taken at least three psychology courses, obtained a letter of reference from a faculty member, and must submit a writing sample to the chair of the psychology department. Students accepted into the program begin their projects in the spring of their junior year and defend a thesis in the spring of their senior year.

**NS 662 Honors Senior Neuroscience Research (4 SH).** Students in the All-College Honors Program register for NS 662. Students must have a 3.5 GPA in three or more classes in neuroscience to begin honors research.

## Nursing (NURS)

*These courses are for Nursing Major students who have been accepted to the UPMC School of Nursing at Jameson only. The 100 through 300 level Nursing courses are provided on-site at the UPMC School of Nursing at Jameson in New Castle, Pennsylvania.*

**NURS 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**NURS 101 Professional Concepts of Nursing (3 SH).** This course introduces the student to the role of the professional nurse. The concepts of communication, clinical decision making, professionalism and patient education are explored. In addition, the holistic aspects of patient care such as culture, spirituality, legal and ethical issues will be discussed. Tanner's clinical judgment model will provide the framework for the student's development of clinical judgment and decision making.

**NURS 102 Foundational Concepts of Nursing (9 SH).** This course introduces the student to the foundational concepts of nursing practice across the lifespan. Basic care and comfort is explored through the concepts of nutrition, elimination, safety, mobility and sensory perception. Physical assessment is a major component of this course. The promotion of health and wellness is an underlying theme carried throughout the course. The student is introduced to basic foundational skills of nursing practice, including medication administration, through both the clinical and lab settings. Students engage in clinical experiences in inpatient medical-surgical units.

**NURS 201 Physiological Concepts of Nursing (10 SH).** This course introduces the student to the physiological concepts of nursing practice across the lifespan. The fundamental aspects of oxygenation, perfusion, acid-based balance, fluid and electrolytes infection, immunity, inflammation, digestion, and metabolism are explored. Through the integration of the nursing concepts, along with Tanner's clinical judgment model, the student begins to respond to identified client problems in the clinical setting. Students engage in clinical experiences in acute medical-surgical units.

**NURS 301 Complex Individual and Family (11 SH).** This course introduces the student to complex individual and family concepts of nursing practice. The course explores dynamic concepts across the lifespan. Family dynamics, reproduction and growth and development alterations are a major focus of the course. Concepts of mental health nursing are explored as they relate to the individual and the overall impact on the family. Through the integration of nursing concepts, along with Tanner's clinical judgement model, the student focuses on assisting the individual and family to adjust to health alteration across the lifespan. Students engage in various clinical experiences in the areas of pediatric, obstetric, geriatric and behavioral health.

**NURS 320 Advanced Nursing Concepts (8 SH).** This course introduces the student to advanced concepts of nursing practice. The course builds and expands on the concepts of oxygenation, perfusion, metabolism, and infection that were previously introduced in Nursing 201. In addition, the advanced concepts of cellular regulation, intracranial regulation and alterations in tissue integrity are explored. Through the integration of nursing concepts, along with Tanner's clinical judgement model, the student engages in advanced clinical decision making in high acuity environments. Students in various clinical experiences that take place in stepdown units, critical care units and emergency departments.

**NURS 340 Transition Into Nursing Practice (6 SH).** This course serves as the student's transition into the role of professional nursing practice. Leadership and management concepts are applied with an emphasis on safety and quality nursing care. Clinical is conducted through a preceptor experience where the student is given the opportunity to manage, delegate and prioritize care for multiple clients.

**NURS 360 NCLEX Prep Course (2 SH).** This course provides the students with NCLEX preparation through content reviews and test taking strategies.

**NURS 401 Community and Public Health Nursing (4SH).** This course covers contemporary evidence-based practices of professional nursing care for the improvement of individual, family, community and global health. The Registered Nurse will use critical thinking strategies to explore complex nursing situations outside of an institutional or acute-care setting. The course will expand the student's knowledge of determinants of health, primary health care, public health nursing roles and activities, and health care settings within a community. Topics covered include ethics, transcultural care, epidemiology, environmental health, public health, disaster preparedness, and care of a person in the community with developmental needs. Note: Active Licensure as a Registered Nurse (RN) is required for 400-level Nursing courses.

**NURS 402 Nursing Research for Evidence Based Practice (4 SH).** This course is an introduction to the concepts of research in Nursing and the use of evidence-based practices in clinical settings. Students in this course will become well-read consumers of research and critical evaluators of research findings in order to assess relevancy to contemporary healthcare issues. Topics covered include identifying a clinical practice problem or issue, appraising research, developing a research question, exploring research methodologies and completing a literature review. Note: Active Licensure as a Registered Nurse (RN) is required for 400-level Nursing courses.

**NURS 403 Advanced Health Assessment (4 SH).** This course builds upon basic physical assessment skills acquired in a pre-licensure program to provide a progressive, modern approach to health assessment of a child, adult, older adult and special populations. The Nursing Process, Quality and Safety Education for Nurses (QSEN) and Patricia Benner's Novice to Expert research provide a framework for devel-

opment of critical thinking in practice. Topics covered in this course include the health history, general and regional examinations by body systems and application of advanced assessment to pregnant women, infants, adolescents and older adults. Note: Active Licensure as a Registered Nurse (RN) is required for 400-level Nursing courses.

**NURS 404 Nursing Care of Vulnerable Populations (4 SH).** This course is designed to enhance the nurse's understanding of cultural competence, social injustice, and health literacy in relation to caring for patients and families within vulnerable populations. The course also includes current research on health policy, ethics, and the care of immigrants. Note: Active Licensure as a Registered Nurse (RN) is required for 400-level Nursing courses.

**NURS 405 Nursing Leadership (4 SH).** This course provides nurses with the leadership skill set required to become effective leaders in a rapidly changing healthcare environment. This course clarifies the differences between leaders and managers. The textbook, activities, and assignments contribute to the continued development of the professional nursing role. Topics covered in the course include managing change, conflict resolution, ethical decision making, healthcare policies and initiatives, delegation, and accountability. Note: Active Licensure as a Registered Nurse (RN) is required for 400-level Nursing courses.

**NURS 406 Nursing Capstone (3 SH).** This is a project based course utilizing concepts learned from the liberal arts curriculum which include; writing, oral communication, language, science-based knowledge (both physical and social sciences), mathematics, biomedical ethics, culture, and humanity as well as nursing knowledge gained in the completion of the 100 through 400 level nursing courses. In particular, this course requires the nurse to employ research strategies in exploring a clinical based healthcare "problem", completing a literature review, designing a project to measure or study the problem, and outlining a plan to disseminate information to key stakeholders. A model of continuous Quality Improvement (QI) is emphasized in this course. Note: Active Licensure as a Registered Nurse (RN) is required for 400-level Nursing courses.

## Peace Studies (PAX)

**PAX 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**PAX 101 Introduction Peace Studies (4 SH).** This course will introduce the beginning student to the concept of peacemaking as it relates to a liberal arts education. It will explore the reasons for violence and conflict, from personal to international, and will explore historically and multiculturally the many ways societies have found peaceful alternatives. The relationship between peace and justice will be an important theme.

**PAX 301 Advanced Peace Studies Seminar (4 SH).** This seminar course is an experientially based, hands-on exploration of ways to work through conflict and to create conditions of sustainable peace. This seminar will incorporate service learning and civic engagement at the local, national, or international level. Prerequisite: PAX 101 or permission of the instructor.

## Philosophy (PHI)

**PHI 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**PHI 101 Problems of Philosophy (RP) (4 SH).** This course will explore various themes introducing the student to the whole discipline of philosophy, the history of Western philosophy from the pre-Socratics to the contemporary thinkers, and some

of the divisions of philosophical thought such as epistemology, ontology, and ethics. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**PHI 102 Practical Logic (RP) (4 SH).** A systematic introduction to critical thinking. This study of the methods and principles for the evaluation of argument includes formal techniques for reasoning that provides conclusive grounds for the truth of its conclusions. Both traditional (Aristotelian) and modern (Boolean) logic are considered, as is informal logic. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**PHI 135 Ancient Greek Justice (RP) (2 SH).** This course will be an examination of the philosophical ideas of justice that surfaced in the Golden Age of Greece and will include a travel-abroad component. The emphasis will be on the early establishment of a “people’s court” in which a jury of citizens stands judicial watch, continuing through the development of the Athenian judicial system that tried, convicted, and sentenced Socrates. Focus will be on differentiating the two types of justice that surfaced (shame and guilt), with a view towards understanding the impact that the Socratic idea of justice had on the development of Western culture. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**PHI 200–209 The History of Philosophy (4 SH).** Studies of the various historical periods of philosophy, such as the Ancient, Medieval, and Modern periods, and studies of the thought characteristic of particular centuries, such as the 19th and 20th centuries. More than one course in this sequence may be taken for credit, as long as each course has a different number, indicating different content.

**PHI 200 Ancient/Medieval Philosophy (RP) (4 SH).** A study of the conceptual history that is Western philosophical thought, starting with its surge within the ancient Greek Ionian civilization (approximately 600 B.C.) and continuing until the end of the Medieval period (around 1400 A.D.). Emphasis will be placed on reading primary sources, in English translation, as a vehicle to understanding first the philosophical method itself; secondly, the philosophical problems that have defined Western philosophy; and thirdly, the developmental nature of philosophical thought. Authors to be discussed may include: the Pre-Socratics, Socrates, Plato, Aristotle, Augustine, Aquinas, Abelard, Maimonides, Avicenna, Averroes, and others. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**PHI 202 Foundations Modern Philosophy (RP) (4 SH).** An examination of the philosophical period that began with the philosophy of Rene Descartes, whose impact led to a redirecting of intellectual efforts and still reverberates today. Beginning with his attack on the epistemological methodologies of his contemporaries, this course will trace the impact that Cartesian philosophy had on his contemporaries and the philosophical responses that followed. Included will be an examination of the primary epistemological divisions of the time (rationalism and empiricism), as expressed by the key philosophers of the time period (Descartes, Leibniz, Spinoza, Locke, Berkeley, and Hume), as well as a look at the culminating transitional figure who closes the period (Immanuel Kant). Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**PHI 206 19th & 20th Century Philosophy (4 SH).** This course will be an examination of a single, influential philosophical movement that occupied the 19th and 20th centuries: phenomenology. Following a brief historical sketch of Western philosophy, emphasizing the major philosophical positions and the development that defines Continental philosophy, the course will examine the turn that philosophy takes with Descartes, and then follow the major influences in this branch of Continental philosophy, with emphasis on figures such as Husserl, Heidegger, Sartre,

Merleau-Ponty, Beauvoir, and Derrida.

**PHI 210–229 Topics in Philosophy (4 SH).** Philosophical studies of various specific topics, such as philosophy of science, of religion, of the mind, etc. More than one course in this sequence may be taken for credit, as long as each course has a different number, indicating different content.

**PHI 212 Philosophy of Science (RP) (4 SH).** An introduction to critical thinking as approached through philosophical problems concerning science. What is science? What is theory? How are theories verified or confirmed? The course includes inductive reasoning, the history and logic of scientific discovery, and how society and human perspectives affect scientific claims. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**PHI 218 Philosophy of Mind (RP) (4 SH).** The philosophy of mind is one of the most rapidly developing and vigorous areas in contemporary philosophy. New techniques in neuroscientific imaging are providing a steady flow of data requiring philosophical analysis and interpretation. Guided reading will be supplemented by historical primary sources and articles on neuropsychology. Since it is highly desirable that both philosophy majors and students of neuropsychology be given the opportunity to study philosophy of mind, this course will normally be offered as part of a cluster with PSY 262: Neuropsychology of Mind. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**PHI 222 Philosophy of Religion (RP) (4 SH).** Philosophical studies of various specific topics, such as philosophy of science, of religion, of the mind, etc. More than one course in this sequence may be taken for credit, as long as each course has a different number, indicating different content. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**PHI 230–259 Practical Ethics (4 SH).** Studies in the application of moral philosophy to ethical questions raised by the practical issues of our time. Individual courses will focus on the application of developed moral theories (such as virtue ethics, utilitarianism, or an ethics of duty) to specific areas of inquiry, such as business, the environment, genetic engineering, and medicine. More than one course in this sequence may be taken for credit, as long as each course has a different number, indicating different content.

**PHI 230 Environmental Ethics (RP) (4 SH).** Beginning with an examination of the nature of ethics in general, this course will explore a variety of theoretical positions on subjects such as the philosophy of nature, animal rights, deep ecology, eco-feminism, and global justice. One guiding theme will be the difference between the “anthropocentric” and an “eco-centric” attitude. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**PHI 240 Biomedical Ethics (RP) (4 SH).** This course will deal with fundamental moral issues that surface in regard to the medical community and to practices therein, beginning with an examination of the theoretical foundation for making moral choices. Initial focus will be on the divergent religious and philosophical positions that have been put forward to justify medical moral choices. Included will be an examination of both consequentialist and non-consequentialist positions, including Divine Command Theory, Utilitarianism, Kant’s categorical position, Buddhist compassion, and others. Once students are grounded in these differing theoretical perspectives, we will examine specific issues from alternative perspectives, giving students an opportunity to compare and contrast divergent positions. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**PHI 250 Business Ethics (RP) (4 SH).** This course will be a study of the ethical



issues and problems that surface in our contemporary business environment. We will begin with an examination of the theoretical grounds upon which more decision making is based, looking at human conduct in relationship to what we ought to do. From this theoretical foundation, we will proceed to examine concrete ethical business practices, using case studies as a means to grasp the ethical issues of conducting modern business. Possible topics include corporate responsibilities (to shareholders, to the general population, and to the environment), product safety and liability, sexual harassment in the workplace, distribution of wealth. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**PHI 401–410 Advanced Topics in Philosophy (4 SH).** A thorough investigation of restricted areas of study in philosophy. One philosopher, one area, one idea or term, or one branch of philosophy will be selected and explored in detail. Different areas of content will receive different course numbers and a student may take more than one 400-level course as long as they have different numbers, indicating different content.

**PHI 590 Field Experience/Internship (1-4 SH).** Prerequisite: consent of the instructor and the program coordinator.

**PHI 601 Philosophy Capstone (4 SH).** The capstone in philosophy will prepare majors for the challenges of doing philosophy in multiple fields (including not just the profession but also in civic engagement with other professions). Under the guidance of their adviser, senior students will produce a polished research project on a selected topic, using an appropriate style and format. Students will attempt to make available the results of this research in a suitable manner, such as a journal publication, a conference presentation or poster, etc. This course is required of all senior philosophy majors who are not doing an Honors Project in philosophy.

**PHI 620-624 Independent Study (1-4 SH).** Advanced study under guidance of a staff member in a special area selected by the student. Prerequisites: four relevant courses in philosophy and approval of the program coordinator.

**PHI 660, 670, 680, 690 All-College Honors Program (1-4 SH).** Note: Philosophy majors enrolled in the All-College Honors Program will fulfill all the requirements of the Philosophy Capstone (PHI 601).

## Physical Education (PE)

**PE 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**PE 114 Folk Dance (1 SH).** This course is designed to acquaint students with folk dance forms of the world, including American, European, Asian, African, and Middle Eastern dance. Locomotor and non-locomotor movement, as well as rhythmic and stylistic components of dance steps, will be explored. The student will gain insight and knowledge of dance as it relates to ones' own personal well-being and life experiences, as well as the relationship of dance to contemporary society and the world in general.

**PE 115 Kickboxing Aerobics (1 SH).** This course will increase cardiovascular endurance and muscle tone through Tae-Bo style aerobic kickboxing. Tae-Bo blends martial art skills, dance and boxing to create a workout that is designed to build strength while burning calories.

**PE 116 Fitness (1 SH).** This course will develop an awareness of the importance and value of physical fitness in everyday life. Various fitness activities and strength training exercises will be introduced. Nutrition and the importance of frequent exercise will also be discussed.

**PE 130 Bowling (1 SH).** This course will provide students with the knowledge of the rules, basic bowling fundamentals, scoring, and the various techniques used in the different approaches, deliveries, and on how to use and control the bowling ball.

**PE 176 Golf (1 SH).** This course will provide students with a basic knowledge and understanding of the rules, regulations, etiquette, basic fundamentals and strategies of the game of golf.

**PE 201 Beginning Swimming (1 SH).** This course is designed for the non-swimmer who has little to no basic swimming skills and/or for those who may have a fear of the water.

**PE 202 Swimming Level II (1 SH).** This course is designed for the beginner swimmer who already has the basic skills of floating, treading water, front crawl, and who has no fear of the water. These skills will be built upon and more advanced skills will be taught.

**PE 204 Lifeguard Training (1 SH).** This course will allow students the opportunity to earn American Red Cross Certification for Lifeguard Training in a swimming pool. Included are certifications in American Red Cross CPR for the Professional Rescuer/AED and First Aid. Students will be challenged to improve skill sets needed to make appropriate decisions about the care to provide in an aquatic and medical emergency.

**PE 206 Aquatic Fitness (1 SH).** This course is designed for the advanced swimmer who already has the basic skills of all four competitive strokes, and who has no fear of the water. These skills will be built upon and more advanced skills will be taught.

**PE 207 Aquatic Games (1 SH).** This course is designed for students with all levels of swimming ability, who want to participate in various games that will be played in the aquatic environment.

**PE 215 Scuba (1 SH).** Open Water Diver Course is designed to certify the student for a safe and enjoyable participation in the sport of SCUBA diving. Learning about the equipment, diving theory and procedures will take place in the classroom. Practicing skills for snorkeling and diving, as well as physical conditioning will take place in the pool.

