

BULLETIN

2019-20



SAINT VINCENT COLLEGE

ACCREDITATIONS

Accreditation Council for Business Schools and Programs
Council on Accreditation of Nurse Anesthesia Educational Programs
Pennsylvania Department of Education
Middle States Commission on Higher Education

APPROVALS

American Chemical Society

MEMBERSHIPS

American Association of Collegiate Registrars and Admissions Officers
American Student Government Association (ASGA)
Association of Benedictine Colleges and Universities (ABCU)
Association of Catholic Colleges and Universities
Association of Governing Boards of Universities and Colleges
Association of Higher Education Parent/Family Program Professionals (AHEPPP)
Association of Independent Colleges and Universities of Pennsylvania
Association for Orientation, Transition and Retention in Higher Education (NODA)
Association for Student Affairs at Catholic Colleges and Universities (ASACCU)
C-Cue, Inc. (Consortium for Computing in Undergraduate Education, Inc.)
Catholic Campus Ministry Association (CCMA)
College Band Directors National Association (CBDNA)
College Board
CFP Certified College
Cooperative Education Association of Pennsylvania
Council for the Advancement and Support of Education (CASE)
Council of Independent Colleges
Council for Six Sigma Certification
Economic Growth Connection of Westmoreland County
Greater Latrobe-Laurel Valley Chamber of Commerce Laurel Highlands, Inc.
Ligonier Valley Chamber of Commerce
Middle Atlantic Association of Colleges of Business Administration
Middle States Association of Collegiate Registrars and Officers of Admissions
National Association of International Educators (NAFSA)
National Association of Campus Activities (NACA)
National Association of College Admissions Counselors
National Association of College and University Business Officers
National Association of Colleges and Employers (NACE)
National Association of Independent Colleges and Universities
National Association of Student Financial Aid Administrators
National Catholic Educational Association
National Collegiate Athletic Association (NCAA)
Pennsylvania Association of College Admissions Counselors
Pennsylvania Association of Colleges and Employers
Pennsylvania Association of Student Financial Aid Administrators
Pennsylvania Association of Colleges for Teacher Education
Westmoreland County Music Educators Association (WCMEA)

AFFILIATIONS AND AGREEMENTS

Argentina

Aden Business School

China

Beijing Normal University
East China Normal University
Ministry of Education of the People's Republic of China
Sanda University
Shandong University
Shanghai University of Electric Power
Shanghai University of Finance and Economics
Southwestern University of Finance and Economics
Wuhan University

France

Ircom-Institu Albert Le Grand

Georgia

International Black Sea University

Netherlands

Erasmus University College
Hanze Hogeschool Groningen/Hanze University of Applied Sciences, Groningen

Spain

Universidad Pontificia Comillas, Madrid, Spain

Taiwan

Fu-Jen Catholic University

United States

Butler County Community
Chatham University
Duquesne University
Lake Erie College of Osteopathic Medicine
Lake Erie College, School of Dental Medicine
Ohio College of Podiatric Medicine
Pennsylvania College of Podiatric Medicine
Pennsylvania State University
Robert Morris University
Seton Hill University
The Catholic University of America
University of Pittsburgh
Westmoreland County Community College

PARTICIPATION

Advanced Placement Program (AP)
Air Force Reserve Officer Training Corps (at University of Pittsburgh)
Army Reserve Officer Training Corps (at University of Pittsburgh at Greensburg)
Bureau of Vocational Rehabilitation
College Level Examination Program (CLEP)
Direct Student Loan Program
Pell Grant Program
Pennsylvania Higher Education Assistance Agency
Supplemental Educational Opportunity Grants

The statements in this Bulletin are for information only and do not constitute a contract between the student and Saint Vincent College. The College reserves the right to change any policy, requirement, course offering, or fee; and also reserves the right to exclude students whose conduct or academic standing is deemed by the College not to be in accord with the requirements set forth in this Bulletin.

Saint Vincent College subscribes to a policy of equal opportunity. In so doing, Saint Vincent does not discriminate against any individual on the basis of race, color, sex, religion, age, veteran status, ethnic origin, or handicap in any of its programs, activities, or employment decisions. The Director of Human Resources, Saint Vincent College, Latrobe, Pennsylvania 15650-2690 is the officer with responsibility for overseeing the implementation of this equal opportunity policy and the affirmative action plan.

This school is authorized under Federal law to enroll non-immigrant alien students.



SAINT VINCENT COLLEGE

Saint Vincent College is accredited by the Middle States Commission on Higher Education, 3624 Market Street, 2nd Floor West, Philadelphia, PA 19104, 267-284-5000, info@msche.org. The Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Commission on Recognition of Postsecondary Accreditation.