**PE 220 Ice Skating (1 SH).** This course follows the USFS Basic Skills Adult curriculum. Students learn the basic skills of ice skating and will progress on an individual basis.

**PE 221 Badminton (1 SH).** This course will provide students with the knowledge of the rules, basic shot skills, and fundamental strategies involved in the game of badminton including both singles and doubles.

**PE 223 Beginning Racquetball (1 SH).** The goal of this course is to provide the student with enough knowledge and skill to enjoy playing racquetball at the recreational level. Stroke fundamentals, serves, and the rules of the game (singles, doubles and cutthroat) will be taught.

**PE 229 Canoeing (1 SH).** This course is designed to provide the basic knowledge and feel for small watercraft. The basic power and steering strokes and general balance needed in a canoe will be taught, along with how to port, power, steer (J-stroke, L-stroke, and rudder), change positions in the water, and race.

**PE 238 Tennis (1 SH).** This course is designed to provide students with a basic knowledge and understanding of the rules, regulations, etiquette, basic fundamentals and strategies of the game of tennis through lecture and demonstration, video,



and practice activities. Students will be grouped according to skill level, when possible, for practice and competition.

**PE 240 Volleyball (1 SH).** This course is designed to develop/teach basic skills and knowledge in the game of volleyball. Students will learn fundamental skills and rules in order to enhance their knowledge, performance, and understanding for the game of volleyball.

**PE 243 Karate (1 SH).** This course will introduce the student to the basics of an Okinawan Karate, Shorin-ryu. This will include beginning techniques such as basic blocks, strikes and kicks, as well as traditional combinations used for defense. Classes will consist of a short exercise period, followed by instruction in Shorin-ryu.

**PE 245 Pickle-ball (1 SH).** This course is designed to provide students with a basic knowledge and understanding of the rules, regulations, basic fundamentals and strategies of the court game of pickle-ball. Students will be introduced to the rules, regulations, basic fundamentals and strategies of pickle-ball through demonstration and practice activities. Students will be grouped according to skill level, when possible, for practice and singles and doubles competition.

**PE 255 CPR/AED (1 SH).** This course will provide the knowledge and skills necessary to help sustain life and minimize the consequences or injury or sudden illness until advanced medical help arrives. After taking this course, one will receive American Red Cross certification in adult, child, and infant CPR/AED and First Aid.

**PE 281 Indoor Rock Climbing (1 SH).** This course is designed to help students learn the fundamentals of indoor rock climbing principles, become familiar with safety concerns, equipment and techniques of belaying and lowering climbers to safety and to learn how to use the indoor rock climbing wall creatively and holistically.

## Physical Education (PED)

**PED 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**PED 301 Early Childhood Movement (1 SH).** This course introduces the student to the factors influencing the changes in the development and learning of motor skills from infancy – Grade 4. Practical laboratory activities are utilized to illustrate basic concepts of motor development and motor learning.

**PED 302 Adapted Physical Education (1 SH).** This course is designed to provide perspectives for teachers and special educators in the field of physical education. The student will gain an understanding of working in an adapted physical education setting. The student will learn to facilitate and enable learning in the least restrictive environment.

## Physics (PHY)

**PHY 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**PHY 141 Foundations Physics I (SD) (4 SH).** The first semester of an introductory study of physics (mechanics, heat, electricity, magnetism, waves, light and modern physics) without calculus. Basic principles used in both semesters are introduced in the first semester. Some emphasis will be given to applications of physics to biological systems. A laboratory is included. Prerequisite: a good background in high school mathematics including algebra and trigonometry. Offered Fall Semester. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**PHY 142 Foundations Physics II (4 SH).** The second semester of an introductory

ry study of physics (mechanics, heat, electricity, magnetism, waves, light and modern physics) without calculus. Some emphasis will be given to applications of physics to biological systems. A laboratory is included. Prerequisite: PHY 141 or PHY 151. Offered Spring Semester.

**PHY 151 Principles Physics I (SD) (4 SH).** The first semester of an introductory study of physics (mechanics, heat, electricity, magnetism, waves, light and modern physics). Basic principles used in both semesters are introduced in the first semester. Some basic concepts of calculus may be introduced as needed. A laboratory is included. Co-requisite: MTH 150 or higher. Offered Fall Semester. Meets Scientific Discovery Intellectual Perspective requirement (SD).

**PHY 152 Principles Physics II (4 SH).** The second semester of an introductory study of physics (mechanics, heat, electricity, magnetism, waves, light and modern physics). Calculus methods will be used. A laboratory is included. Prerequisite: PHY 151; Co-requisite: MTH 152 or higher. Offered Spring Semester.

**PHY 311 Thermal Physics (4 SH).** A study of the behavior of systems containing large numbers of particles. The course emphasizes the analysis of model systems using statistical mechanics. From that analysis, the thermodynamic behavior of real systems can be understood. Prerequisite: PHY 152; Co-requisite: MTH 250. Offered Fall Semester, alternate years.

**PHY 313 Modern Physics (4 SH).** Modern Physics offers a broad introduction to the major developments in physics in the 20th century. Topics covered include special relativity, wave-particle duality, quantum mechanics, statistical mechanics, solid state physics, nuclear physics, elementary particle physics, and other specialized topics. Prerequisite: PHY 152. Offered Fall Semester, alternate years.

**PHY 321 Experimental Physics I (2 SH).** Experiments from many fields such as optics, nuclear, and atomic physics. Fundamental experimental techniques will be introduced. Computer automation methods are emphasized. Prerequisite: PHY 152. Offered Fall/Spring semesters, alternate years.

**PHY 322 Experimental Physics II (2 SH).** Experiments from many fields such as optics, nuclear, and atomic physics. Fundamental experimental techniques will be introduced. Computer automation methods are emphasized. Prerequisite: PHY 152. Offered Fall/Spring semesters, alternate years.

**PHY 331 Computational Physics I (2 SH).** This course will stress the application of mathematics to physical processes. The emphasis will be on analytical approaches to problem solving. The topics discussed include: series expansions, complex numbers, linear algebra, partial derivatives, multiple integrals, vector analysis, Fourier series, ordinary differential equations, partial differential equations, special functions, and probability. Prerequisite: PHY 152; Co-requisite: MTH 250. Offered Fall Semester, alternate years.

**PHY 332 Computational Physics II (2 SH).** As not every problem of interest can be solved analytically, Computational Physics 2 will stress a numerical approach to analyzing physical processes. The topics discussed in this course include translating analytical expressions into expressions that can be calculated by a computer, representing the data from numerical calculations in meaningful ways, finding numerical solutions to physically relevant ordinary differential equations (ODEs) and partial differential equations (PDEs), and simulating random processes. Prerequisite: PHY 331. Offered Spring Semester, alternate years.

**PHY 351 Mechanics (4 SH).** Physics 151 provided students an introduction to mechanics using the formalism of either Newton's laws or one of the conservation laws (momentum and energy). This course will deepen the sophistication with

which students approach mechanics. Some of this will come from learning to apply mathematical tools such as series expansion, vector calculus, differential equations, symbolic solvers, and numerical integration while solving problems. This sophistication will also come from analyzing motion when an observer's frame of reference is accelerating (non-inertial reference frames) and the motion of rotating objects. A student in this course will master an entirely different formulation of mechanics, one that will generalize into the framework for understanding quantum mechanics (Lagrangian and Hamiltonian mechanics). Prerequisite: PHY 152; Co-requisite: MTH 250. Offered Spring Semester, alternate years.

**PHY 352 Electromagnetic Theory (4 SH).** A study of the foundations of classical electromagnetic theory, including electric and magnetic fields, potential theory, Maxwell's equations, and electromagnetic waves. Vector methods are used extensively. Prerequisites: PHY 152, MTH 250. Offered Spring Semester, alternate years.

**PHY 401 Quantum Mechanics (4 SH).** The theory of quantum mechanics is discussed and studied in detail. Applications are made primarily to atomic structure. Prerequisite: PHY 313. Offered Fall Semester, alternate years.

**PHY 402 Astrophysics (4 SH).** Astrophysics is an all-purpose overview of astronomy and cosmology at a quantitative level accessible to the junior or senior undergraduate science major. The student will be introduced to advanced topics at the forefront of current research. This may include extrasolar planets and low-mass stars, the interstellar medium, galactic evolution, gravitational waves, and the expansion of the universe. In preparation for these advanced topics, introductory and intermediate astrophysical foundations will also be established. This may include the study of celestial coordinate systems, planetary mechanics and geology, radiative processes, stellar structure and evolution, and general relativity. Prerequisites: PHY 142 or PHY 152; MTH 152; and junior or senior standing. Also listed as AST 402. Offered Fall Semester, alternate years.

**PHY 590 Field Experience/Internship (1-4 SH).**

**PHY 601 Physics Capstone I (2 SH).** A study of selected topics or problems that require the integration of previous physics and related experiences. The seminar will involve individual and/or group work culminating in an appropriate presentation. Additionally, each student will do preliminary background research to develop a proposal for his/her senior capstone project. Offered Fall Semester.

**PHY 602 Physics Capstone II (2 SH).** A focused student project which has been approved by the physics faculty. The project culminates in written and oral presentations. Offered Spring Semester.

**PHY 610, 611 Advanced Topics (4 SH).** Interests of students are considered in selecting particular topics. Prerequisite: consent of instructor. Offered on demand.

**PHY 620-624 Independent Study (1-4 SH).**

**PHY 660, 670, 680, 690 Honors Project (1-4 SH).**

## Political Science (PS)

**PS 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**PS 101 Introduction to Politics (ST) (4 SH).** An introduction to the discipline of political science. The aim of the course is to introduce students to the scope and nature of political science, the fundamental problems of political life in the contemporary world, and the main types of political systems around the world. Special attention is paid to the challenges facing democracy as a political system in the coming decades. Meets Social Thought and Tradition Intellectual Perspective requirement

(ST).

**PS 102 Introduction to American Politics (ST) (4 SH).** A critical introduction to the institutions, processes, powers, and limitations of the American national government. Special attention is given to an examination of the role of the citizen in American government and to the nature of democracy in America. Proposals for the reform of American government are also examined. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**PS 103 Introduction to Political Philosophy (RP) (4 SH).** An introductory examination of several of the basic problems of political life. The issues considered include the nature and function of order, authority, law, justice, freedom, equality and progress. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**PS 104 Introduction to International Relations (ST) (4 SH).** A study of politics among states and other actors who affect global relations. Once establishing a background in the concepts used to analyze world politics, students will use these concepts to explore the Cold War era, the end of that system, and several pertinent international issues in the areas of security, economics, and the environment. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**PS 204 Model United Nations (1 SH).** This course prepares students to participate in a simulation that utilizes the basic structural tenets and procedural framework of the United Nations. Students develop familiarity with parliamentary procedures and a working knowledge of the national interests of member states. Students either attend a national Model United Nations conference or serve as conference staff for the Westminster College Model United Nations high school conference. Delegates work as diplomats, representing various countries and working towards solutions to various international problems. Conference staff members prepare a simulation experience and host committee sessions for area high school students. This course may be repeated for up to a total of four semester hours.

**PS 211 State and Local Government (4 SH).** A study of the American experience in state and local government, analytically oriented, with the objective of explaining political processes at the sub-national level. Attention is given to a description of basic institutions, to an analysis of state and municipal politics in a comparative perspective, and to salient policy questions.

**PS 212 The Congress (4 SH).** A study of the development and functioning of Congress and the legislative process. The course focuses on Congress' role in policy making, with special attention given to the history, institutions, powers, and duties of Congress, and to the roles played by the committees and leadership of both Houses. The relationships of Congress to parties, interest groups, and other branches of government also are examined.

**PS 213 The Presidency (4 SH).** A survey of the development, roles, duties, powers, and limitations of the President and his chief advisers. The course focuses on such topics as the President and the Constitution, Presidential elections, the structure of the Presidency, and the President's relations with Congress, the bureaucracy, and the American people. Special attention is given to the impact of the President on both domestic and foreign policy and to recent attempts to reform the Presidency.

**PS 214 The Courts (ST) (4 SH).** This course covers a variety of topics relating to the politics of the American judicial system. Topics include: the structure and function of the state and national courts, the causes and consequences of civil litigation, the methods used to select judges, the politics of the bar, political litigation by

interest groups, the historical development of judicial power and the controversies surrounding it, the factors that influence judicial decisions, and the relationship between the courts, the public and other branches of government. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**PS 215 Politics of Rock and Roll (4 SH).** This course examines the relationship between one of the most powerful forces of the 20th and 21st centuries – rock and roll music – and the political realm. The course focuses on the development of rock and roll in the post-war environment as well as the role the music played in the political and social tumult of the 1960s. Finally, attention is given to the interconnections between the music and the socio-political culture of the succeeding decades. Some of the artists covered include: Elvis Presley, Chuck Berry, The Beatles, Bob Dylan, The Rolling Stones, Jimi Hendrix, Janis Joplin, Aretha Franklin, Stevie Wonder, Bruce Springsteen, and Michael Jackson.

**PS 221 American Political Thought (4 SH).** An examination of American political theory from the origin of this country to the present, with emphasis on the development of liberalism, conservatism, and radicalism within the American tradition.

**PS 222 Political Ideologies (RP) (4 SH).** Over the last two centuries, an unprecedented number of political dreamers have emerged to question social and political arrangements. Often they have dared to imagine they could craft perfect societies. Students will compare the ways that different belief systems have addressed fundamental concepts like freedom, justice, equality and human nature, as they explore the political belief systems (including liberalism, conservatism, feminism, socialism, anarchism, fascism and environmentalism) that have captured peoples' imaginations and stirred them to action. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**PS 232 European Politics (4 SH).** A comparative study of the political systems and current challenges facing selected European powers. The patterns of political culture, political interests, political power, and public policy are analyzed. In addition, the project of European integration (the European Union) will be studied, and its current and future relations with the United States investigated.

**PS 233 Politics in Developing Countries (4 SH).** Selected countries from the Third World will be studied to analyze the politics of change in the developing countries as they face the complex world of the international system. In particular, these issues will be studied: political instability; money management, inflation, and foreign debt; population pressures on limited resources; ethnic problems contributing to city, rural and regional frictions; asymmetrical economic development; and foreign policy issues relating to trade and diplomacy with industrialized countries of the world.

**PS 235 African Politics (4 SH).** A study of the interaction between politics and social structures in Africa. Topics will include political organization in pre-modern Africa, the development and impact of slavery, the operations and impact of European colonialism, the struggle for independence, the nature of the African state, the operation of democratic and authoritarian governments, the role of women, and the effects of AIDS.

**PS 236 Russian Politics (ST) (4 SH).** This course introduces students to important issues in contemporary Russian politics including the development of its political, economic and social institutions. Students will examine the historical development of Russia's governing institutions; compare the Russian Federation to other post-Soviet republics, and consider Russia's regional and global significance. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**PS 241 Public Policy (ST) (4 SH).** An introduction to theories of policy making, policy implementation, and policy evaluation with particular attention to their applications to the American political system. An overview of policy in areas such as education, transportation, civil rights, welfare, agriculture, and defense is also provided. Special attention is given to the discussion of improving public policies. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**PS 242 Environmental Policy & Politics (4 SH).** This course explores “the environment” as a focus of public policy, an issue in political debate, and a basis for thinking about the purposes of political life. It reviews some of the classic readings in environmentalism, considers domestic and international policy approaches to major issues such as climate change, clean air and water, and sustainable development, and explores the ways in which thinking “environmentally” challenges our standard assumptions about policy-making and political life. Prerequisite: PS 101 or consent of instructor.

**PS 251, 252, 253, 254, 255 Political Science Seminars (4 SH).** Work in selected areas. These areas include PS 251 Seminar in Politics and Behavior; PS 252 Seminar in American Politics; PS 253 Seminar in Political Philosophy; PS 254 Seminar in Comparative Politics; PS 255 Seminar in International Politics. Special topics related to the selected area to be offered are announced prior to each registration period.

**PS 301 Junior Seminar: Research Design and Analysis in Political Science (4 SH).** An introduction to the various approaches to and challenges of research design and analysis in the discipline of political science. The goal is for each student to design a research project which will then be pursued in the Senior Capstone course. This course must be taken in the spring of the junior year. Prerequisites: PS 101, 102, 103, 104 and junior standing.

**PS 302 Seminar: Mock Convention I (2 SH).** Seminar to be held in the Spring term before Westminster’s Mock Convention. Students will learn about the role of National Nominating Conventions in the American political system. Planning will begin for Westminster’s Mock Convention to be held in the fall of the following academic year.

**PS 303 Seminar: Mock Convention II (2 SH).** Seminar to be held in the same term as Westminster’s Mock Convention. Students will continue to plan, prepare and execute the convention. Students will gain experience in all aspects of the process: credentials, public relations, platform, etc.

**PS 311 Campaigns and Elections (4 SH).** An examination of the processes by which Americans and their government are linked. Special attention is given to the study of the structures and functions of political parties and interest groups. Attention is also given to the role of the individual citizen, public opinion and elections in the linkage process. Problems in citizen-government linkage in the United States and proposals for reform are emphasized.

**PS 321 American Constitutional Law: Government Powers (4 SH).** An examination of the U.S. Supreme Court as an agency of judicial decision making within the framework of the American political system. The Supreme Court is studied within its political, historical, and constitutional framework, where it seeks to protect or expand its own powers as it is called upon to clarify social values as it interprets the major clauses of the U.S. Constitution.

**PS 322 American Constitution Law: Civil Rights and Liberties (4 SH).** An examination of the role of the Supreme Court, judicial review, and political struggle in shaping the evolution of the Constitutional framework of American politics. This course focuses on judicial review and the role of the Supreme Court in articulat-



ing and defending the civil rights and liberties of American citizens, through the interpretation and application of the Bill of Rights and the Fourteenth Amendment. Particular focus will be placed on the issues of freedom of speech and expression, the relationships between church and state, the right of privacy, and the constitutional guarantees of equal protection before the law.

**PS 323 Modern Political Philosophy (4 SH).** A study of normative values, as related to government and politics, utilizing the writings of the great political thinkers of the West from Machiavelli to the present.

**PS 331 Geopolitics (4 SH).** This course reviews traditional understanding of geopolitics, but moves beyond examining how geography impacts the projection of military power; addressing broader issues regarding the relationship between territory and international conflict. Particular attention will be paid to how nationalism and globalization have transformed the relationship between geography and war. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**PS 332 U.S. Foreign Policy (4 SH).** An exploration of the actors, institutions, and processes that shape the making of contemporary U.S. foreign policy. The course begins with an overview of Cold War foreign policy, and then focuses on the challenges facing American policy in the post-Cold War era. Special attention is given to the continuities and changes in the political processes through which foreign policy is made, and different theoretical approaches to the explanation of United States foreign policy. Prerequisite: PS 104 or permission of instructor.

**PS 342 Politics and the Economy (4 SH).** An examination of the manifold relationships between political life and economic organization, with an emphasis on advanced capitalist societies. The course will consider major theories about the relationship between government and the economy, explore the history and variety of relationships between the state and the market economy, evaluate the impact of economic change on political life, and discuss some of the pressing contemporary issues in this area, such as fiscal policy and government deficits, free trade/protectionism and international economic interdependence, monetary policy, government regulation of the economy, and questions of poverty and inequality.

**PS 411 Political Psychology (4 SH).** A study of the dynamic relationship of the individual to his/ her political environment, with emphasis on theories of political personality, political socialization, and political efficacy. Students are introduced to a means of scientifically studying the subjective communication that is inherent in theories of political personality. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**PS 431 International Law and Organization (4 SH).** A study of selected international institutions that have been constructed to address challenges faced by the world's states. The course will introduce the student to several theories of international cooperation and explore the validity of these approaches in explaining behavior in the United Nations system (which consists of many international organizations). Students will leave the course with an understanding of the structures of these organizations, as well as a sense of how and why they work and sometimes fail to work. Topical areas will include peacekeeping, arms control and disarmament (e.g., nuclear weapons, biological and chemical warfare), development and trade, social and humanitarian issues (e.g., refugees, drug trafficking, transnational crime), and legal issues (e.g., war criminals, asylum). Prerequisite: PS 104 or permission of instructor.

**PS 590 Field Experience/Internship (1-4 SH).** Prerequisites: two courses in political science and consent of program.

**PS 601 Senior Capstone (4 SH).** An examination of central theoretical debates and challenges confronting modern political scientists. Over the course of the semester, each student will complete a substantial research project that applies a contemporary theoretical approach to a pressing issue in contemporary political life. This course must be taken in the fall of the senior year. Prerequisite: PS 301.

**PS 620-624 Independent Study (1-4 SH).** Prerequisites: two courses in political science and consent of program.

**PS 660, 670, 680, 690 Honors Project (1-4 SH).**

## Psychology (PSY)

**PSY 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**PSY 100 Research Experience in Psychology (1 SH).** This course aims to introduce students to basic processes in Neuroscience/Psychology research and help them become active and engaged members in the Neuroscience/Psychology community. You will participate in a broad Neuroscience/Psychology research project and become familiar with research ethics, laboratory techniques, basic scientific inquiry, the research process, and scientific communication.

**PSY 101 Introduction to Psychology (ST) (4 SH).** Principles of human and animal behavior. The study of individual, group and institutional behavior in context. Offered every semester. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**PSY 201 Experimental Design, Methods, and Statistics (4 SH).** An introduction to experimental research design, methods and statistics for the behavioral sciences. This course includes research ethics training, APA style writing instruction, and data analysis. Students propose research, do peer review, collect and analyze data, and present the results through laboratory modules and term research projects. Prerequisites: PSY 101.

**PSY 212 Personality (ST) (4 SH).** A critical survey of the major theories of personality structure, dynamics, and development. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**PSY 213 Psychology of Prejudice (ST) (4 SH).** This class will apply social psychological theory and research to understand the psychological underpinnings of prejudice. Students will explore the impact of prejudice on members of targeted groups with a particular emphasis on understanding the experience of racism. Grounded in psychological theory and research, students will explore current social issues related to prejudice as well as specific ways to reduce stereotyping and prejudice on both a personal and societal level. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**PSY 215 Psychology of Sex (4 SH).** This course explores the psychological processes that underlie human sexual behavior. With an eye toward historical and cultural variations, students will explore such topics as sexual attraction, motivation, attitudes, decision making, behavior, and disorders. This course is based on a scientific exploration of sexuality; thus students will learn how psychologists study sexuality empirically, and how the results of sexuality research are perceived by the public. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**PSY 219 Early Childhood Development (ST) (4 SH).** A chronological approach to the principles and theories of child development from birth-11 years of age. This course fulfills the developmental psychology requirement for early childhood education majors. Meets Social Thought and Tradition Intellectual Perspective require-



ment (ST).

**PSY 221 Childhood & Adolescence (ST) (4 SH).** A topical approach to principles of human growth and development, with an emphasis on both childhood and adolescence. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**PSY 225 Lifespan Development (4 SH).** A chronological approach to the study of lifespan development from infancy to old age. This course meets the developmental psychology requirement for nursing majors. Offered every spring semester.

**PSY 235 Psychology of Women (4 SH).** This course challenges students to question their existing beliefs about what it means to be male and female in today's society. We will explore traditional and changing gender roles and their impact. Course topics include an in-depth look at issues related to gender stereotypes, violence against women, interpersonal relationships, childcare and employment. Students will also explore global issues related to gender roles and culture by examining women's lives in other countries.

**PSY 241 Organizational Psychology (4 SH).** A study of the interaction of individual and structural characteristics which influence productivity and human dignity in all organizational settings. Primarily utilizing case-study methods.

**PSY 251 The Internet: Psychology (ST) (4 SH).** An application of psychology to the Internet. Topics to be covered include: human/computer interaction, dyadic interaction via the Net, group dynamics in communication networks and cross-cultural Cyberspace. A cluster course. Must also register for CS 252. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**PSY 261 Neural Networks: The Biopsychological Perspective (4 SH).** An introduction to how biologically-oriented psychology analyzes such topics as memory, intelligence and consciousness as emerging from principles of neurocomputation. A cluster course. Must also register for CS 271.

**PSY 262 Neuropsychology of Mind (4 SH).** This course surveys the contributions of psychology and neuroscience to understanding human thought and human nature. Particular attention is paid to scientific approaches in studying consciousness and the field of clinical neuropsychology. A cluster course. Must also register for PHI 218.

**PSY 281 Principles of Learning (4 SH).** Analysis of the variety of mechanisms by which our behavior and our representations develop from experience. Prerequisite: PSY 101.

**PSY 291 Adulthood and Aging (4 SH).** An examination of the theories and research regarding development and change from young adulthood through old age.

**PSY 300 Critical Thinking and Writing in Psychology (2 SH).** This course serves as a means for you to understand and contribute to scholarly work processes in the field of neuroscience/psychology. You will contribute to completion of a neuroscience/psychology project under the leadership of a peer mentor. You will also critically investigate the neuroscience literature surrounding an identified topic and complete a comprehensive written review using appropriate style and format, with a final presentation of that review to your peers. Prerequisites: PSY 100 and 101.

**PSY 301 Assessment (4 SH).** This course explores issues related to the assessment of human functioning within a variety of areas, including intelligence, academic achievement, personality and other dimensions of psychological adjustment. The course will focus on major assessment strategies and instruments within each of these areas, as well as principles underlying the construction and effective use of

assessment instruments. A laboratory is included. Prerequisite: PSY 201.

**PSY 315 Animal Behavior (4 SH).** An introduction to the fascinating fields of animal behavior and cultural learning. This course focuses on the relationships between animals and their environments through adaptation, communication and social organization. It also explores other exciting issues such as, what animal behavior can teach us about ourselves, how economic game theory has been used to explain evolution of behavior, and how our understanding of animal behavior is changing the way we treat them. There will be field work in the form of animal observations and a possible field trip to Pittsburgh Zoo or another wild animal facility. Prerequisites: C- or better in BIO 203 or permission of instructor, willingness to spend a lot of time watching animals. (Also listed as BIO 363.)

**PSY 321 Social Psychology (4 SH).** Descriptive and experimental examination of the interaction of individuals, small groups and large groups focusing on topics such as attitude formation, conformity, aggression, cooperation, and intergroup relations. A laboratory is included. Prerequisite: PSY 201.

**PSY 341 Behavioral Neuroscience (SD) (4 SH).** Analysis of how nervous system activity underlies sensory, perceptual and higher cognitive activities including motivation, memory, language, thought, and mental illness. A laboratory is included. Prerequisite: PSY 101 or BIO 201. (Also listed as NS 341 and BIO 433.) Meets Scientific Discovery Intellectual Perspective requirement (SD).

**PSY 351 Cognition (4 SH).** Memory, problem solving, language and intelligence considered from information processing and alternative views. Prerequisite: PSY 101

**PSY 401 Abnormal Psychology (4 SH).** An examination of the theoretical and empirical approaches to understanding abnormal human behavior with an introduction to the nature, causes and treatment of various psychological disorders. Prerequisite: PSY 101.

**PSY 421 Clinical Psychology (4 SH).** This course provides an in-depth exploration of the field of clinical psychology and the treatment of psychological disorders. Prerequisite: PSY 101.

**PSY 431 Abnormal Child Development (4 SH).** An overview of problems and processes that lead to abnormal development in childhood and adolescence. Included is an in-depth examination of early psychological disorders. Prerequisites: PSY 101 or 221.

**PSY 590 Field Experience/Internship (1-4 SH).** Working in a psychology related field under the supervision of a person with at least a master's degree in psychology or a related discipline. Regular contact with the Westminster College internship instructor is required. A reading list developed prior to actual internship activities, a journal and a paper integrating the readings, internship experience and other college course work are required. Prerequisite: junior level standing.

**PSY 600 Senior Psychology Scholarship Experience (4 SH).** This course serves as a means for you to contribute novel scholarly work to the field of psychology through leadership of a team engaged in work on a designated topic. This work may include empirical research, written contributions, analysis of data relevant to new information, development of new research methodology, outreach, or educational research projects, and more.

**PSY 610, 611 Advanced Topics (4 SH).** Specialized topics usually offered only once or twice to explore cutting-edge issues, methods, and creative needs of instructors and students. Prerequisite: consent of instructor.

**PSY 620-624 Independent Study (1-4 SH).** Supervised, individual investigation

of a topic of special interest, generally in the form of an experimental project. However, any activity which affords an opportunity for learning not usually provided by the classroom situation is seriously considered. Prerequisite: written approval of the program after submission of an application, including a prospectus, to the program at least two weeks before preregistration.

### **PSY 639, 640 Experimental and Personality Research I and II.**

**PSY 650 Research Scholars (2 SH).** The research scholars program is for those exceptional students who choose to do a more extensive, two to three semester capstone research project in psychology. Students eligible for this program must have a 3.5 GPA overall, a 3.5 GPA in psychology, have taken at least three psychology courses, obtained a letter of reference from a faculty member, and must submit a writing sample to the chair of the program. Students accepted into the program begin their projects in the spring of their junior year and defend a thesis in the spring of their senior year.

**PSY 662 Honors Senior Research (1-4 SH).** Students in the All-College Honors Program register for PSY 662. Students must have a 3.500 gpa in three or more classes in psychology to begin honors research.

## **Public Relations (PR)**

### **PR 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**PR 101 Principles, Practices and Theory of Public Relations (ST) (4 SH).** A concept course which will make students familiar with the background and content of public relations management and help them understand the nature of managerial and ethical responsibilities of public relations practitioners. Attention will be given to the codes of ethics and enforcement processes of national societies of public relations professionals. The primary focus will be on management's critical areas of accountability: the conceptualization and specification of the tasks and responsibilities which define the nature, scope and warranty of public relations activity. The course also will provide an overview of the various sectors of public relations such as public affairs, community relations, employee relations, financial and shareholder relations, consumer relations, international relations, crisis management and issues management. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**PR 102 Writing for Media (4 SH).** This course is designed to review and reinforce the basic principles of grammar, introduce elements of style (ex. AP style), and organization unique to writing in communication-related professions. Students will also be introduced to basic communication theory that can be applied when writing content for print, online, and broadcast outlets, as well in persuasive pieces used in public relations and advertising. The course also discusses the structure of the news, public relations, and advertising industries in order to demonstrate how they are related, and to discuss how this industries influence society.

**PR 110 Design Principles + Practice (VP) (4 SH).** This course presents the foundation for understanding the discipline of graphic design. Students will gain an understanding of fundamental terminology and technical issues in graphics and design. Presentations and discussions will introduce the incorporation of digital imagery into the disciplines of graphic design, illustration and photography. In addition, students will survey other design disciplines such as product design, industrial design, architecture, etc. This course will utilize Adobe® InDesign® and Illustrator® software applications. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**PR 112 Digital Photography + Imaging (VP) (4 SH).** This course will investigate the fundamentals of digital photography and imaging. Students will learn to photograph, manipulate digital photography, and learn the use of basic cameras and photographic equipment. In addition, this course will emphasize development of basic and creative shooting skills. This course will utilize Adobe® Photoshop®. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**PR 202 Advertising & Public Relations (4 SH).** This course will examine the current practices of advertising and public relations with a particular emphasis on how these two areas work together in serving the client. Prerequisite: successful completion of PR 101.

**PR 203 Public Relations Research (4 SH).** This course prepares students for public relations research necessary for planning and evaluating programs of action and communication. The course will focus on 1) identifying and segmenting various social groupings (interest groups, stakeholders, coalitions); 2) ascertaining the impact of the action and information system on communication participants; and 3) evaluating the results of such action and communication activity against desired outcomes. Prerequisite: successful completion of PR 101.

**PR 301-399 Selected Topics in Public Relations (4 SH).** This series of courses broadens the PR curriculum, enabling majors to keep up with developments in this rapidly changing field. Special topics will be taught by faculty members in areas of interest to them, areas that might not warrant a permanent offering but which permit the incorporation of new research material, in-depth analysis, and stimulating readings. Course offerings may be influenced by recommendations from the Public Relations Society of America. Prerequisite: successful completion of PR 203.

**PR 401 Public Relations Writing (4 SH).** This course focuses on skills and techniques that cover writing for public relations, copy dissemination, media use and media network design; these techniques range across internal and external media, print, electronic and audiovisual media. Special attention will be given to 1) the range of media used; 2) the multiple groups which have to be reached at the same time; 3) the social and organizational context in which public relations writing is done; and 4) the objectives to be attained by such writing. These objectives must be identified with the public relations mission to seek accord with various social groupings and organizations. The course requires an understanding of the journalistic writing style. Types of writing will include speech writing, proposals, news releases, annual reports, and newsletters. Prerequisites: successful completion of PR 101, WRI 301. Note: PR 202 and 203 are strongly recommended as a prerequisite or co-requisite.

**PR 402 Public Relations & The Media (4 SH).** A study of the history and relationship between public relations and the media environment. Course content covers setting up media program, building strong working relationships with the press, helping reporters meet their objectives, using tools of the trade from news releases to news conferences, training spokespeople, understanding the ethics of media relations, planning media events, managing international media, anticipating issues and managing crises, counseling senior management, and evaluating the effectiveness of media relations programs. Prerequisites: successful completion of PR 101, 202, 401, WRI 301.

**PR 501 Experiential Studies (4 SH).** This requirement will involve both the simulation and practice of public relations. Students will attract, consult with, execute plans for, and service public relations clients both on campus and in the immediate community. Prerequisites: successful completion of all courses through the third-year sequence (PR 402) and permission of the department.

**PR 590 Internship (1-4 SH).** Admission is limited to senior majors in good academic standing who have completed all courses through the third-year sequence. Graded.

**PR 601 Public Relations Capstone (4 SH).** A course which looks at topics, issues, case studies and campaign strategies relevant to the field of public relations. Particular attention will be directed to strategic planning and implementation as they pertain to public relations administration. Students will be expected to research, plan, design, and create a public relations campaign. Effective evaluation techniques will be incorporated into the campaign. This course will reflect knowledge gained in all prior public relations courses as well as the Liberal Studies curriculum. The project will culminate in a public presentation. Prerequisites: successful completion of PR 101, PR 202, PR 203, PR 401, PR 402, WRI 301 and PR 501.

**PR 620-624 Independent Study (1-4 SH).**

**PR 660, 670, 680, 690 Honors (1-4 SH).**

## Religion (REL)

**REL 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**REL 100 Understanding the Bible (RP) (4 SH).** What is the Bible? Who wrote it? When and where was it written, edited, and collected? How did it come to be so important in World culture? How can we answer these and other questions asked of a text of such authority and antiquity? This course follows the history of the text and the academic discipline of Biblical criticism. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**REL 109 Christianity: A Brief Introduction (1 SH).** This course allows students to gain a better understanding of the Christian narrative, the Christian church and mission, and the implications of a Christian worldview on ethics and justice in the world today. Through exploring the narrative arc of creation, sin, redemption, new creation, and mission we will frame a complex narrative allowing us to further probe theological issues such as the incarnation, sin, atonement, justification and resurrection. These theological issues, crucial to understanding Christianity, will prompt further discussion on ethics and justice in today's world.