FOR INFORMATION about admission, contact:

Office of Admission and Financial Aid
Saint Vincent College
300 Fraser Purchase Road
Latrobe, Pennsylvania 15650-2690
Phone 724-805-2500
1-800-782-5549
e-mail: admission@stvincent.edu
home page: www.stvincent.edu

2019-2020 CALENDAR

FALL SEMESTER 2019

Aug. 26	Final registration and adjustments; Classes begin
Sept. 2	Labor Day; no classes
Sept. 3	Last Day for adding courses
Sept. 9	Last Day for withdrawal without permanent record Last day for withdrawal with 95% refund
Sept. 10 - Nov. 22	Withdrawals receive "W"
Sept. 15	December 2019 Graduate applications due
Sept. 20	Last day to change to P/F designation; last day to change to Audit
Sept. 24	Last day for withdrawal with 40% refund; no refund after this date
Sept. 26	Spring and Summer 2019 incomplete grades not changed become "F"
Sept. 30	Last day to add internship credit for the Fall semester
Oct. 9	Early performance grades due at noon
Oct. 14-15	Extended weekend for undergraduates begins after last class on Oct. 11
Oct. 15	Graduate Fall Term 2nd session courses begin
Oct. 16	Classes resume
Oct. 30-31 - Nov. 1,4-5	Registration for Spring Semester 2020
Nov. 15	May and August 2020 Graduate applications due
Nov. 21	Founders' Day (classes canceled 3:30 – 7 p.m.)
Nov. 25	Withdrawals receive WF
Nov. 27-Dec. 1	Thanksgiving vacation begins after last class on Nov. 26
Dec. 2	Classes resume
Dec. 6	Last day of class
Dec. 7-8	Reading Days
Dec. 9-12	Final examinations
Dec. 12	Grades due at noon for all December Commencement applicants
Dec. 14	December Commencement
Dec. 17	Final grades are due at noon

SPRING SEMESTER 2020

Jan. 12	Students return
Jan. 13	Final registration and adjustments; Classes begin
Jan. 20	Last Day for adding courses
Jan. 27	Last Day for withdrawal without permanent record Last day for withdrawal with 95% refund
Jan. 28 - April 14	Withdrawals receive "W"
Feb. 7	Last day to change to P/F designation; last day to change to Audit
Feb. 11	Last day for withdrawal with 40% refund; no refund after this date
Feb. 13	Fall 2019 incomplete grades not changed become "F"
Feb. 14	Last day to add internship credits for the Spring semester
Feb. 26	Early performance grades due at noon
Feb. 29-March 8	Spring break for undergraduates; begins after last class on Feb. 28
March 9	Classes resume Graduate Spring Term 2nd session courses begin
March 25-27, 30-31	Registration for Fall Semester 2020
April 9-13	Easter vacation begins after last class on April 8
April 14	Classes resume
April 15	Withdrawals receive WF
April 22	Honors Convocation and Undergraduate Conference (classes canceled from 11:30 a.m. -7 p.m.)
May 1	Last day of class
May 2-3	Reading Days
May 4-7	Final examinations
May 7	Grades due at noon for all May Commencement applicants
May 9	Commencement
May 12	Final grades are due at noon
May 18	Summer Session begins

Semesters are 15 weeks in length with an additional week for final examinations.

**Students enrolled in courses at Seton Hill University under the cross-registration agreement should obtain a calendar from SHU with the applicable dates.*

INTRODUCTION TO THE COLLEGE

MISSION STATEMENT

Saint Vincent College is an educational community rooted in the tradition of the Catholic faith, the heritage of Benedictine monasticism, and the love of values inherent in the liberal approach to life and learning. Its mission is to provide quality undergraduate and graduate education for men and women to enable them to integrate their professional aims with the broader purposes of human life. The programs, activities, and encounters that make up student life at Saint Vincent College encourage the intellectual gifts, professional aptitudes, and personal aspirations of students to mature harmoniously.

CATHOLIC, BENEDICTINE AND LIBERAL ARTS VALUES

Central to the Mission of the College are its Catholic tradition, its Benedictine heritage, and its commitment to liberal arts education. Outlined below are some of the values of a Catholic, Benedictine, liberal arts education as defined and operated upon by the Saint Vincent College community.

CATHOLIC

Saint Vincent College seeks to provide an understanding of the positive contributions which the Catholic Church has made, and continues to make, to human progress. Faculty, administrators, staff, and students of all faiths work together in a common search for truth in an environment that does the following:

- Affirms that the love of God and faith in Jesus Christ are authentic values for believers. The life of faith and the life of learning are regarded as inclusive and mutually compatible; as expressed in the College motto, *veri justique scientia vindex*, “learning is the best advocate of truth and justice.”
- Represents a sacramental view which consecrates all visible creation as a pledge, reminder, and active instrument of God’s invisible presence and grace.
- Supports the integration of religious and temporal values in everyday life.
- Promotes appreciation for the positive contributions of all peoples and cultures to world civilization. In this sense, Saint Vincent is truly “catholic,” ecumenical, and international.