**REL 140 Old Testament/Hebrew Bible (RP) (4 SH).** This introductory course will cover the continuing significance of the texts in the Old Testament or Hebrew Bible and basic questions about them: What do the books say and mean? How do Jews and Christians understand them differently? How have people understood historical and scientific difficulties in reading them? How can they illuminate our concerns about equality, feminism, politics, racism, multiculturalism, relativism, etc.? Offered Fall Semester. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**REL 141 Torah: First Five Books of Bible (RP) (4 SH).** The first five books of the Hebrew Bible, the Torah (or Pentateuch), are foundational texts for both the religions of Judaism and Christianity and for understanding the foundations upon which western civilization developed. These texts establish the nature of the relationship between God, creation, and God's people. This course will explore the narratives, laws, and theological themes of this first part of the Hebrew Bible/Old Testament, using a variety of interpretative approaches. Meets the Religious & Philosophical Thought (RP) Intellectual Perspective requirement.

**REL 142 Prophetic Literature (RP) (4 SH).** From Amos to Zechariah the Biblical books of Prophecy have been a source of inspiration for people from private

individuals to preachers to politicians. When and where and by whom were these books written? How did Prophecy develop as a form of religious activity and then a style of literature? How can we interpret and understand Prophecy today? Meets the Religious & Philosophical Thought (RP) Intellectual Perspective requirement.

**REL 143 The End Times: Apocalyptic Lit (RP) (4 SH).** “The End is Nigh!” is the characteristic claim of apocalyptic or eschatological literature. What was the background and origin of that claim and of this literature? This course examines the Book of Daniel, Chapter 13 of Mark’s Gospel, Chapter 2 of the Second letter to the Thessalonians, and the Revelation to John as examples of Apocalyptic literature. Meets the Religious & Philosophical Thought (RP) Intellectual Perspective requirement.

**REL 150 New Testament (RP) (4 SH).** This introductory course will cover basic questions about the NT texts and their continuing significance: e.g., What do the books say and mean? How do various Christians understand them differently? How have people understood historical and scientific difficulties in reading them? How can they illuminate our concerns about equality, feminism, politics, racism, multiculturalism, relativism, etc.? Offered Spring Semester. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**REL 151 Jesus (RP) (4 SH).** Or: All You Ever Wanted to Know about Jesus but Were Too Afraid or Busy to Ask. This introductory course will cover basic questions about Jesus and his continuing significance: e.g., Who was Jesus? What do ancient texts, especially the New Testament, say about him? How can they illuminate our concerns about equality, feminism, politics, racism, multiculturalism, relativism, etc.? What is the difference between the historical Jesus and the Christ of faith? Offered biennially. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**REL 152 The Synoptic Gospels (RP) (4 SH).** A study of the first three gospels with an emphasis on their historical context and literary content, as well as on their relevance to contemporary life and theological issues. A study of the Synoptic Gospels first three gospels (Matthew, Mark, and Luke), with an emphasis on their historical context and literary content, as well as on their relevance to contemporary life and theological issues. Offered biennially. Meets the Religious & Philosophical Thought (RP) Intellectual Perspective requirement.

**REL 153 The Gospel of John (RP) (4 SH).** A study of the Gospel according to John, with an emphasis on its historical context and literary content, as well as on its relevance to contemporary life and theological issues. Meets the Religious & Philosophical Thought (RP) Intellectual Perspective requirement.

**REL 154 Paul and His Letters (RP) (4 SH).** St. Paul: Heretic and Apostle (4 SH). This introduction to Paul’s letters in the Bible will cover basic questions about the apostle Paul and his continuing significance: e.g., Who was Paul? What do his letters say about the meaning of life in his time? How can they illuminate our concerns about equality, feminism, politics, racism, multiculturalism, relativism, etc. Offered biennially. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**REL 160 Understanding Christianity (RP) (4 SH).** This introductory course will cover basic questions about Christianity and its continuing significance: What is Christianity? How have various Christians expressed and explained their faith in different times and places? How have they related to the rest of the world and the issues of the day (e.g., today’s concerns about equality, feminism, politics, racism, multiculturalism, relativism)? Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).



**REL 161 Understanding Theology (RP) (4 SH).** This course will examine the theological themes of God, Creation, Sin, Redemption, and Sanctification in light of Orthodox, Roman Catholic, and Protestant beliefs. Each theme first will be examined in light of biblical theology. The creeds, rituals, and documents of the three major branches of Christianity will be examined as the basis for discussion of the development of these themes within Christian faith and practice. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**REL 162 Eastern Orthodox Christianity (RP) (4 SH).** An introduction to the Eastern Orthodox tradition, with particular attention to how it evolved and was celebrated in Russia. Students will explore the dogmas, liturgy, iconography, and history of the Orthodox Church; and attention will be given to the relationship between the Church and the State, particularly under communism. Students will also be asked to compare Orthodoxy with Western Christian traditions and with their own notions of worship and religious expression. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**REL 163 Reform/Presbyterian Theology & Worship (RP) (4 SH).** What is the Reformed tradition, or Presbyterianism? What beliefs and practices distinguish the Reformed tradition from other Christian traditions? What do Presbyterians believe about the Sacraments (Baptism and the Lord's Supper)? What about predestination? How does the U.S. government reflect Presbyterian polity? This course will explore these and many other issues that help us understand the hallmarks of the Reformed tradition. Through understanding Reformed theology, we will also examine Reformed worship. Readings from John Calvin's Institutes of the Christian Religion, the classic text for the Reformed tradition, will be an important part of the course. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**REL 164 Biblical Theology (RP) (4 SH).** An exploration of important issues in biblical interpretation and application, beginning with an investigation of the task and method of biblical theology, as distinguished from systematic theology. It will cover the history of biblical interpretation and consider the relationship between biblical ideas and modern thought. Meets the Religious & Philosophical Thought Intellectual Perspective requirement.

**REL 167 Christ & Caesar: Early Christianity (RP) (4 SH).** This introductory course will cover basic questions about the first five centuries of the Christian church within the Roman Empire: e.g., How were Christians affected by their imperial context? How did Christians respond to cultural, political, religious, socioeconomic, aspects of the empire? (Also listed as HIS 234). Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**REL 170 Introduction to Religion in the World (RP) (4 SH).** Despite a huge diversity of individual positions on religion, it remains a universal and highly influential human activity. This course examines the narratives, rituals, symbols, moralities, and ultimate goals of the world's religious communities. Particular attention is given to concepts and tools for understanding and analyzing religious behavior as an expression of human experience. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**REL 171 Religion in the Western World (RP) (4 SH).** The Western World is dominated by the religions of Judaism, Christianity, and Islam. This course inspects the contents and the histories of these traditions as well as other less well-known traditions such as Zoroastrianism, indigenous traditions of Africa and America, and the New Religious Movements of the modern era. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**REL 172 Religions from India (RP) (4 SH).** Hinduism and Buddhism are the major, but not the only, religious traditions to have emerged from the Indian sub-continent. This course studies the histories, narratives, rituals, scriptures, concepts, and meditative practices of the religions of India, including their increasing influence in our own society. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**REL 173 Religion in China (RP) (4 SH).** Religious practices in China are a mixture of Daoism, Confucianism, Chinese Buddhism, and folk traditions, although Christianity and Islam are also present. The interactions of these traditions through China's long history is a fascinating insight into the human behaviors that we call "religion." Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**REL 174 Religion in America (RP) (4 SH).** This introductory course examines the ways religion has influenced the United States from the colonial period to the present. As well as the characteristics of the country's diverse spiritual traditions, four interconnected themes are addressed: religious pluralism, religious freedom and its relationship to state power, individual spiritual experience, and social reform and religion. How, at various times, have these themes reflected, contradicted, inspired, and reinforced broader dynamics in the American past? Meets the Religious & Philosophical Thought (RP) Intellectual Perspective requirement.

**REL 175 Gender and Religion (RP) (4 SH).** This course is designed to lead the student in the study of the role of gender in the major Western religions of Judaism, Christianity, and Islam. This study will focus on the religious texts that have been interpreted to define gender roles in these religious traditions. The influence of these religions on the perception of the roles of men and women in culture and society will be examined. The feminist approach to the issues of authority and power in these Western religious traditions will also be addressed. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**REL 176 Religion and Art (VP) (4 SH).** Religion and art are intimately connected. Visual arts such as painting and sculpture express and enhance religious narrative, but more—music, dance, drama, and all performative and productive arts are seen as somehow giving access to the Extraordinary. How can art "express the inexpressible"? What might this tell us about religion? Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**REL 177 Religion and Society (RP) (4 SH).** A study of contemporary religious beliefs, practices and organizations, primarily in the United States, as they derive from and influence a social context. Significant study of the Old Order Amish, as well as of the debate about secularization, the increased importance of evangelical Christianity, and new religions. Prerequisite: One lower-level sociology course or permission of instructor. (Also listed as SOC 303). Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**REL 178 Philosophy of Religion (RP) (4 SH).** What is philosophy of religion? Traditionally focused on arguments such as those claiming to prove the existence of God or the immortality of the soul, currently a complete reconsideration of philosophy of religion is underway. Beginning with the questions "what is philosophy?" and "what is religion?" this course applies philosophical argument to a more global history of religion. Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**REL 200 Applied Biblical Interpretation (4 SH).** A survey of various methods of interpretation and their application to selected biblical texts. It will explore the possibilities of meanings suggested by the texts and their practical application in



contemporary contexts (e.g., church education, ethics, mission, preaching, theology).

**REL 260 Text and Meaning (4 SH).** Hermeneutics is an interdisciplinary study of interpretation. It examines how human beings experience the world and life as intelligible. We will ask fundamental questions regarding such intelligibility: What is a text? What is a context? What is language? What is meaning? Can everything we perceive be considered texts, including people and the world itself? What are the principles and methods of understanding the world of human “objects”—i.e., forms of human expression such as paintings, laws, literature, music, and religions? Prerequisite: Junior or senior status or permission of the instructor.

**REL 270 Method/Theory in Study of Religion (4 SH).** How should we go about the study of religion? Various disciplines (psychology, anthropology, sociology, philosophy of religion) have provided their own approaches, and these methods will be considered briefly. They do not, however, deal with the initial attitude that is adopted toward the phenomenon of religion. A frank admission of our own lack of knowledge, putting our own beliefs to one side, and imaginative re-experiencing, as well as Christian theological attitudes towards other religions, will be considered as possible methodological principles, as will the results of adopting these attitudes.

**REL 590 Field Experience/Internship (1-4 SH).** An opportunity for students to work under guidance in a church or other agency during the Fall or Spring semesters or in the summer. Prerequisite: consent of the instructor and the program coordinator.

**REL 601 Religion Capstone (4 SH).** This course is required of senior majors in religion and Christian education who are not doing an Honors project in religion.

**REL 620-624 Independent Study (1-4 SH).** Individual study in a specific academic area under the guidance of a selected faculty member. Prerequisite: consent of the instructor and the program coordinator.

**REL 660, 670, 680, 690 All-College Honors Program (1-4 SH).**

## Science (SCI)

**SCI 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**SCI 101 Introduction to Healthcare (1 SH).** Introduction to Health Care is a course designed to expose pre-nursing students to the current state of healthcare delivery as well as the role and responsibilities of healthcare professionals today. Topics covered in this course include an introduction to healthcare economics, ethics, workplace skills, team member roles, diversity in healthcare and career projections.

**SCI 105 Understanding Science: Food and Health (4 SH).** What we eat and drink is fundamental to our health. However, when it comes information about the relationship between food and health, it's often difficult to know what to believe. Do some foods really cause cancer? Is there any reason to take a vitamin every day? Do green tea and red wine actually help prevent heart disease? What can we eat to reduce the risk of dementia? Will a gluten-free diet help you lose weight? Are antioxidants and probiotics truly effective? Anyone looking for guidance from newspapers, magazine, and web sites will often find conflicting information. Even advice from medical professionals is not always consistent. This course is designed to reveal the source of that confusion and to demonstrate why we should be skeptical of medical claims in nonscientific sources. More importantly, it will help students learn how to evaluate the results of scientific studies, to get accurate information about relationships between food and health that they can use to make informed decisions about

their diet.

**SCI 150 Introduction to Forensic Science (SD) (4 SH).** A study of the science behind forensic investigations. Case studies will be used to link the science with real world examples. Laboratory experiences involve using forensic analysis techniques to solve a “crime.” Meets Scientific Discovery Intellectual Perspective requirement (SD).

**SCI 294 Women in Science (SD) (4 SH).** A study of the personal and professional lives of women who have succeeded in science careers, within the context of their historical and cultural environments. Political, philosophical, and technological changes affect what science is done, by whom, and for what purpose. Laboratory time will involve projects in the biological and physical sciences, conducting scientific studies similar to those done by many of these women early in their scientific careers. Meets Scientific Discovery Intellectual Perspective requirement (SD).

## Social Science (SSC)

**SSC 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**SSC 251 Research Methods (4 SH).** An introduction to the nature and processes of social science inquiry. Particular attention is given to designing social science research projects, and to techniques for gathering, analyzing, and communicating data from both primary and secondary sources. The course is intended to increase the student's ability to understand published studies and to enhance student research skills. Prerequisite: Two sociology or criminal justice studies courses.

**SSC 252 Data Analysis for Social Science (QR) (4 SH).** This class covers some introductory but powerful statistical techniques for analyzing and interpreting social science data. Students will use both descriptive and inferential statistics, and evaluate the strengths and weaknesses of various statistical methods. They will also develop skills in presenting and interpreting statistical charts, graphs and tables. There is no formal prerequisite, but SSC 251, PS 301 or other exposure to research methods is recommended. Meets Quantitative Reasoning Intellectual Perspective requirement (QR).

**SSC 253 Q Methodology (2 SH).** The purpose of this course is to introduce students to the statistical and methodological principles associated with Q methodology. Q methodology was innovated by the British physicist/psychologist Dr. William Stephenson (1902-1989), and provides both the tools and the philosophy to scientifically study the subjective and is of interest to students in the human sciences. The course will examine the differences between Q and R methodologies, concurrence theory, q-samples, p-sets, q-sorting, conditions of instruction, the statistical tools of correlation and factor analysis, judgmental rotation of factors, factor scores, factor interpretation, and use of dedicated computer software to analyze Q results.

## Sociology (SOC)

**SOC 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**SOC 101 Principles of Sociology (ST) (4 SH).** In taking this course, students will become more aware of the effects of social forces on the individual. The course provides an introduction to the concepts and methods used in the systematic study of society. Topics include: social norms, social groups, social conflict, social inequality, social institutions, social change, and the sociological perspective. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**SOC 105 Cultural Anthropology (HC) (4 SH).** An introduction to the perspec-

tives, methods and topics of study of cultural anthropology. Central focus is on cultural universals of language, religion and values and the cultural stances of ethnocentrism and cultural relativism. Emphasis on contemporary indigenous peoples, and especially Native Americans, as they encounter and assimilate into commercial, global-scale societies. We also discuss the roles and responsibilities of anthropologists as ethnographers, including issues of authority, methodological rigor, objectivity and advocacy. Meets Humanity & Culture Intellectual Perspective requirement (HC).

**SOC 106 Individual & Society (ST) (4 SH).** Analysis of the interrelationship between society, culture, and the individual with emphasis upon the emergence of self and the participation of the individual in social processes. Attention is paid to comparative theories of action and empirical studies. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**SOC 107 Sociology of Gender (ST) (4 SH).** An examination of the social and historical influences upon behavior as it is differentiated by gender. The pattern of learning sex roles as well as the current redefinition of such roles will be discussed. Material from a variety of sources will be examined with the intent of both documenting and explaining this differentiation of roles. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**SOC 108 Social Problems and Policies (ST) (4 SH).** An examination of societal intentions and actions for resolving issues of public concern such as poverty, unemployment, and the well-being of those who are sick, disabled, displaced, at risk, dependent or racial/ethnic minorities. Both historical and ideological factors will be explored as will be the consequences of action in terms of social programming and policies. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**SOC 200 Studies in Sociology (4 SH).** This course will deal with specific aspects of society not included in the regular curriculum. Topics will be announced prior to registration.

**SOC 204 Social Work (4 SH).** An exploration of the knowledge base, theories, and methods that social workers use. Several of the major fields of practice are examined including family and child welfare, health care, mental health, criminal justice, and gerontology.

**SOC 209 Minority/Majority Relations (ST) (4 SH).** This course will trace the history of race as a concept, examine how racial and ethnic relations changed over time in the U.S., analyze the causes and consequences of prejudice and discrimination, and consider how majority-minority relations shape life chances for various groups in the U.S. and throughout the world. Some of the topics we cover include: ethnic identity, popular culture, segregation, immigration, racial profiling, and interracial relationships. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**SOC 210 Gerontology (HC) (4 SH).** A study of the different social, biological, and demographic aspects of aging. Population characteristics of people over 65 as well as patterns of age-graded expectations will be examined. Special attention will be paid to the changing roles of the elderly in our society as well as attitudes toward aging. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**SOC 214 Social Class in America (ST) (4 SH).** An examination of the various forms and systems of social inequality in human societies, with attention to the mechanisms that perpetuate inequalities, ideologies that legitimate them, and possibilities for social mobility. Particular focus is on the pronounced and growing

income and wealth inequality in the contemporary United States and the social problems of poverty and food insecurity. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**SOC 215 Women Cross-Cultural Perspective (ST) (4 SH).** This course examines the contemporary situations of women in Asia, Africa, the Middle East, and Latin America, with particular attention to how their economic, political, family, and religious roles and dominant cultural ideologies influence their world-views, opportunities and experiences. Particular attention is paid to how women themselves construct and experience their lives in various cultural contexts. The experience of societal development within these nations, and its particular consequences for women, will be highlighted throughout. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**SOC 241 Sociology of Violence & Nonviolence (4 SH).** Violence, from a sociological perspective, is considered a social phenomenon that evolves in a socio-historical-political moment. This course will evaluate theory and research on violence and nonviolence from both a macro and micro sociological lens. Topics investigated will be interpersonal violence, violence against animals, hate crimes, school violence, bullying, terrorism, structural violence, and social movements that involve both violence and nonviolence. We will also investigate how race, social class, gender, sexual orientation, age, and ability shapes who is more likely to be a victim or perpetrator of violence.

**SOC 260 Food, Culture and Society (ST) (4 SH).** This course is an introduction to the emerging field of study called the Sociology of Food. We explore social, cultural and political issues, at the global, national and local levels, around the production, distribution, preparation, consumption and symbolism of food. Choices and outcomes regarding these processes reflect individual and group identities and relationships, access to resources and position in various social hierarchies. Students also are asked to reflect on the ethics of food processes and policies and their own food choices. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**SOC 303 Religion and Society (RP) (4 SH).** A study of religious belief systems, organizations, and movements as they derive from and influence a social context. Attention is given to the debate about secularization and to the increased importance of evangelical Christianity and new religious movements. Prerequisite: One lower-level sociology or criminal justice studies course or permission of instructor. (Also listed as REL 177.) Meets Religious and Philosophical Thought Intellectual Perspective requirement (RP).

**SOC 304 Social Change (4 SH).** An investigation into processes by which large-scale modifications of societies occur, current thinking about social evolution, changes in modern society, and development in developing countries. Prerequisite: One lower-level sociology or criminal justice studies course or permission of instructor.

**SOC 305 Sociology of Organizations (4 SH).** A general analysis of human organizations, their structures, normative systems, and conflicts. A special emphasis is placed on theories of bureaucracy. Prerequisite: One lower-level sociology or criminal justice studies course or permission of instructor.

**SOC 306 Gender & Family (4 SH).** This course examines the function, structure, and variety of families. Topics include: the historical origins of contemporary American family life; patterns in family formation and dissolution, including dating, cohabitation, marriage, and divorce; sexuality and families; work-family (im)balance; and social problems, such as poverty and intimate violence. We will discuss and

debate the implications of changing family life in the United States and abroad. Prerequisite: One lower-level sociology or criminal justice studies course or permission of instructor.

**SOC 307 Sociology of Sport (4 SH).** This course examines the social institution of sport through both cultural and structural lenses. Topics covered include: socialization through sport; race, social class, gender and ability construction through sport; sports, media, and mass consumption; the socio-economics of sport; and social change through sport. Prerequisite: One lower-level sociology or criminal justice studies course or permission of instructor.

**SOC 327 Medical Sociology (4 SH).** A study of the social aspects of illness and wellness. Special emphasis will be placed on the roles of participants in the health care system, as well as the development of the system itself. Prerequisite: One lower-level sociology or criminal justice studies course or permission of instructor.

**SOC 350 Social Theory (4 SH).** This course provides a general introduction to the major classical and contemporary theories in sociology and criminology. We examine the major tenets and critiques of these theories while embedding them in their historical and cultural contexts. We also discuss theoretical applications in contemporary sociological and criminological research. Taken fall of the junior year. Prerequisites: Two sociology or criminal justice studies courses or instructor permission.

**SOC 590 Field Experience/Internship (1-4 SH).**

**SOC 601 Sociology Capstone (4 SH).** The student will execute a research proposal that studies a research question in sociology or criminal justice studies. As befits the culminating course in the two majors, students demonstrate knowledge of relevant literature, theory and methodological techniques during the research process. The final research is presented to disciplinary and general audiences. Taken fall of the senior year. Prerequisites: SOC 350, SSC 251 and SSC 252; SOC 350, SSC 251 OR SSC 252 for International Studies majors.

**SOC 620-624 Independent Study (1-4 SH).**

**SOC 660, 670, 680, 690 Honors Project (1-4 SH).**

## Spanish (SPA)

**SPA 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**SPA 101 Elementary Spanish I (4 SH).** A course designed for students who have had less than one year of Spanish in high school, or who wish to study Spanish as a new language. All four basic language skills — speaking, listening, reading, and writing — are addressed, with particular emphasis on satisfying immediate communicative needs in the language

**SPA 102 Elementary Spanish II (4 SH).** A continuation of the skills and emphases stated for SPA 101. Prerequisite: SPA 101 or consent of instructor.

**SPA 201 Intermediate Spanish I (FL) (4 SH).** A course designed for students who have a basic background in Spanish. All four basic language skills — speaking, listening, reading, and writing — are addressed, with particular emphasis on developing oral proficiency. Prerequisite: SPA 102 or consent of instructor. Meets Foreign Language Intellectual Perspective requirement (FL).

**SPA 202 Intermediate Spanish II (FL) (4 SH).** A continuation of the skills and emphases stated for SPA 201. Prerequisite: SPA 201 or consent of instructor. Meets Foreign Language Intellectual Perspective requirement (FL).

**SPA 301 Spanish Advanced Conversation & Composition I (4 SH).** A course in oral and written practice at the advanced level, designed to develop fluency in speaking and writing Spanish. The emphasis is on the reading of cultural and literary texts, as well as current periodicals, which serve as the basis for group discussion and for writing short essays. Prerequisite: SPA 202 or consent of instructor.

**SPA 302 Spanish Advanced Conversation & Composition II (4 SH).** A continuation of the skills and emphases stated for SPA 301. Prerequisite: SPA 301 or consent of instructor.

**SPA 303 Commercial Spanish (4 SH).** An introduction to the technical vocabulary of international business, including the writing of business letters and the translation of magazine articles using the computer. Authentic documents and videos are used. The course also examines advertising images, immigration, and business ethics in their cultural and historical context. A competency examination will be given at the end of the course. Prerequisite: SPA 302 or consent of instructor.

**SPA 351 Cultures of Spain (HC) (4 SH).** An introduction to major institutions of peninsular Spain in their historical context. The course examines the various factors (historical, social, economic, artistic) that have shaped contemporary cultural identity. The arts and popular culture are included. Prerequisite: SPA 302 or consent of instructor. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**SPA 352 Culture of Hispanic America (HC) (4 SH).** A study of the cultural diversity of Hispanic America presented through literature, film, and the arts. Attention is given to Mexico, the Caribbean, Central and South America, and the United States in the 20th century. Prerequisite: SPA 302 or consent of instructor. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**SPA 421 Introduction to Spanish Literature and Culture (4 SH).** A study of selected works by representative authors from Spain with additional focus given to historical, cultural, and artistic considerations. Prerequisite: SPA 302 or consent of instructor.

**SPA 422-429 Topics in Spanish: Spain (4 SH).** An in-depth study focusing on a major peninsular Spanish writer, genre, period, or significant theme. Prerequisite: SPA 302 or consent of instructor.

**SPA 431 Introduction to Hispanic American Literature and Culture (4 SH).** A study of selected works by representative authors from Hispanic America with additional focus given to historical, cultural, and artistic considerations. Prerequisite: SPA 302 or consent of instructor.

**SPA 432-439 Topics in Spanish: Hispanic America (4 SH).** An in-depth study focusing on a major Hispanic American writer, a genre, the literary and artistic production of a particular country, or a significant theme. Prerequisite: SPA 302 or consent of instructor.

**SPA 441-9 Topics in Spanish: Advanced Spanish Language Skills (4 SH).** A course emphasizing the development of particular advanced language skills in Spanish such as translation. Prerequisite: SPA 302 or consent of instructor.

**SPA 590 Field Experience/Internship (1-4 SH).** Prerequisite: SPA 301 or consent of instructor.

**SPA 601 Spanish Capstone (4 SH).** A course required of all Spanish majors. Through work with members of the departmental faculty, each student will conduct a research project to examine in depth a topic in the language, literature, or culture of the Spanish-speaking world. The project will be developed in conjunction with an

exploration of the student's study abroad experience, as well as the student's progress through the Spanish program as a whole. Written work for the course is done in both Spanish and English.

**SPA 620 Independent Study (1-4 SH).** Courses designed for advanced students who are capable of undertaking individual projects in Spanish language or literature. A comprehensive report or scholarly paper in Spanish is required. Prerequisites: completion of at least three Spanish courses numbered 301 or higher, and consent of the department chair.

**SPA 660, 670, 680, 690 Honors Project (1-4 SH).**

## Spanish for Nursing (SPN)

**SPN 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**SPN 101 Elementary Spanish I - Medical (4 SH).** A course designed for students who have had less than one year of Spanish in high school, or who wish to study Spanish as a new language and wish to focus their language learning on vocabulary and culture that would be beneficial to health care workers. All four basic languages skills - speaking, listening, reading, and writing - are addressed, with particular emphasis on satisfying immediate communicative needs in the language.

**SPN 102 Elementary Spanish II - Medical (4 SH).** A continuation of the skills and emphases stated for SPN-101. Prerequisite: SPN-101 or consent of instructor.

**SPN 201 Intermediate Spanish I - Medical (FL) (4 SH).** A continuation of the skills and emphases stated for SPN-102. Prerequisite: SPN-102 or consent of instructor. Meets Foreign Language (FL) Intellectual Perspective Requirement.

## Special Education (SED)

**SED 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**SED 201 Foundations Special Education (ST) (4 SH).** This course is designed as an introduction to the field of special education for students seeking careers in education. It includes such topics as: identification, placement, programming, inclusive practices, advocacy, and other topics relating to persons who have disabilities from historical, medical, educational, societal, and individual points of view. Includes practicum to be completed outside of class. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**SED 402 Behavior Management Special Education (4 SH).** This course is designed to provide a basic understanding of the characteristics of students with learning and behavior problems with respect to factors that influence the instructional environment while providing classroom management theory and practical applications for students who have special needs.

**SED 404 Reading Strategies Special Education (4 SH).** This course is designed to provide specific instructional reading techniques and strategies to assist the learner who has been identified as being at-risk for failure due to poor reading skills or as having special needs.

**SED 411 Legal Issues Assessment (2 SH).** The focus of the course is on the analysis of legislation, litigation, and administrative rulings related to special education. The course will emphasize the development of legally sound policies and procedures to ensure an appropriate education for students with disabilities. Pre-service teacher candidates will become familiar with a variety of assessment instruments and techniques to use to effectively instruct children who have disabilities in PreK-8 settings.



**SED 412 Assessment Methods (2 SH).** The course will emphasize the development and implementation of assessment procedures for students who have disabilities. Pre-service teacher candidates will become familiar with a variety of assessment instruments and techniques to administer to effectively evaluate children who have disabilities in PreK-8 settings.

**SED 413 High Incidence Strategies (2 SH).** This course is designed to provide practical application of knowledge about learners who have high incidence disabilities, theory, best practices, regulations, and research as related to a practicum component in PreK-8 schools working with students who have special needs in a classroom setting. The goal of the courses is to assist future special educators to prepare for the unique role of a teacher in a field that is rapidly changing as a result of shifts in public school policies, school reform, questions of efficacy, limitations of resources, teacher roles and expectations, and advocacy.

**SED 414 Low Incidence Strategies (2 SH).** This course is designed to provide practical application of knowledge about learners who have low incidence disabilities, theory, best practices, regulations, and research as related to a practicum component in PreK-8 schools working with students who have special needs in a classroom setting. The goal of the courses is to assist future special educators to prepare for the unique role of a teacher in a field that is rapidly changing as a result of shifts in public school policies, school reform, questions of efficacy, limitations of resources, teacher roles and expectations, and advocacy.

**SED 462 Special Education Practicum (2 SH).** This course is designed to provide pre-service teacher candidates with hands-on experiences in observing and assessing children who have disabilities. In PreK-8 settings, students will teach lessons, progress monitor, administer assessment instruments, use curriculum based measurement, and evaluate and interpret the results for instructional purposes.

**SED 562 PreK-8 Special Education Field Experience (2 SH).** This course is an off-campus experience in either a PreK-8 school or institutional setting intended to provide the student with opportunities to participate with teachers and children who have special needs in classrooms. For Early Childhood PreK-4/Special Education PreK-8 majors and other minors who desire an experience with children or youth who have disabilities. Prerequisites: Must have completed at least three semesters and two education courses at Westminster College and have a GPA of at least 2.800. Graded S/U.

**SED 572 Secondary Special Education Field Experience (2 SH).**

**SED 605 Special Ed PreK-8 Capstone (6 SH).** Student teaching (12 SH) is a supervised dual student teaching experience open to Early Childhood PreK-4 and Special Education PreK-8 majors who have completed the pattern of required courses. Students are required to participate in related seminars and meetings. In addition to the regular tuition and fees, there is a student teaching fee.

## Sports Management (SMGT)

**SMGT 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**SMGT 110 Sports Management (4 SH).** This course introduces the basic concepts of sports administration and management. Topics covered include administrative philosophy, sport governance, personnel management, budget and finance, promotion, legal considerations, athletic event management and crisis management. Analysis of current and future trends in sports management will also be addressed. Prerequisite: Sports Management major or minor.

**SMGT 201 Practicum I (2 SH).** The first of two sports management practicums to enhance professional development and career readiness, each student will be required to spend approximately 4 hours per week (60 hours total) in the assigned experiential learning opportunity. The specific duties will be determined by student needs and abilities in cooperation with the supervising faculty. SMGT 201 and 202 will be taken in concurrent semesters. Students will be responsible for providing their own transportation. Prerequisite: SMGT 110, Sports Management major and Sophomore standing.

**SMGT 202 Practicum II (2 SH).** The second of two sports management practicums to enhance professional development and career readiness, each student will be required to spend approximately 4 hours per week (60 hours total) in the assigned experiential learning opportunity. The specific duties will be determined by student needs and abilities in cooperation with the supervising faculty. SMGT 201 and 202 will be taken in concurrent semesters. Students will be responsible for providing their own transportation. Prerequisite: SMGT 201 and Sports Management major.

## Speech (SPE)

**SPE 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**SPE 111 Introduction Public Communication (4 SH).** An introductory course designed to help the student develop and deliver oral presentations. Students will present a variety of oral assignments both informal and formal. At least one presentation will demonstrate the effective use of visual aids and new presentation technologies. In addition, the course presents communication theory which will help the student understand communication processes and develop better listening skills.

## Theatre (THE)

**THE 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**THE 101 Introduction to Theatre (VP) (4 SH).** An examination of the process by which dramatic literature becomes theatre. The course examines the forms of comedy, tragedy, and their offshoots as well as the elements of theatre—structure, character, language, scenography—and the styles of theatre with an emphasis on modernism and post-modernism. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**THE 102 Introduction to Acting (VP) (4 SH).** Concentrates on approaches to acting and analysis of scenes from an actor's point of view. The laboratory section concentrates on scene work, monologue exercises, and improvisation. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**THE 111 Stagecraft I (VP) (4 SH).** An introduction to the fundamentals of technical theatre, THE 111 provides the student with the knowledge of modern stagecraft and the theater plant and with practical experience in handling tools and materials essential to constructing, painting, assembling, dressing, and shifting stage scenery. Students will construct the scenery for departmental productions. Lab and participating as part of the crew for the current main stage productions required. Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**THE 112 Stagecraft II (4 SH).** A continuation of THE 111 Technical Production with advanced study of technical aspects of play production. Theory will be emphasized as well as discussion of scenography. Students will construct the scenery for departmental productions. Lab required. Prerequisite: THE 111 or consent of the instructor.

**THE 151 Voice & Diction (4 SH).** Theory and practice in the basic techniques of developing a clear and expressive speaking voice. Breath control, proper phonation, full resonance and projection, and articulation will be covered as well as exercises for improving use of pitch, timbre, and vocal quality. (Also listed as COM 151.)

**THE 201 Script Analysis (4 SH).** A basic study in interpretation: How does a script produce and transmit meaning? Fundamental skills in “discovering meaning” are developed by examining different models for analysis and synthesis, exercises in interpretation, and the directing of short scenes.

**THE 202 Advanced Acting (4 SH).** A seminar/laboratory study. The seminar segment will concentrate on more advanced study of approaches to act. The laboratory segment is designed to increase effective use of concentration, observation, sensory awareness, and emotional truth on stage. Prerequisite: THE 102.

**THE 203 Acting III (4 SH).** A seminar/laboratory study. The seminar segment continues to concentrate on advanced study of approaches to acting. In the laboratory section, more emphasis will be placed on building a character. Activities will include exercises, improvisations, longer scenes, and an increased number of monologues from period plays.

**THE 211 American Dramatists (HC) (4 SH).** This entry-level course introduces students to significant, often groundbreaking dramas by the most acclaimed American playwrights of the 20th century: Eugene O’Neill, Philip Barry, Arthur Miller, Tennessee Williams, Edward Albee, John Guare, Sam Shepard, David Mamet, August Wilson, Tony Kushner, and Suzan Lori-Parks, among others. Students will explore varying use of dramatic content and structure across time and through major American themes, as well as the ever-changing understanding of theatrical convention and innovation. (Also listed as ENG 108.) Meets Humanity and Culture Intellectual Perspective requirement (HC).