BENEDICTINE

The traditional Benedictine apostolate of education is characterized by an appreciation of truth wherever it is found and by respect for the unique person and talents of every student. In an authentic Benedictine environment, students are not just objects of an educational enterprise; they are valued partners in a common search for truth and beauty. Saint Vincent College is grounded in the following core values of Benedictinism:

- Hospitality, as exemplified by a tolerant spirit that recognizes the mystery of God’s presence in all creation and the sacred dignity of each person.
- Commitment to a concept of community that advocates tranquility and order and is nourished by mutual respect, appreciation, and charity. Even in times of historical and personal upheaval, Benedictine life seeks to preserve peace and solidarity, maintained by the communal effort of prayer and work.
- Care and concern for each individual as evidenced in personal interactions that anticipate the needs of others, bear patiently with others, and promote the personal growth of others.
- Stewardship for all work spaces, living spaces, and the natural environment

LIBERAL ARTS AND SCIENCES

Liberal arts education is integrative, challenging students to explore the principles, perspectives, and goals of many different disciplines and modes of learning. Saint Vincent’s particular approach to liberal arts education, undergirded by the values of its Catholic, Benedictine heritage, provides an education for life and for lifelong learning. It espouses a love of learning and a belief in the intrinsic worth of higher education. The College seeks to instill the following educational virtues:

- Facility to comprehend particular phenomena conceptually and to look for patterns and regularities in experience.
- Ability to evaluate ranges of evidence and to revise previous theory or hypotheses accordingly.
- Skill in discovering relationships between seemingly divergent phenomena.
- Ability to be an independent learner rather than a mere consumer of others’ interpretations.
- Facility to articulate and express one’s thoughts clearly.
- Self-assurance in adhering to mature social and ethical values, coupled with tolerance for alternate values in others.

- Skill in making informed decisions and courage to act on them.
- Appreciation for the fine arts, especially art, music, and literature.
- Receptivity to uncommon opinions and unfamiliar cultures.

CAMPUS MINISTRY

In founding Saint Vincent College, Catholic Benedictine monks established an academic tradition in which religion plays a vital role. Students are encouraged to search for personal religious faith in the context of community life. The College attempts to guide and help students of all faiths in their search for authentic religious values. The mission of Campus Ministry is to enable the college community, especially the students, of all faith traditions, by providing opportunities to explore, celebrate, act on, and live their faith through prayer, education, service, Christian living, and Leadership Formation. The staff of Campus Ministry is charged with promoting and encouraging religious life and values. The staff members are available for conversation and/or counsel at appointed hours and upon request. A variety of events such as lectures, Bible Studies, discussions, retreats, and Gospel-oriented services to the needy through interaction with community agencies are sponsored by the campus ministers. Catholic religious services are conducted daily and ecumenical services on a regular basis on campus. In addition to the traditional Catholic Sacraments, Eucharistic Adoration takes place several times a week. Praise and Worship gatherings take place weekly. Students may also participate in the liturgical functions of the monastic community and Saint Vincent Parish. These services are held in the Basilica. Congregations of various faiths in the surrounding communities welcome students to their religious services.

AN INVITATION TO LEARNING

During your college years, you as a student are faced with some important decisions. One of them is to determine your approach to education—your own “aims and objectives.” You will have to determine whether your objective is merely to fulfill the minimum requirements in order “to get a degree,” or whether it is to become more creatively engaged in learning as an integral part of your life.

This *Bulletin* concerns itself for the most part with the less significant objective, which is the first. It contains the basic information about courses, procedures, and requirements necessary for obtaining a degree: it is your responsibility to have and

to use this information. If you have problems or questions about this part of college life, be sure to ask your faculty advisor for help. If you are in the process of changing majors or career plans, a thorough discussion with your faculty advisor and with a member of the Career and Professional Development Center staff is more imperative. Finally, if you have unresolved problems and don't know where to turn, contact the office of Vice President for Academic Affairs. The Vice President for Academic Affairs may know resources at the College or elsewhere with which you are not familiar.

The more significant objective, which touches upon a personal commitment to learning, is more difficult to deal with than information about degree requirements. Your openness to new experiences, your friendships with faculty and fellow students are more essential to the realization of this objective than the information contained in any college bulletin.

As a preamble, faculty members will tell you that if you wish to be serious about learning, you must practice critical reading and listening in all your courses: you must be able to tell the difference between essentials and non-essentials. And you must be able to express yourself well, both verbally and in writing. Few people have been able to achieve these essential skills for learning without diligently working at them over a long period of time.

In your college experience try to learn as much as you can about change: your personal and spiritual developmental change, social change, change we call failure, even the change we call death. Many of the courses of the core curriculum are designed to help you think about change—from a chemical reaction to a political revolution or a religious experience. Secondly, it is important to have possible careers in mind in determining what you will learn; and it is important to gain a reasonable mastery in some field while at college. However, it would be a mistake to think of your college education exclusively in terms of the work you want to do. The much larger part of your waking hours, even before retirement, will be taken up by self-directed activities. Courses in the core curriculum outside your major are important for developing meaningful self-directed activities outside the world of paid work. In addition, social service, religious activities, art, meditation, dance, drama, music, sports, friendships are all elements of a good college experience. The *Rule of Saint Benedict* is a classic text about achieving a peaceful balance between work and other activities and values of life. Finally, your personal philosophy about learning should take cognizance of the fact that human beings must live in the context of a variety of systems. Your college

education will help you learn about systems: how they work, and how to make them work justly for you and your neighbor. To achieve this, however, it is not sufficient to learn about political, economic, and social systems only in class. First-hand experience through participation in clubs and organizations seems necessary to learn how to negotiate with other interest groups, and how to get things done in an effective and morally acceptable way. You may be able to start a new organization to meet a need, many extracurricular activities at Saint Vincent were begun and are run by students.

These dimensions of learning which touch upon a person's relation to the basic realities of life are also suggested when the College describes its "viewpoint and tendencies" as Catholic, Benedictine, and liberal. A college education at Saint Vincent provides the opportunity for a student to come to grips with some of the basic questions of life in company with faculty and fellow students.

HISTORY AND HERITAGE

Saint Vincent Archabbey and College was founded in 1846 by Boniface Wimmer, a monk from the Benedictine Abbey of Metten in Bavaria. Wimmer came to America with the intention of educating the sons of German immigrants and training a native clergy for the German-speaking peoples of the United States. He settled on the site of a parish established for English and Irish Catholics in 1789, and very quickly learned that his monks would not be able to limit their attention to Germans alone. With the aid of several American bishops, friends, and benefactors in Europe, and a strong community of Benedictine monks at the monastery of Saint Vincent, he established the first Benedictine college in the United States. From modest beginnings the college grew rapidly, and on 18 April 1870 the State Legislature of Pennsylvania incorporated the school, empowering it "to grant and confer degrees in the arts and sciences as are granted in other colleges and universities in the United States, and to grant to graduates, or persons on whom such degrees may be conferred, diplomas or certificates as is usual in colleges and universities."

From its earliest days Saint Vincent College has striven to embody the ideals and character of the 1,500-year-old heritage of Benedictine education and scholarship. Based firmly on the ideal of Christian community, this heritage has contributed to both the survival and dissemination of Western culture. It has been an enduring heritage because of its capacity to adjust to the exigencies of successive ages. For more than 150 years the monks of Saint Vincent have worked to exemplify and to carry on this living tradition. From their ranks, men have

established Benedictine colleges and schools in Minnesota, Kansas, North Carolina, New Jersey, Illinois, and Georgia, among other places.

In the words of a college catalogue of the 1850s, Saint Vincent is located in an "elevated and healthy" area. Situated on a foothill of the Alleghenies, the school commands a panoramic view of the countryside. In January of 1963 a fire destroyed part of the campus and in the years which have followed a new age in the history of the college has begun. Out of the ashes of the past a new Saint Vincent has emerged. With a deep awareness of the heritage and tradition which is its foundation, the community has once again turned its face toward the future. And perhaps no better image of this dynamic commitment to a creative relationship between old and new exists than the campus itself, whose newly constructed and aesthetically pleasing modern buildings blend harmoniously with the older structures built by the pioneer monks themselves. Saint Vincent College became coeducational in 1983 as a major step to strengthen all aspects of the community life and educational services of the College. The decision was based on a belief that the College was in a strong position to offer men and women the opportunity of personal development and solid career preparation in a wholesome environment grounded in the time-tested Benedictine educational and religious tradition.

Saint Vincent College, along with the other units of the Saint Vincent Community — Archabbey, Seminary and Parish — observed the 150th anniversary of its founding in 1996 with an 18-month series of activities and events which recognized the rich history and heritage of Saint Vincent while focusing attention on planning and preparing for the future.

SETON HILL UNIVERSITY CROSS-REGISTRATION PROGRAM

In order to present wider opportunities to the students of Saint Vincent College and Seton Hill University, an academic cross-registration program exists between the two institutions during the fall and spring terms. Library facilities at both institutions are available to all students and members of faculties at both colleges. This program has been designed to give the students of each institution every opportunity to advance academically, at moderate costs, within the common perspectives of these two Catholic institutions. Grades earned for cross-registered courses are included in the calculation of the GPA.

DUQUESNE UNIVERSITY AND SAINT VINCENT COLLEGE COOPERATIVE PROGRAM

Duquesne University and Saint Vincent College offer a cooperative program in Pharmacy. This collaboration allows individuals to pursue an undergraduate liberal arts education in preparation for graduate studies in a professional field. Additional information is available in the *Bulletin* in the Allied Health Professions section.