**THE 212 Shakespeare’s Plays (HC) (4 SH).** An introductory course in the drama and stagecraft of the undisputed Titan of English literature, William Shakespeare. Students will analyze and discuss Shakespeare’s achievement in poetic and theatrical presentations of popular stories for the Elizabethan stage. The syllabus will draw from five to six plays, ranging from comedy to history play to tragedy to romance, and lessons may incorporate screenings of notable films, stage, and TV productions, in their entirety or choice selections. (Also listed as ENG 113 Shakespeare.) Meets Humanity and Culture Intellectual Perspective requirement (HC).

**THE 213 African American Drama (HC) (4 SH).** This class will explore African-American culture from the days of slavery through the present, examining African-American playwrights’ characters and personal lives, and by exploring the historical climate at the time the texts were written. (Also listed as ENG 124.) Meets Humanity and Culture Intellectual Perspective requirement (HC).

**THE 214 British & Irish Drama (4 SH).** An introductory survey of the seminal dramatic literature constituting the British theatrical tradition, from the English Renaissance (Shakespeare and his cohort), through Restoration, Enlightenment and Victorian traditions, to contemporary political and avant-garde drama. The course syllabus will share space with representative 19th- and 20th-century Irish plays by major dramatists such as Wilde, Shaw, Synge, Yeats, Beckett, Friel, McDonagh, and Walsh. Students will acquaint themselves with a range of plays, playwrights, performance spaces, dramaturgical conventions, and acting methods of these periods to understand the role and impact of theater in British and Irish popular culture. When possible, the class will attend a stage production of such plays. (Also listed as ENG 127).

**THE 215 Soldiers on the Stage: Military Entertainment and Drama (4 SH).**

Over the semester, students will be introduced to a variety of entertainments provided for the American military from WWI to present day. Students will compare live performances created “for troops by civilians” versus those made “for the soldier by the soldier”. Additionally, the course will introduce a selection of dramatic scripts that feature soldier and/or veteran characters. Throughout this exploration, students will be re-viewing America’s history at times of both war and peace. Videos, audio clips, archival materials, guest lecturers, and independent research projects will be supplemented by service-learning projects coordinated with nearby active U.S. military bases and/or veteran organizations.

**THE 225 Theatre for Social Engagement (ST) (4 SH).** In this highly participatory course, students will engage the social issues of the day using various interactive performance methods, including Playback Theatre and Augusto Boal’s Theatre of the Oppressed techniques. The course culminates in the creation of an original devised production that addresses a local social issue and is produced in collaboration with an under-represented segment of the local community. Meets Social Thought and Tradition Intellectual Perspective requirement (ST).

**THE 251 Oral Interpretation (VP) (4 SH).** A study of the methods of creating for a listening audience an interpretation of the printed page. Attention is focused upon literary form, imagery, inflection, word stress, and other factors which influence listener response and understanding, and also which aid in the effective expression of one’s own ideas. (Also listed as COM 251.) Meets Visual and Performing Arts Intellectual Perspective requirement (VP).

**THE 255 Playwriting (4 SH).** The playwriting course will look at the challenges of writing play scripts by studying and writing scripts. After exploring language as action, building characters, non-verbal communication through writing scenes, we will work at structuring and writing one-act and two-act plays. (Also listed as WRI 355.)

**THE 301, 302, 303, 304, 305, 306 Theatre Practicum (1 SH).** Major assignments in program productions: acting, directing, stage managing, lighting, sound.

**THE 311, 312, 313, 314 Professional Workshop (1 SH per workshop).** A variety of specialized topics will be presented by theatre professionals. Topics may include but are not limited to costuming, make-up, publicity, art’s management, children’s theatre and playwriting. The student will attend two six-hour weekend sessions or four three-hour evening sessions. Grading is S/U.

**THE 320 Digital Art Studio (4 SH).** This course is a hybrid of traditional art methods and computer manipulated images. Students will create paintings, drawings, and collages that are enhanced with digital editing software. Reversing the process, students begin with a computer generated image/photo and continue to work on it with traditional materials. Students will learn basics of studio art, Photo-shop and Elements software, scanning and digital printing to create most unusual and exciting art.

**THE 321 Principles of Theatrical Design (4 SH).** This is an introductory course to performance design. The material covered will be primarily hands-on projects designed to provide students the chance for self-expression as it relates to stage design. Skills to be covered will be sketching and drawing, painting, drafting, and model building. Prerequisite: THE 111.

**THE 322 Scenography (4 SH).** This course studies the theoretical and practical elements of scenography. Through the study of the design theories and script analysis, students will explore the areas of lighting, scenic, costume, and sound design.

**THE 370 Theatre History I: Antiquity to the 17th C. (HC) (4 SH).** History of theatre and its relationship to the arts and sciences: Greek, Medieval, Renaissance and the Age of Reason. Major emphasis of study focuses on the correlation between the physical stage, the theatrical conventions, and the playscripts of the period. Meets Humanity and Culture Intellectual Perspective requirement (HC).

**THE 371 Theatre History II: 18th C. to the Present (HC) (4 SH).** History of theatre and its relationship to the arts and sciences: Romantic Period and the Modern/Post-Modern World. Major emphasis of study focuses on the correlation between the physical stage, the theatrical conventions, and the playscripts of the period. Meets Humanity & Culture Intellectual Perspective Requirement (HC).

**THE 404 Directing for Theatre (4 SH).** The course explores the elements comprising an approach to directing for the theatre. Elements include script analysis, stage composition, picturization, and techniques in working with actors. The course is hands-on. Students work from a study script as well as other scripts of their choice. Prerequisite: THE 102.

**THE 410 Advanced Topics (4 SH). Advanced Topics**

**THE 590 Field Experience/Internship (1-4 SH).**

**THE 601 Theatre Capstone. Advanced Study I (2 SH).** Advanced Study I focuses on the scholarly research required to prepare for the performance/practical element of the capstone experience. THE 601 usually culminates in an advanced research paper that explores and explains a specific topic in theatre studies chosen by the student in conjunction with his or her capstone adviser. Prerequisites: advanced junior standing and permission of the instructor.

**THE 602 Theatre Capstone. Advanced Study II (2 SH).** In Advanced Study II, students apply the practical skills developed while pursuing the theatre major. THE 602 usually culminates in the presentation of scenes related to the topic studied in THE 601. Depending on the student's area of interest, scenes will be directed, designed, and/or acted in by the capstone student. In some cases, special projects such as directing or designing a main stage production may provide the content of THE 601 and 602 and fulfill the capstone requirement. Prerequisites: successful completion of THE 601 and senior standing.

**THE 620-624 Independent Study (1-4 SH).**

**THE 660, 670, 680, 690 Honors Research (1-4 SH).**

## Writing (WRI)

**WRI 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**WRI 111 Writing (4 SH).** These courses concentrate on the skills of discovering, selecting, and developing ideas. Students will learn how to research topics, organize and develop their thoughts, and revise and edit their writing with attention to grammar and style. Students will develop their ability to analyze, summarize, and argue. Through these skills, they will learn strategies for effectively developing and expressing ideas to different audiences. As they research, students will develop their ability to use a variety of standard print and electronic sources. Required of all first-year students. Students will take 111 either in the Fall or the Spring Semester. A minimum passing grade of C- is required for graduation.

**WRI 210 Introduction to Creative and Professional Writing (4 SH).** In this course, students will give their attention to the craft of writing by advancing their understanding of creative nonfiction and professional feature writing. Students will learn to critique their peers' work in order to advance the class's understand-

ing of the editing process and the genres in which we are working. Having gained knowledge and confidence through these processes, students will begin to write convincingly about the art of writing. Over the course of the term, each student will write 2 or 3 creative nonfiction essays and 2 or 3 professional feature stories. These essays and stories will be modeled by the examples in the textbooks that we read and discuss. Regularly, students will submit drafts of their work to the class for discussion in a workshop format. For each draft submitted to the workshop, 3 students will be assigned the task of writing a thoughtful critique.

**WRI 301 Journalism I (4 SH).** News reporting and writing, focusing on developing journalistic style and news judgment. Students will learn techniques of researching, interviewing, quoting, editing, beginning makeup and design, and rewriting the “handout,” or news release. This course also includes an introduction to press law, ethics and broadcast news. All students are expected to submit stories for print consideration. Prerequisite: successful completion of WRI 111.

**WRI 302 Journalism II (4 SH).** Advanced news, feature, and editorial writing course designed to take students beyond the inverted pyramid. The focus is on polishing print and broadcast news writing style, developing techniques of writing various feature stories, and understanding opinion writing. Students will practice copy editing, photo editing, headline writing, caption writing, layout, and design. This course includes a closer study of press law and responsibilities. As lab requirement, students will work with the Holcad staff and submit stories for print consideration. Prerequisite: successful completion of WRI 301.

**WRI 351 Creative Non-Fiction (4 SH).** Creative Non-Fiction takes as its premise the core of all writing-narrative structure and imagery. In non-fiction, structure becomes plastic and changeable according to a writer’s goals. Students will explore ways to create imagery-rich text. Students will read a wide selection in this genre and analyze what individual writers have done and how they’ve done it.

**WRI 352 Career Writing (4 SH).** A course in the various types of practical writing required in the workplace. Prerequisite: successful completion of WRI 111.

**WRI 353 Poetry Workshop (4 SH).** A beginning workshop in which students develop skills in reading, evaluating, writing and revising poetry.

**WRI 354 Fiction Workshop (4 SH).** A beginning workshop in which students develop skills in reading, evaluating, writing and revising fiction.

**WRI 355 Playwriting Workshop (4 SH).** A beginning workshop in which students develop skills in reading, evaluating, writing and revising plays.

**WRI 356 Screenwriting Workshop (4 SH).** A beginning workshop in which students develop skills in reading, evaluating, writing and revising screenplays. (Also listed as FS 356.)

**WRI 358 Technical Writing (4 SH).** Throughout the ages, writing has always been mediated by the medium in which the words appear. With the advent of computers, in particular the Internet, the medium has shifted from paper-based to computer-based. We are in danger of losing the subtlety of language in the speed of technology and globalism. Instant messaging, e-mail, Web pages and other forms of computer-mediated communication are changing how we communicate with one another. It is important to emphasize that words must still be carefully crafted and writers must consider both the connotation and denotation of the words they choose. Because these documents will be technical in nature, they’ll contain graphs, charts, and a wide variety of visual elements as well as text.

**WRI 401 Advanced Writing Workshop (2 SH).** A workshop that will meet once

a week for two credit hours, in which students will develop their skills in writing and criticism through peer review and interchange with the instructor. Students will work in the genre of their choice. Prerequisites: successful completion of at least one of the following courses: WRI 351, 353, 354, 355 and 356.

**WRI 402 Advanced Writing Workshop (2 SH).** A workshop that will meet once a week for two credit hours, in which students will develop their skills in writing and criticism through peer review and interchange with the instructor. Students will work in the genre of their choice. Prerequisites: successful completion of at least one of the following courses: WRI 351, 353, 354, 355 and 356.

**WRI 601 Writing Capstone I (4 SH).** Writing 601 is the first half of the two-course Writing Concentration capstone. The capstone project should demonstrate a Writing major's ability to develop a creative and/or professional writing project that is assisted and complemented by literary analysis. By the end of Writing 601, each student will have developed a significant writing project, submitted comprehensive proposal, and completed a significant segment of the project for evaluation.

**WRI 602 Writing Capstone II (4 SH).** Writing 602 is the second half of the two-course Writing capstone. The capstone project should demonstrate a Writing major's ability to develop a creative and/or professional writing project that is assisted and complemented by literary analysis. By the end of Writing 602, each student will have completed a significant writing project.

## Westminster (WST)

**WST 199, 299, 399, 499 Experimental Courses (1-4 SH).**

**WST 101 Westminster 101 (1 SH).** A one-credit course that serves to introduce students to life at Westminster College and assist them in making a successful transition to higher education. Students will learn how to take advantage of opportunities for personal and academic growth while on campus and to develop strategies for personal and academic success.



# Directories (2019-2020)

The date of initial appointment to Westminster College is given in parentheses.

## THE BOARD OF TRUSTEES

### CORPORATE OFFICERS

Robin W. Gooch (Chair)  
 Jeffrey A. McCandless (Vice Chair)  
 Kathy Brittain Richardson (President)  
 Kenneth J. Romig (Treasurer)  
 Diane L. Ubry (Secretary)

### CLASS OF 2020

David M. Farner, Pittsburgh, PA  
 Robert C. Jazwinski, Hermitage, PA  
 Linda C. Jenkins, Irvington, NY  
 Deborah P. Majoras, Maineville, OH  
 Stephen D. McConnell, Sarasota, FL

### CLASS OF 2021

Ashley E. Davis, Washington, DC  
 Barbara B. Guffey, Gibsonia, PA  
 Robert C. Jackson, Grove City, PA  
 Doreen A. McCall, Harrisburg, PA  
 Jeffrey A. McCandless, Washington, DC  
 Lisa B. Peters, Pittsburgh, PA  
 John T. Weisel, Montclair, NJ  
 Jeffrey T. Wiley, Allison Park, PA  
 Joseph F. Zunic, Sewickley, PA

### CLASS OF 2022

Gary D. Brown, Pittsburgh, PA  
 Ralph A. Dise Jr., Shaker Heights, OH  
 Robin W. Gooch, Chagrin Falls, OH  
 Thomas K. Ritter, Linwood, NJ  
 Linda W. Simpson, Charlotte, NC

### CLASS OF 2023

Mark G. DeWitt, Pittsburgh, PA  
 Beth A. Eck, Charlottesville, VA  
 Christian G. Heilmann, New Hartford, NY  
 Peter Y. Herchenroether, Pittsburgh, PA  
 Benjamin T. Nelson, Princeton, NJ

### ASSOCIATE TRUSTEES

Sara B. Arblaster, Alumni Council Representative  
 Brice H. Bokesch, Student Representative  
 Helen M. Boylan, Faculty Representative  
 Jackson H. Gastmeyer, Student Representative  
 Megan G. Parker, Student Representative  
 Sherri P. Pataki, Faculty Representative  
 Peter M. Smith, Faculty Representative

## EXECUTIVE STAFF

KATHY BRITTAIN RICHARDSON, President of the College (2016)  
B. A., Shorter College; M. A., Ph. D., University of Georgia

JEFFREY S. COKER, Vice President for Academic Affairs and Enrollment, Professor of Biology (2017)  
B.S., Davidson College; M.Ed., Ph.D., North Carolina State University

JAMES E. DAFLER, Director of Athletics (1988)  
B.A., Capital University; M.Ed., Ohio University

CARLOS D. LASSITER, Vice President for Student Affairs and Dean of Students (2017)  
A.B., Vassar College; M.A., Ed.D., The University of Mississippi

JAMIE G. McMINN, Associate Dean of Academic Affairs, Assistant to the President for College Relations, and Professor of Psychology (2003) B.A., Emory & Henry College; M.S., Ph.D., University of Pittsburgh

THE REV. JAMES R. MOHR, College Chaplain (2003)  
B.A., Muskingum College; M.Div., Louisville Presbyterian Theological Seminary

KENNETH J. ROMIG, Vice President for Finance and Management Services (2004)  
B.A., Westminster College; C.P.A. (Pennsylvania)

ERIN T. SMITH, Associate Professor; Chief Information Officer (2002)  
B.S., M.S.I.S., University of Tennessee

MATTHEW P. STINSON, Vice President for Institutional Advancement (2015)  
B.A., Mount Union College; M.B.A., Jones International University

## ACADEMIC AFFAIRS

JEFFREY S. COKER, Vice President for Academic Affairs and Enrollment, Professor of Biology (2017)  
B.S., Davidson College; M.Ed., Ph.D., North Carolina State University

MICHAEL E. ALEPRETE JR., Associate Professor of Political Science; Director of Global Education (2007)  
B.A., Duquesne University; M.A., Ph.D., University of Pittsburgh

CAROLYN K. CUFF, Professor of Mathematics; Faculty Development Officer, 2017 Distinguished Faculty Award (1989)  
B.S., Westminster College; M.S., Ph.D., Case Western Reserve University

ALISON L. DuBOIS, Director of the Graduate School, Associate Professor of Education (2011)  
B.A., John Carroll University; M.Ed., Westminster College; Ph.D., Duquesne University

COLLEEN M. HANNON, Associate Registrar (2001)  
B.A., M.Ed., Westminster College

JENNIFER A. HOUGH, Director of the Professional Development Center (2000)  
B.A., M.Ed., Westminster College

KRISTIANNE KALATA, All College Honors Program Director; Associate Professor of English (2005)  
B.A., Westminster College; M.A., Ph.D., Duquesne University

JAMIE G. McMINN, Associate Dean of Academic Affairs, Assistant to the President

for College Relations, and Professor of Psychology (2003) B.A., Emory & Henry College; M.S., Ph.D., University of Pittsburgh

KAREN K. RESENDES, Co-Director of the Drinko Center, Associate Professor of Biology (2009)  
B.S., College of William and Mary; Ph.D., Brown University

PAMELA A. RICHARDSON, Co-Director of the Drinko Center, Associate Professor of Mathematics (2006)  
B.S., Bowling Green State University; Ph.D., University of Virginia

TRICIA L. RYAN, Assistant Professor of Nursing; Director of the School of Nursing (2016)  
B.S.N., The Pennsylvania State University; M.S.N., Ph.D., Robert Morris University

JESSICA P. SHELENBERGER, Coordinator of the Academic Success Center (2017)  
B.A., Malone University; M.F.A., Chatham University