THE CAMPUS

In a pattern characteristic of many Benedictine communities, the first buildings were grouped in a quadrangle. At least ten of the original buildings were “home-made.” That is, the architects and workmen were Benedictines who cut the trees, sawed the timber, and fashioned clay into bricks.

Alfred Hall (1907) houses the administration offices and also provides space for language laboratories, computer labs, classrooms, and some faculty offices.

Andrew Hall (1905) extends from the Archabbey Basilica and contains the monastic refectory.

Anselm Hall (1875-1879) connecting Andrew Hall with Placid Hall provides space for small dining-meeting rooms.

Aquinas Hall (1952) connects Wimmer Hall with the Archabbey Basilica and provides classrooms for the seminary.

Archabbey Basilica (1892-1905) dominates the campus at Saint Vincent. The cornerstone was laid in 1892, and the consecration took place August 24, 1905. Beneath the Basilica is the Crypt, which contains altars and many works of modern art in glass, wood, stone, and acrylic and oil paintings. The Basilica was completely restored in 1996.

Aurelius Hall (1923) served as a College residence hall until 2002 and traditionally housed freshmen. Today, Aurelius Hall houses the McKenna School of Business, Economics, and Government and serves as a residence hall.

Chapel of St. Gregory the Great (1998) is the Seminary chapel.

Community Center (1979) adjoins Anselm, Benedict, and Placid Halls. It houses the main student dining room and food preparation facilities.

Elizabeth J. Roderick Center (1998) houses Seminary and Archabbey offices, seminary residence rooms, and guest rooms.

Fred M. Rogers Center (2008) is a LEED® Gold Certified building where the Department of Event and Conference Services is located. Additionally, the Center houses the Fred Rogers Center for Early Learning and Children’s Media including the Fred Rogers Archive of multimedia materials from Mister Rogers’ Neighborhood and other

work by and about Fred Rogers. The Foster and Muriel McCarl Coverlet Gallery is also located on the ground floor of the building featuring more than 400 coverlets.

Gerard and Bonaventure Halls (1963) are residence halls providing accommodations for 459 students in double rooms.

Headmasters Hall and Placid Hall (built in sections from 1855-1877) house the post office, dining and conference rooms, academic affairs, the faculty commons, faculty offices, and classrooms for the School of Arts, Humanities, and Social Sciences.

Leander Hall (1913) is a residence hall for seminary students and monastic guests.

Mary, Mother of Wisdom Student Chapel (2003) is the College Student Chapel.

Monastery (1967) is the residence of the Benedictine monks.

Parish Center (1997) provides a gathering space for parish activities, parish offices, and the Basilica Gift Shop.

Prep Hall (1998), named in honor of all of the alumni of the former Saint Vincent Preparatory School and in thanksgiving for the leadership of Prep alumni in providing the funding necessary to make the building a reality. It houses “smart” classrooms, multimedia laboratory, media suite, communication, and education faculty offices.

Robert S. Carey Student Center (1952-1954; The Frank and Elizabeth Resnik Swimming Pool, 1993; Student Union, 1996, 2003) covering more than an acre of ground, contains the gymnasium, Performing Arts Center, swimming pool, Mary, Mother of Wisdom Student Chapel, Campus Ministry, wellness center, book center, snack bar, student union, classrooms, game room, fitness center with free weights, weight machines, and cardiovascular machines, art gallery, art studios, music practice rooms, and the fine arts department and education faculty offices and classrooms.

Rooney Hall (1995) is a College residence hall that houses 125 students in double rooms and 50 students in 15 apartments.

Saint Benedict Hall (2002) is the residence hall for first-year students. The hall accommodates 368 students in double rooms.

The Sis and Herman Dupré Science Pavilion (2013) houses the Herbert W. Boyer School of Natural Sciences, Mathematics, and Computing and was completed in January 2013. The project renovated nearly 60,000 square feet of space and added another 45,000 square feet of new construction to the original Science Center built in 1969. All the disciplines — natural sciences, mathematics, and computing — share classrooms, lab space, computer labs, conference rooms, lounges, and a 75-seat lecture hall. A three-story all-glass atrium serves as a window to the natural world and a welcoming gateway into the building.

Student Activities Center (1964) is used for social affairs and recreation and features a glass wall that provides a dramatic view of the College athletic fields and the mountains to the east.

Wimmer Hall (1952) is a College residence hall. It has 135 private rooms.

The names of most of the buildings honor early Benedictine educators and deceased abbots who served the College as president.

THE LIBRARY

The Dale P. Latimer Library provides a climate-controlled repository of the institutions’ bibliographic holdings and a growing resource in support of the College’s teaching mission.

Borrowing privileges are available to enrolled students, faculty, administrators, and staff members of the College. The Saint Vincent identification card serves as the Library card. The Library is open to patrons 89 hours each week when school is in session. Special hours are in effect during vacation periods and holidays; schedule changes are posted in the Library, distributed to the offices of the College, and available on the College website.