ERIN T. SMITH, Associate Professor; Chief Information Officer (2002)  
B.S., M.S.I.S., University of Tennessee

SHANNON ISHIYAMA SMITHEY, First Year Program Coordinator, Professor of Political Science (2003)  
B.A., B.S., Southern Methodist University; M.A., Ph.D., The Ohio State University

CHRISTOPHER A. STRANGFELD, Academic Professional, Performing Arts Technical Director (2017)  
B.A., M.A., Geneva College

GARY L. SWANSON, Technical Operations Manager (1990)  
B.A., Westminster College

SCOTT D. WIGNALL, Registrar (2015)  
B.A., M.A., Western Illinois University

MARK V. WILSON, Academic Professional in Chemistry/Instrument Support Specialist (2016)  
A.B., Kenyon College; Ph.D., University of Michigan

## ADMISSIONS AND FINANCIAL AID

ANDRIA R. ALESSIO, Admissions Counselor (2015)  
B.A., Westminster College; M.A., Slippery Rock University

DAWN M. CRUTCHER, Associate Director of Admissions (2002)  
B.A., Grove City College; M.A., University of Texas, San Antonio

LYNN L. FOLTZ, Data Analyst, Enrollment Management (1991)  
B.S., Westminster College

CHERYL GERBER, Director of Financial Aid (1997)  
B.A., Grove City College

JESSICA A. HORGOS, Admissions Counselor (2018)  
B.A., Slippery Rock University

REGENE A. KING, Assistant Director of Financial Aid (1999)  
B.S., M.Ed., Westminster College

NATALIE M. PAOLETTA, Admissions Counselor (2018)  
B.S., Westminster College

KELSEY M. REOTT, Admissions Counselor (2019)

B.A., Westminster College

AMBER D. SCALFARI, Coordinator of Visits and Outreach (2009)

B.A., M.Ed., Westminster College

BRADLEY P. TOKAR, Director of Admissions (1993)

B.A., M.Ed., Westminster College

## ATHLETICS

JAMES E. DAFLER, Director of Athletics (1988)

B.A., Capital University; M.Ed., Ohio University

SCOTT R. BENZEL, Head Football Coach (2014)

B.A., Mercyhurst University; M.B.A., Robert Morris University

TRAVIS BROWN, Head Men's Lacrosse Coach (2018)

B.A., Aurora University; M.Ed. Heidelberg University

RICHARD DEMAIO, Assistant Football Coach (2014)

B.A., M.B.A., Robert Morris University

COLYN J. HAUGH, Assistant Football Coach and Assistant Track and Field Coach (2014)

B.S., M.S., Robert Morris University

JARED R. HECK, Assistant Football Coach (2019)

B.S., M.Ed., Westminster College

TIMOTHY J. McNEIL, Head Track and Cross Country Coach (2007)

B.A., M.Ed., Westminster College

MISTY L. MOTTER, Assistant Athletic Trainer (2006)

B.S., Indiana University of Pennsylvania; M.E., Westminster College

JENNIFER L. PAWLOWSKI, Head Women's Lacrosse Coach (2019)

B.S., Edinboro University; M.S., California University of Pennsylvania

JAN M. REDDINGER, Head Softball Coach (1996)

B.A., West Liberty State University; M.S., Eastern Illinois University

ROSANNE M. SCOTT, Head Women's Basketball Coach (2001)

B.A., Bethany College

KEVIN G. SIROKI, Head Men's Basketball Coach (2012)

B.A., Westminster College

PATRICK J. SMITH, Head Swimming & Diving Coach (2016)

B.A., M.Ed. Westminster College

TAMMY L. SWEARINGEN, Associate Professor of Physical Education, Assistant Athletic Director, Head Women's Volleyball Coach (1993)

B.S., Youngstown State University; M.S., University of Akron

KELLY F. SWINEY, Head Baseball Coach (2017)

B.S., Allegheny College; M.S., California University of Pennsylvania

GIRISH THAKAR, Head Soccer Coach (1998)

B.S., Slippery Rock University; M.Ed., Westminster College

SHAUN J. TOOMEY, Athletic Trainer (1987)

B.S., Miami University of Ohio; M.S., Indiana State University

## BUSINESS AFFAIRS

KENNETH J. ROMIG, Vice President for Finance and Management Services (2004)

B.A., Westminster College; C.P.A. (Pennsylvania)

GINA N. CARRIER, Director of Student Financial Services (2012)

B.S., M.B.A., Youngstown State University; C.P.A., (Ohio)

KIMBERLEE K. CHRISTOFFERSON, Director of Human Resources (1982)

B.A., M.Ed., Westminster College

KATHRYN K. DeMEDAL, Senior Accountant (2008)

B.A., M.Ed., Westminster College

JASON R. JANUSZIEWICZ, Director of Facilities Operations (2019)

B.A., M.B.A., Mount Saint Mary College; M.T.M.-C.M., Bowling Green State University

JANET M. SMITH, Director of Financial Services (2002)

B.A., University of Pittsburgh

## COLLEGE CHAPLAIN

THE REV. JAMES R. MOHR, Chaplain (2003)

B.A., Muskingum College; M.Div., Louisville Presbyterian Theological Seminary

STEPHANIE LEHMAN, Campus Ministry Fellow (2016)

B.A., Westminster College

## COMMUNICATIONS AND MARKETING

ERIN T. SMITH, Associate Professor; Chief Information Officer (2002)

B.S., M.S.I.S., University of Tennessee

BRIAN J. BORNES, Marketing Specialist (2018)

B.A., Indiana University of Pennsylvania

DEREK D. BUCK, Marketing Specialist (2018)

B.A., Indiana University of Pennsylvania

TAYLOR L. CARSON, Content Marketing Specialist (2018)

B.S., Slippery Rock University

ELIZABETH FONTAINE HILDEBRAND, Director of Publications (2007)

B.A., Westminster College

NATHAN J. LaRICCIA, Sports Information Director (2012)

B.A., Kent State University; M.Ed., Heidelberg University

CONNIE L. MCGINNIS, Director of Celebrity Series and Parent Engagement (1993)

B.A., Youngstown State University

## INFORMATION TECHNOLOGY SERVICES

ERIN T. SMITH, Associate Professor; Chief Information Officer (2002)

B.S., M.S.I.S., University of Tennessee

KATIE L. BITTNER, Campus Webmaster (2008)

B.A., Westminster College

ANDREW CHANGOWAY, Project Manager/Infrastructure Engineer (2007)

B.S., Westminster College

BRANISLAV CIKEL, Senior Systems Engineer (2001)

B.A., Westminster College

STANTON A. FLEMING, User Services Team Lead (2002)

B.A., Westminster College; M.S., University of Pittsburgh

KELLY A. HARTNER, Director of Information Technology Services (1994)

A.S., Community College of the Air Force; B.S., University of South Carolina;

M.Ed., Westminster College

ALEJANDRA E. JULIO, Library/ITS Help Supervisor (2013)

B.S., M.S., University of Ottawa

MARK A. PATTON, Systems Analyst (2017)

B.S., Westminster College

DAVID M. PELUSO, Enterprise Services Team Lead (2006)

B.A., University of South Florida

WILLIAM R. QUIGLEY, Principal Database Administrator (2008)

B.A., Westminster College

CLIFFORD J. YONATA, Desktop and Device Specialist (2009)

B.A., Kent State University

## INSTITUTIONAL ADVANCEMENT

MATTHEW P. STINSON, Vice President for Institutional Advancement (2015)

B.A., Mount Union College; M.B.A., Jones International University

JUDITH E. BOGGS, Senior Director of Institutional Advancement (2018)

B.A., Geneva College

NICOLE A. HUNTER, Assistant Director of Alumni Engagement (2016)

B.A., M.Ed. Westminster College

ROBERT G. KLAMUT, JR., Senior Director of Major Gifts (1985)

B.S., Clarion University; M.Ed., University of Pittsburgh

MERRIANNE H. MCGILL, Director of Advancement Services (1999)

B.A., Westminster College

KARA H. MONTGOMERY, Senior Director of Alumni Engagement (2014)

B.S., Slippery Rock University; M.Ed., University of Pittsburgh

ANDREW J. YOUTZ, Major Gifts Officer (2016)

B. A., University of Mount Union

## LIBRARY

JAMIE P. KOHLER, Director of the Library (2011)

B.A., Juniata College; M.S., University of Pittsburgh

JOHN C. GARRISON, Library Services (2012)

B.A., The College of Wooster; M.S., University of Michigan

ALEJANDRA E. JULIO, Library/ITS Help Supervisor (2013)

B.S., M.S., University of Ottawa

T. ELOISE STEVENS, Library Services (2014)

B.A., Eastern Connecticut State University; M.S., University of Pittsburgh

## STUDENT AFFAIRS

CARLOS D. LASSITER, Vice President for Student Affairs and Dean of Students

(2017)

A.B., Vassar College; M.A., Ed.D., The University of Mississippi

MELISSA BARON, Director of the Wellness Center (2011)

R.N., Sharon Regional Health System School of Nursing; B.S.N., Pennsylvania State University

FAITH A. CRAIG, Director of Disability Resources (2012)

B.S., Youngstown State University; M.A., Slippery Rock University

SARAH M. GELLMAN, Counselor (2018)

B.A., Earlham College; M.A., Lewis & Clark College

JEANNETTE HUBBARD, Director of Diversity and Inclusion (P-T) (2001)

B.S., Geneva College; M.A., Duquesne University

FRANCESCA A. MANILLA, Assistant Director for Student Engagement (2018)

B.A., Kent State University; M.A., University of Akron

OSMOND C. MBAERI, Director of Public Safety (2019)

B.A., Widener University

JETER L. SMITH, Associate Dean of Student Affairs: Residence Life and Student Conduct (2018)

B.A., Hiram College; M.S.Ed., Western Illinois University

ANTHONY UBERTI, M.D., College Physician (2009)

B.S., Westminster College; M.D. Penn State University Medical School

GINA M. VANCE, Assistant Vice President for Student Affairs: Campus Engagement (2006)

B.S., Mount Union College; M.Ed., Kent State University

MELINDA J. WISE, Counselor (P-T) (2018)

B.S.W., Edinboro University; M.S.S.A., Case Western University

## SODEXO DINING SERVICES

JEFF CREVELING, Food Service Director (1999)

A.A.S., Montgomery County Community College



## THE FACULTY (2019-2020)

*The listing that follows includes full-time members of the faculty and certain administrators who hold faculty rank. The date in parentheses is the year of initial appointment as a full-time faculty member.*

ANDREW W. ADE, Professor of English; English/Art/Theatre Chair (2003)  
B.A., Northwestern University; M.A., Ph.D., University of North Carolina, Chapel Hill

MICHAEL E. ALEPRETE JR., Associate Professor of Political Science (2007)  
B.A., Duquesne University; M.A., Ph.D., University of Pittsburgh

KRISTEN M. AMICK, Associate Professor of Microbiology (2018)  
B.S., Penn State Erie; Ph.D., The George Washington University

JAMES ANTHONY, Lecturer of Mathematics (2009)  
B.S., Lock Haven University; M.A., The Pennsylvania State University

ROBERT BADOWSKI, Assistant Professor of Business; School of Business Chair (2016)  
B.S., Indiana University of Pennsylvania; M.B.A., Ph.D., Robert Morris University

<sup>1</sup>JOSEPH M. BALCZON, Associate Professor of Biology (1997)  
B.S., The Pennsylvania State University at Erie, Behrend College; M.S., Ph.D., The Pennsylvania State University

DAVID L. BARNER, Professor of Broadcast Communications; School of Communication Chair (1981)  
B.S., M.S., Shippensburg University; Ed.D., University of Pittsburgh

ANNE HAGAN BENTZ, Associate Professor of Music (2001)  
B.M.E., University of Delaware; D.M.A., University of Maryland

JEFFREY T. BERSETT, Professor of Spanish (2002)  
A.B., Washington University; M.A., Ph.D., University of Virginia

KEITH B. BITTEL, Lecturer, School of Business (2015)  
B.A, Westminster College; M.S., Duquesne University

JOHN P. BONOMO, Professor of Computer Science (1998)  
M.S. and B.S., Catholic University; Ph.D., Purdue University

HELEN M. BOYLAN, Professor of Chemistry; Gibson Drinko Chair; 2018 Distinguished Faculty Award (2001)  
B.S., Westminster College; Ph.D., Duquesne University

DEANNE M. BUFFALARI TENNANT, Assistant Professor of Psychology (2014)  
B.S., Allegheny College; Ph.D., University of Pittsburgh

AMY H. CAMARDESE, Professor of Education; 2019 Distinguished Faculty Award (2001)  
B.S.Ed., Ohio University; M.Ed., University of Pittsburgh; Ph.D., Kent State University

CRAIG L. CAYLOR, Associate Professor of Physics; Mathematics/Computer Science/Physics Chair (2001)  
B.S., Kansas State University; M.S., Ph.D., Cornell University

JAMIE J. CHAPMAN, Assistant Professor of Sociology (2014)  
B.A, M.A., Edinboro University; Ph.D., The University of Akron

---

1 On sabbatical leave, Fall Semester 2019

- <sup>2</sup>PATRICIA G. CLARK, Associate Professor of History; History/Philosophy/Religion Chair (2004)  
B.A., Michigan State University; M.S., A.M., Ph.D., University of Illinois
- JEFFREY S. COKER, Professor of Biology; Vice President for Academic Affairs and Enrollment (2017)  
B.S., Davidson College; M.Ed., Ph.D., North Carolina State University
- JOSHUA C. CORRETTE-BENNETT, Associate Professor of Biology (2001)  
B.S., Bates College; Ph.D., Brandeis University
- KEITH F. CORSO, Assistant Professor of Communication Studies (2004)  
B.A., Westminster College; M.A., University of Akron; Ph.D., Capella University
- TRICIA M. COWEN, Assistant Professor of English (2018)  
B.F.A., Emerson College; M.A., Ph.D., Binghamton University
- CAROLYN K. CUFF, Professor of Mathematics; Faculty Development Officer, 2017 Distinguished Faculty Award (1989)  
B.S., Westminster College; M.S., Ph.D., Case Western Reserve University
- TIMOTHY CUFF, Professor of History (2000)  
B.A., Westminster College; M.A., Bowling Green State University; M.A., Ph.D., University of Pittsburgh
- KAREN M. DABNEY, Visiting Assistant Professor of Theatre (2017)  
B.A., St Olaf College; M.F.A., New School for Drama, New York; Ph.D., University of Colorado
- ANN MURPHY DAMMRON, Associate Professor of French and Spanish (1995)  
B.A., Clark University; M.A., Ph.D., Brown University
- JONI L. DARBY, LECTURER OF NURSING (2019)  
B.S., Penn State University; M.S.N., Robert Morris University
- JANE A. DEAN, Lecturer of Special Education (2017)  
B.S., M.Ed., Slippery Rock University
- NANCY J. DeSALVO, Associate Professor of Music (2000)  
B.M., Youngstown State University; M.M., Manhattan School of Music; D.M.A., The Cleveland Institute of Music
- ALISON L. DuBOIS, Associate Professor of Education; Director of Graduate School (2011)  
B.A., John Carroll University; M.Ed., Westminster College; Ph.D., Duquesne University
- KERRI CORNELL DUERR, Associate Professor of Biology (2010)  
B.A., Hartwick College; M.S., Villanova University; Ph.D., University of Vermont
- CHARLENE KLASSEN ENDRIZZI, Professor of Education (1993)  
B.A., M.A., Fresno Pacific College; Ph.D., University of Arizona
- NATACHA C. FONTES-MERZ, Associate Professor of Mathematics (2004)  
B.A., Oberlin College; M.A., Ph.D., Kent State University
- MARIAN M. “MAROSH” FURIMSKY, Associate Professor of Biology; MedPAC Coordinator (2006)  
B.S., Ph.D., University of Ottawa
- ERIC A. GABER, Visiting Assistant Professor of Business; Scheller-Edwards Entrepreneur in Residence (2018)

B.S., Clarion University; M.B.A., E.M.B.A., Indiana University

JOHN C. GARRISON, Associate Professor/Serials and Electronic Resources Librarian (2012)

B.A., The College of Wooster; M.S., University of Michigan School of Information

JOHN W. GEIDNER, Instructor of Accounting (2014)

B.S., M.B.A., Indiana University of Pennsylvania; C.P.A. (Pennsylvania and Ohio)

R. TAD GREIG, Professor of Music; Director of Bands (1995)

B.M., Grove City College; M.M., Youngstown State University; Ph.D., Kent State University

KRISTIANNE KALATA, Associate Professor of English, All-College Honors Program Director (2005)

B.A., Westminster College; M.A., Ph.D., Duquesne University

ROBERT A. KNOP JR., Associate Professor of Physics (2014)

B.S., Harvey Mudd College; M.S., Ph.D., California Institute of Technology

JAMIE P. KOHLER, Associate Professor/Collection Management/Cataloging Librarian (2011)

B.A., Juniata College; M.L.I.S., University of Pittsburgh

PATRICK D. KRANTZ, Associate Professor of Environmental Science (2002)

B.S., West Virginia University; M.S., Northwest Missouri State University; Ph.D., University of Missouri-Columbia

PATRICK E. LACKEY, Assistant Professor of Chemistry (2016)

B.S., Duquesne University; Ph.D., University of North Carolina

<sup>3</sup>ANGELA M. LAHR, Associate Professor of History (2013)