The Library includes a collection of audio tapes and a DVD collection. The Library currently receives more than 150 print periodicals and has nearly 170,000 print volumes and approximately 85,000 microforms. The Library houses unique collections in theology and special collections of Pennsylvania and Benedictina. The Library is also a repository for a collection of rare books which is soon to be housed in a newly renovated climate-controlled area. Access to this collection will be available through special request.

The whole collection is classified according to the Library of Congress (LC) system and the Library uses a fully automated public access catalog (OPAC) based on the integrated system of Innovative Interfaces Incorporated. Electronic resources are available through a variety of databases including EBSCO Discovery Services, EBSCOHost, Lexis-Nexis, and JSTOR. The building houses a computer lab, and the campus network is thoroughly accessible for laptop users.

Materials not available at the Library may be requested from other libraries through Interlibrary Loan service (ILL); this service is available through the Public Services Librarian at the Circulation Desk or by completing the on-line ILL request form on the Saint Vincent College website.

ADMISSION

The Office of Admission and Financial Aid encourages students to come to campus and experience firsthand the environment and the spirit of Saint Vincent College.

The Office is open from 8:30 a.m. to 4:30 p.m. on weekdays and by appointment on many Saturdays. Student guides are available for tours of the campus.

Visitors can call 1-800-782-5549 or visit www.stvincent.edu in advance to arrange an appointment. Admission counselors will be better able to advise prospective students whose test records, secondary school grade reports, or college transcripts are available for reference.

ADMISSION POLICY

Saint Vincent College has a rolling admission policy; that is, the applicant is notified of the decision of the Admission Committee soon after all credentials are received.

After acceptance, the applicant may reserve space in the class at Saint Vincent College by making a deposit of \$100 required of all students, and if residence on campus is desired, an additional \$100 to reserve a room. This deposit will be credited to the applicant's account, but it is not refundable.

FRESHMAN APPLICANTS

An applicant for the freshman class should submit the following to the Office of Admission and Financial Aid:

1. A completed application form with the non-refundable \$25 application fee or fee waiver form.
2. An official transcript sent directly to Saint Vincent College from the guidance office at the secondary school of graduation.
3. Test results from the Scholastic Assessment Test (SAT) or from the American College Testing Program (ACT).

SUBJECTS REQUIRED FOR ADMISSION

Adequate preparation is an important determinant for a successful college education. Fifteen secondary school academic units are required for admission to Saint Vincent College. These 15 units must include 4 units of English, 3 or more units of college preparatory mathematics, 1 unit of laboratory science, and 3 units of social science; 2 units of a foreign language are preferred among 5 elective units.

Engineering students must have 1 unit in plane geometry, 1 unit in intermediate algebra, 1 unit in physics, and 1/2 unit in trigonometry in addition to the above required for admission.

Music and Music Performance students

must audition for acceptance. Art Studio and Art students must submit a portfolio for acceptance to the Fine Arts Department.

If an applicant's secondary school program differs significantly from that outlined above, the Office of Admission and Financial Aid should be consulted.

TRANSFER CREDIT EVALUATION

Transfer credit evaluation is completed in the Registrar's Office and based on course content regardless of mode of delivery (onsite, hybrid, or online). A log of previously evaluated courses from various accredited colleges and universities is maintained and updated on a regular basis with school deans/department chairpersons. Assessment of a new course requires the student provide a course description and/or course syllabus. This information is reviewed by the school dean/department chairperson to determine whether the course will transfer as equivalent to a Saint Vincent course or as elective credit. Final determination of acceptance or denial of transfer credit is the responsibility of the Registrar.

CREDIT BY EXAMINATION AND CREDIT FOR EXPERIENTIAL LEARNING GENERAL POLICY

A maximum 62 credits for Advanced Standing may be earned through programs such as Advanced Placement Tests, CLEP, Armed Forces Course Equivalencies, Credit for Experiential Learning, and all other such evaluating mechanisms.

ADVANCED PLACEMENT CREDITS

Saint Vincent College awards Advanced Standing Credit to students who achieve scores of 4 or 5 on any Advanced Placement Test of the College Board. Test scores must be sent directly to the Office of Admission and Financial Aid from the College Board within the first year of enrollment as a matriculated student at Saint Vincent College. Refer to the Consumer Information page of the SVC website for a list of acceptable AP credits.

Faculty advisors will contact first-year students who earn AP credit in Chemistry and/or Calculus to see if they would rather take the course at Saint Vincent; the AP credits will not be recorded on the Saint Vincent Transcript. In order to receive AP credit for Biology II, students must successfully complete BL 150 General Biology I.

CLEP

Saint Vincent College awards Advanced Standing Credit to students who achieve scores on CLEP tests according to the schedule published by the Office of Admission and Financial Aid.