B.A., University of Evansville; M.A., Ph.D., Northern Illinois University

JESSE R. LIGO JR., Professor of Accounting; William McKee Chair (2008)

B.A., Westminster College; M.B.A., Bowling Green State University; C.P.A. (Pennsylvania)

SARAROSE D. LYNCH, Associate Professor of Education (2012)

B.S., West Virginia Wesleyan College; M.S., Ed.D., West Virginia University

RUSSELL E. MARTIN, Professor of History (1996)

B.A., University of Pittsburgh; A.M., Ph.D., Harvard University

JAMIE G. McMINN, Professor of Psychology; Associate Dean of Academic Affairs; Assistant to the President for College Relations (2003)

B.A., Emory & Henry College; M.S., Ph.D., University of Pittsburgh

MANDY B. MEDVIN, Professor of Psychology (1992)

B.A., Rutgers University; Ph.D., University of Washington

COLLEEN M. MERRICK, Associate Professor of Communication Studies (2002)

B.A., M.A., Ph.D., Duquesne University

DEBORAH C. MITCHELL, Professor of English and Film Studies (1992)

B.A., M.A., Youngstown State University; Ph.D., Case Western Reserve University

<sup>4</sup>KANG-YUP NA, Associate Professor of Religion (1998)

A.B., Princeton University; M.Div., Princeton Theological Seminary; Ph.D., Emory University

THOMAS E. OBERST, Associate Professor of Physics; Planetarium Director

3 On sabbatical leave, Spring Semester 2020

4 Leave of absence, Academic Year 2019-2020

(2008)

B.S., Duquesne University; M.S., Ph.D., Cornell University

DIANA I. ORTIZ, Assistant Professor of Biology (2014)

B.S., Universidad del Turabo, Gurabo, Puerto Rico; M.S., Jackson State University; Ph.D., University of South Carolina

KRISTIN PARK, Professor of Sociology, (1993)

A.B., Colgate University; M.A. Certificate in Latin American Studies, M.A., Ph.D., University of North Carolina at Chapel Hill

SHERRI P. PATAKI, Professor of Psychology; Psychology Chair (2004)

B.S. Allegheny College; Ph.D., Carnegie Mellon University

DANIEL E. H. PERTTU, Associate Professor of Music; School of Music Chair (2008)

B.A., Williams College; M.M., M.A., Kent State University; D.M.A., The Ohio State University

<sup>5</sup>MELINDA H. CRAWFORD PERTTU, Associate Professor of Music (2011)

B.S., Duquesne University; M.A., Ph.D., The Ohio State University

BRIAN A. PETRUS, Assistant Professor of Business Administration (2014)

B.S., Westminster College; M.B.A., Youngstown State University

RENÉ A. PICÓ II, Associate Professor of Education; School of Education Chair (2017)

B.S., M.Ed., Ph.D., The Pennsylvania State University

JOEL T. POSTEMA, Associate Professor of Spanish, Modern Languages Chair (2005)

B.A., Calvin College; M.A., Western Michigan University; Ph.D., Washington University

SUZANNE G. PRESTIEN, Associate Professor of English and Public Relations (1997)

B.A., Kent State University; M.A., University of Toledo; Ph.D., Case Western Reserve University

DIANA M. REED, Lecturer of Education (2012)

B.A., Grove City College; M.A.T., University of Pittsburgh

BRYAN S. RENNIE, Professor of Religion and Philosophy (1992)

B.A., M.A., Ph.D., University of Edinburgh, Scotland

KAREN K. RESENDES, Associate Professor of Biology; Co-Director of the Drinko Center (2009)

B.S., College of William and Mary; Ph.D., Brown University

JAMES C. RHOADS JR., Professor of Political Science; Criminal Justice/Sociology Chair; Political Science Chair, LawPac Coordinator (1992)

B.A., M.A., Ph.D., Kent State University

JESSICA D. RHODES, Assistant Professor of Psychology (2016)

B.A., D'Youville College; M.A., Ph.D., University at Buffalo

PAMELA A. RICHARDSON, Associate Professor of Mathematics; Co-Director of the Drinko Center (2006)

B.S., Bowling Green State University; Ph.D., University of Virginia

JOHN C. ROBERTSON, Associate Professor of Biology; Biology Chair (2000)

B.S., University of Massachusetts; M.S., University of Rhode Island; Ph.D., Arizona

5 On sabbatical leave, Spring Semester 2020

State University

BRITTANY A. ROWE-CERNEVICIUS, Assistant Professor of Public Relations (2010)

B.A., M.A., Edinboro University; Ph.D., Bowling Green State University

TRICIA L. RYAN, Assistant Professor of Nursing; Director of the School of Nursing (2016)

B.S.N., The Pennsylvania State University; M.S.N., Ph.D., Robert Morris University

JESSICA L. SARVER, Assistant Professor of Chemistry (2016)

B.S., Penn State Behrend; Ph.D., University of Pittsburgh

ERIN T. SMITH, Associate Professor; Chief Information Officer (2002)

B.S., M.S.I.S., University of Tennessee

PETER M. SMITH, Professor of Chemistry; BioChemistry/Chemistry Chair (2002)

B.S., Ph.D., University of Tennessee

SHANNON ISHIYAMA SMITHEY, Professor of Political Science; First Year Program Coordinator (2003)

B.S., B.A., Southern Methodist University; M.A., Ph.D., The Ohio State University

TIBOR SOLYMOSI, Lecturer of Philosophy (2019)

B.A., Allegheny College; M.A., Ph.D., Southern Illinois University, Carbondale

TAYLOR ELOISE STEVENS, Assistant Professor/Instruction and Outreach Librarian (2014)

B.A., Eastern Connecticut State University; M.L.I.S., University of Pittsburgh

TAMMY L. SWEARINGEN, Professor of Physical Education; Assistant Athletic Director; Head Women's Volleyball Coach (1993)

B.S., Youngstown State University; M.S., University of Akron

DAVID G. SWERDLOW, Professor of English (1990)

B.A., University of Maryland; M.A., Ph.D., Ohio University

MILAGROS Z. SWERDLOW, Lecturer of Spanish (1997)

B.A., Westminster College; M.A.T.L., University of Southern Mississippi

ANN E. THROCKMORTON, Professor of Biology (1990)

B.S., B.A., Hastings College; M.S., Fort Hays State University; Ph.D., Florida State University

BRADLEY L. WEAVER, Lecturer of Broadcast Communications (2000)

B.A., Alderson-Broadbent (W. Va.) College; M.S., University of Kansas

SANDRA K. WEBSTER, Professor of Psychology; 2012 Distinguished Faculty Award (1983)

B.A., M.A., Ph.D., Southern Illinois University, Carbondale

SHANNON WHITCOMB, Lecturer of Anatomy and Physiology (2018)

B.S., Lock Haven University; M.S., Iowa State University

ERIN E. WILSON, Associate Professor of Chemistry (2015)

B.A., Kenyon College; Ph.D., University of Michigan

TIMOTHY D. WINFIELD, Assistant Professor of Music; Heritage Professor (2014)

B.S., Indiana University of Pennsylvania; M.M., Ithaca College; D.M.A., University of Southern California

ANDREW WITHINGTON, Visiting Assistant Professor of Music (2019)

B.M., Ph.d., University of Canterbury; M.M., University of Auckland

SUMMER E. ZICKEFOOSE, Assistant Professor of Art; Art Gallery Director (2010)

B.F.A., B.A., The University of Iowa; M.F.A., The University of Florida

ROBERT H. ZULLO, Associate Professor of Business (2017)

B.A., University of Virginia; M.A., University of North Carolina; Ph.D., University of Georgia

## EMERITI

MONIKA A. BECKER, Professor of Biology Emerita (1980-2001)

B.A., Youngstown State University; Ph.D., Case Western Reserve University

DORITA F. BOLGER, Professor, Librarian Emerita (1981-2013)

B.A., The Pennsylvania State University; M.S.L.S., Clarion University

CAROL M. BOVÉ, Professor of French Emerita (1984-2010)

B.A., University of Pennsylvania; M.A., Ph.D., State University of New York, Binghamton

EVA H. CADWALLADER, Professor of Philosophy Emerita (1973-1996)

B.S., Bucknell University; M.A., University of Louisville; Ph.D., Indiana University

A. DWIGHT CASTRO, Professor of Classics Emeritus, 2015 Distinguished Faculty Award (1970-2015)

B.A., Gettysburg College; M.A., Ph.D., Indiana University

JAMES A. CUMMINS, Professor of Spanish Emeritus (1963-2002)

A.B., Juniata College; M.A., Middlebury College; Ph.D., University of Michigan

BEVERLY WHITE CUSHMAN, Associate Professor of Religion and Christian Education Emerita (2004-2015)

B.A. Stetson University; M.Div., M.A., Ph.D., Vanderbilt University

DAVID O. CUSHMAN, Professor of Economics Emeritus (2005-2015)

B.A., Stetson University; M.A., Ph.D., Vanderbilt University

LINDA P. DOMANSKI, Professor of Education Emerita (1996-2013)

B.S., M.Ed., Slippery Rock University; Ed.D., University of Pittsburgh

JACOB ERHARDT, Professor of German Emeritus (1968-2004)

B.A., Baldwin-Wallace College; M.A., Middlebury College; Ph.D., Case Western Reserve University

BARBARA T. FAIRES, Professor of Mathematics Emerita, 2001 Distinguished Faculty Award (1971-1972; 1976-2009)

B.S., East Carolina University; M.S., University of South Carolina; Ph.D., Kent State University

SAMUEL A. FARMERIE, Professor of Education Emeritus and Curator of Cultural Artifacts (1966-1996)

B.S.Ed., Clarion University; M.Ed., Westminster College; D.Ed., The Pennsylvania State University

J. PHILIP FAWLEY, Professor of Biology Emeritus (1972-2005)

P.S., M.S., Ph.D., Kent State University

DANIEL E. FISCHMAR, Professor of Economics Emeritus, 2014 Distinguished Faculty Award (1975-2017)

B.A., M.A., Roosevelt University; Ph.D., Southern Illinois University, Carbondale

ELIZABETH A. FORD, Professor of English Emerita, 2005 Distinguished Faculty Award (1989-2005)

B.A., M.A., Youngstown State University; Ph.D., Kent State University

JOSEPH B. FUSCO, Professor of Physical Education Emeritus (1968-2000)

B.A., M.Ed., Westminster College; Ph.D., University of Pittsburgh

ALAN G. GITTIS, Professor of Psychology Emeritus, 2009 Distinguished Faculty Award (1976-2011)

B.A., Temple University; M.A., Ph.D., The Ohio State University

DAVID B. GRAY, Professor of Psychology Emeritus, 2003 Distinguished Faculty Award (1965-2003)

B.A., Westminster College; M.Div., Pittsburgh Theological Seminary; M.Ed., Ph.D., University of Pittsburgh

S. KIPLEY HAAS, Professor of Physical Education Emerita (1970-2005)

B.S., M.Ed., Slippery Rock University

JAMES E. HALL, Professor of Mathematics Emeritus (1984-2006)

B.S., Northern Illinois University; A.M., Harvard University; Ph.D., University of Wisconsin

CLARENCE E. HARMS, Professor of Biology Emeritus, 1993 Distinguished Faculty Award (1969-2003)

B.A., Tabor College; M.A., University of Kansas; Ph.D., University of Minnesota

WARREN D. HICKMAN, Professor of Mathematics Emeritus, 1998 Distinguished Faculty Award (1968-2008)

B.S., Capital University; M.S., Case Western Reserve University; Ph.D., Kent State University

G. EUGENE HILL, Associate Professor of Education Emeritus (1974-1998)

B.S., M.A., West Texas State College; M.A., Ed.D., University of Denver

JOSEPH M. HOPKINS, Professor of Religion Emeritus (1946-1985)

B. Mus., Westminster College; B.Th., Pittsburgh Theological Seminary; Ph.D., University of Pittsburgh

FREDERICK D. HORN, Professor of English Emeritus, 1997 Distinguished Faculty Award (1966-2002)

A.B., Lycoming College; M.A., Ph.D., University of Delaware

DARWIN W. HUEY, Professor of Education Emeritus, 1994 Distinguished Faculty Award (1977-2017)

B.A., M.Ed., Westminster College; Ed.D., University of Pittsburgh

NANCY E. JAMES, Professor of English Emerita (1965-1990)

A.B., Waynesburg College; M.A., University of Pittsburgh; Ph.D., The Pennsylvania State University

WILLIAM L. JOHNSON, Professor of Physics Emeritus, 2007 Distinguished Faculty Award (1971-2007)

B.A., University of Southern Mississippi; M.S., Ph.D., U.S. Naval Postgraduate School

ALLEN C. JOHNSTON, Professor of Education Emeritus (1976-2001)

A.B., Grove City College; M.Ed., Ph.D., University of Pittsburgh

MARTHA R. KELLNER, Associate Professor of Chemistry Emerita (1993-2015)

B.A., Greenville College; M.S., University of Illinois; Ph.D., University of Kentucky

PHYLLIS G. KITZEROW, Professor of Sociology and Criminal Justice Studies



Emerita, 2011 Distinguished Faculty Award (1978-2012)

B.S., University of Wisconsin; M.A., Ph.D., University of Pittsburgh

TERRI L. LENOX, Professor of Computer Science Emerita, 2013 Distinguished Faculty Award (1999-2018)

B.S., Grove City College; M.S., Ph.D., University of Pittsburgh

G. SAMUEL LIGHTNER IV, Professor of Physics Emeritus (1970-2008)

B.S., Randolph-Macon College; Ph.D., University of Virginia

GARY D. LILLY, Associate Professor of Sociology and Criminal Justice Studies Emeritus (1977-2013)

B.A., Westminster College; M.A., Ph.D., Kent State University

ROBIN ANNA-KARIN LIND, Associate Professor of Music Emerita (2000-2014)

B.A., College of Idaho; M.A., University of Oregon; Ph.D., University of Utah

KENNETH M. LONG, Professor of Chemistry Emeritus, 2002 Distinguished Faculty Award (1962-2002)

B.S.Ed., Goshen College; M.A.T., Michigan State University; Ph.D., The Ohio State University

CAMILA BARI DE LÓPEZ, Professor of Spanish Emerita (1997-2014)

Profesora de Literatura, Universidad Nacional de Cuyo, Argentina; Ph.D., University at Albany

NANCY A. MACKY, Associate Professor of English Emerita (1993-2003)

B.A., Rutgers University; M.A., Ph.D., Kent State University

JESSE T. MANN, Professor of French, Vice President for Academic Affairs and Dean of the College Emeritus (1984)

B.A., Washington and Lee University; M.A., Ph.D., University of Virginia

PATRICK C. MCCARTHY, Professor of Biology Emeritus, 2008 Distinguished Faculty Award (1970-2008)

B.S., M.S., Ph.D., Wayne State University

DELBER L. MCKEE, Professor of History Emeritus (1952-1988)

A.B., Hastings College; M.A., University of Wisconsin; Ph.D., Stanford University

GAIL L. MILLER, Professor of Business Emeritus (1983-2013)

B.A., Otterbein College; M.B.A., University of Georgia; D.B.A., University of Kentucky

M. EILEEN MORELLI, Associate Professor of Education Emerita (2002-2015)

B.S., Youngstown State University; M.Ed., Valparaiso University; Ed.D., University of Pittsburgh

B. EUGENE NICHOLSON, Professor of Physical Education Emeritus (1969-2007)

B.S.Ed., Slippery Rock University; M.Ed., Westminster College

J. MILLER PECK, Professor of Mathematics Emeritus (1958-1962; 1963-1999)

A.B., Harvard University; M.S., Carnegie Mellon University

JAMES A. PERKINS, Professor of English Emeritus, 2006 Distinguished Faculty Award (1973-2008)

B.A., Centre College; M.A., Miami University; Ph.D., University of Tennessee

D. SCOTT RENNINGER JR., Professor of Physical Education Emeritus (1978-2014)

A.B., Heidelberg College; M.S., Eastern Michigan University

JAMES K. SEWALL, Associate Professor of Spanish Emeritus (1962-1987)  
B.A., Grove City College; M.A., Fairleigh Dickinson University

DAVID C. SMITH, Associate Professor of Accounting Emeritus (2004-2016)  
B.S., Bucknell University; M.S., Robert Morris University; M.B.A., University of Pittsburgh; C.P.A. (Pennsylvania)

MOLLY P. SPINNEY, Associate Professor, Head Librarian Emerita (1975-2012)  
B.A., Westminster College; M.L.S., University of Pittsburgh

RICHARD L. SPROW, Professor of English Emeritus, 2016 Distinguished Faculty Award (1976-2016)  
B.A., St. Lawrence University; M.A., Ph.D., Purdue University

DAVID C. TWINING, Professor of History Emeritus (1990-2013)  
B.A., College of Wooster; M.A., University of Virginia; Ph.D., Case Western Reserve University

ROBERT L. VANDALE, Professor of Religion Emeritus, Director of the Peace and Conflict Resolution Center (1973-1998)  
B.A., Lawrence College; M.Div., Pittsburgh Theological Seminary; Ph.D., University of Iowa

R. THOMAS WILLIAMSON, President Emeritus (1997-2008)  
B.A., College of Wooster; J.D., University of Baltimore

ROGER T. WOLCOTT, Professor of Sociology Emeritus (1956-1993)  
B.A., Cornell University; M.A., Ph.D., Columbia University

PAUL G. WOZNIAK, Professor of Accounting Emeritus (1974-2008)  
B.S., M.B.A., Youngstown State University; C.P.A. (Pennsylvania)