Students anticipating taking CLEP tests

should check the Consumer Information page of the SVC website for a list of CLEP tests to determine which tests are acceptable at the College. Test scores must be sent directly to the Saint Vincent College Office of Admission and Financial Aid from the College Board.

CREDIT FOR EXPERIENTIAL LEARNING

Applications for credit for learning gained in non-academic settings are available in the Registrar's Office. The Registrar will arrange evaluation of the application by appropriate faculty members.

INTERNATIONAL BACCALAUREATE PROGRAMS

Saint Vincent College awards Advanced Standing Credit to students who participate in the International Baccalaureate Programs. Official test scores and transcripts must be sent to the Office of Admission and Financial Aid for evaluation. Credit is awarded according to a standing policy in the college. Refer to the Consumer Information page of the SVC website for a list of acceptable IB credits.

ARTICULATION AGREEMENTS

Please refer to the Saint Vincent College website (www.stvincent.edu) for the most up-to-date information regarding articulation agreements.

ADVANCED STANDING FOR CREDITS EARNED AT OTHER COLLEGES AND UNIVERSITIES

Regulations used by Saint Vincent College regarding the acceptance of credits earned at other colleges and universities are as follows:

1. Credits earned by a student at another accredited institution will be accepted if the quality of the credits earned is a C- grade (1.70) or better, and if the number of credits in a given course does not exceed the number granted in a comparable course at Saint Vincent College. The College reserves the right to accept or reject courses for transfer credit on the basis of course objectives and content. All transfer credits must be submitted within the first year of enrollment as a matriculated student at Saint Vincent College.
2. For graduation from Saint Vincent College a minimum of 34 credits, including 18 in the major, must be earned at Saint Vincent College. If a student elects a minor or concentration, nine credits must be earned at Saint Vincent College.
3. A maximum of 90 credits earned at accredited four-year institutions will be accepted for transfer. A maximum of 62 credits earned at accredited two-year institutions will be accepted for transfer.
4. Transfer course grades are not used in the

computation of the student's grade point average at Saint Vincent College.

5. For registration purposes for currently enrolled students, transfer credits must be received by March 15 to be included in credits completed for the following fall registration; transfer credits must be received by Oct. 15 to be included in credits completed for the following spring registration.
6. Situations not adequately covered by these regulations are resolved by the Registrar.

TRANSFER APPLICANTS

An applicant who is transferring from another post-secondary school should submit the following to the Office of Admission and Financial Aid:

1. A completed application form with the non-refundable \$25 application fee or fee waiver form.
2. An official transcript sent directly to Saint Vincent College from the post-secondary schools previously attended.
3. A secondary school transcript sent directly to Saint Vincent College from the graduated secondary school.
4. A completed Dean of Students Reference Form from the post-secondary school most recently attended. This form is available through the Office of Admission.

The applicant's academic achievement and personal history at the post-secondary schools previously attended are of primary importance in the decision for admission. The secondary school record is requested as background information for academic counseling.

Personnel in the Office of Admission and Financial Aid are available to evaluate transcripts on request, even before application.

Faculty members are available for interviews, course advisement, and class scheduling through the Office of Admission and Financial Aid.

A personal interview is preferred by the Office of Admission and Financial Aid.

EARLY ADMISSION

A student with an exceptional record may be accepted to begin a degree program at Saint Vincent College after the completion of the junior year in high school. The student should be in the upper tenth of the class and have the assurance that the high school will grant a diploma after the successful completion of one year in college. An interview with the Dean of Admission is required.

PRE-COLLEGE CREDIT

High school juniors and seniors are invited to take courses at Saint Vincent College for college credit. Such credits will be applied toward a degree at Saint Vincent College upon acceptance as a matriculated student or reported on an official transcript for transfer to other colleges and universities.

NON-MATRICULATED STUDENTS

A person who wishes to pursue studies at Saint Vincent College without becoming a candidate for a bachelor's degree may take courses for credit as a non-matriculated student. A non-matriculated student is expected to conform to the general regulations of the College, and to fulfill the same requirements, and to meet the same scholarship standards for each course pursued as are demanded of candidates for a degree. A maximum of 30 credits will be accepted from a non-matriculated student toward a degree program.

OPPORTUNITY SVC/ACT 101/STUDENT SUPPORT SERVICES (SSS – TRIO) PROGRAM SPECIAL ADMISSION POLICY

The Opportunity SVC/Act 101/Student Support Services (SSS – TRIO) Program is an academic support system funded, in part, by the College, the Commonwealth of Pennsylvania through Act 101 and by the U.S. Department of Education through the Student Support Services (SSS – TRIO) Program. Placement in the program is determined by the Admission Committee which evaluates the applicant's grades, test scores, and recommendations. Although each candidate is evaluated according to individual merits and potential, academic and financial eligibility requirements may be taken into consideration in accordance with state or federal guidelines. Program participants are required to complete a three-week, credit-bearing summer component. During the summer component, tutoring is provided. In addition, a fall transitional semester is an added benefit of the program. The Opportunity staff provides ongoing academic counseling to the student throughout his or her college years.

READMISSION

A student who has withdrawn and been away from Saint Vincent for more than two semesters or has been dismissed from Saint Vincent College must reapply according to the ordinary application procedures.

This student may be readmitted only with permission from the Assistant Vice President for Student Success and Retention and from the Office of Student Affairs.

If this student has attended another post-secondary school, an official transcript must be sent directly to the Saint Vincent College Office of Admission and Financial Aid from the post-secondary schools attended.

A student who has withdrawn and been away from Saint Vincent for two semesters or less may re-enroll directly at the Registrar's Office after meeting with his/her advisor.

FINANCIAL ASSISTANCE AND PAYMENT

Saint Vincent College makes every effort to provide financial assistance to students who have been admitted. See the Financial Aid section of this *Bulletin*.

At Saint Vincent College the cost is kept at the lowest possible level consistent with a financially responsible operation. The payment of the College's bill is due before the beginning of classes each semester or session. The student must obtain financial clearance from the Business Office indicating that satisfactory arrangements have been made for payment of financial obligations to the College. Students who do not receive this financial clearance will not be officially enrolled at the College.

Students may not enroll for a successive semester until their accounts have been completely satisfied; and no diplomas, transcripts, or records will be issued until all financial obligations have been settled.

On checks given in payment of tuition and other fees which are returned by the bank because of insufficient funds, the issuer of the check will be charged a service charge of \$25 plus 3 percent of the amount of the check. All checks must be drawn on a U.S. bank. The College reserves the right to change any of the fees whenever increasing costs may require such change.

FINANCIAL INFORMATION

TUITION AND FEES FOR 2019-2020 Students enrolled Fall 2019 and Spring 2020:

Financial Information Per Semester Tuition per semester (12-19 credits)
\$17,760

Students taking more than 19 credits will be billed the \$17,760 rate plus \$1,112 per credit for credits exceeding 19. Students with less than 12 credits will be billed \$1,112 per credit. Undergraduate students taking graduate courses will pay the undergraduate rate.

Regular Rooms, basic rate

Bonaventure and Gerard	\$2,997
Gerard Hall (double used for triple)	\$2,544
Saint Benedict Hall (single)	\$3,484
Saint Benedict Hall (single used for double)	\$3,214
Saint Benedict Hall (double)	\$3,174
Saint Benedict Hall (double used for triple)	\$2,706
Wimmer (single)	\$3,175
Rooney (double)	\$3,745
Rooney (apartment)	\$4,451
Wimmer (double)	\$2,939
Aurelius (double)	\$3,589
Aurelius (suites-small)	\$3,452

Private Rooms, surcharge

Bonaventure, Gerard and Wimmer Halls	\$2,066
Apartment Meal Plan	\$2,212
Board Plans 19 meal + \$50 flex	\$2,801
15 meal + \$100 flex	\$2,728
12 meal + \$125 flex	\$2,548
200 Block + \$100 flex	\$2,800
5 meal + \$50 flex	\$917
Student Government Fee (charged to all students taking 12 or more credits)	\$142

Technology Fee

The technology fee partially covers the increased costs of academic computer support and multimedia instruction. Voicemail, telephones, and cable television are not included in this fee.

\$233 a semester (for full-time students)
\$90 a semester (for part-time students)
\$180 bandwidth fee

Per Semester Special Course and Lab Fees

Science Lab Fee, per course	\$117
Human Dissection Lab fee (BL-290, INTS-223, INTS-225)	\$257
Experimental Psychology and Lab (PY 341)	\$109

Nursing Course fee (NUR106)	\$86
Psychological Assessment and Educational Testing (PY 382)	\$37
Lifeguard Certification (ND190)	\$37
Applied Music (MU 125) per credit	\$311
Applied Music (MU 225, MU 325, MU 425) per credit	\$217
Student Teaching Fee (ED 410)	\$311
Student Teaching Orientation Fee (ED 400)	\$148
Art Studio Courses, per course (AR 130, 131, 134, 135, 136, 139, 189, 218, 225, 230, 233, 234, 236, 238, 240, 318, 325, 336, 337, 338, 348, 368, 384, 386, 388, 404)	\$109
Senior Art Exhibit (AR 405), per course	\$109
Junior Recital (MU 330)	\$73
Senior Recital (MU 430)	\$73
Teaching Observation Lab (ED 101, ED 102, ED 103)	\$65
Education Labs (ED 207, 307)	\$65

Audit Fees
Course Audit (per credit) \$1,112

Course Audit for persons more than 30 years of age up to 64 years of age is one-half of the regular course audit fee. For persons 65 years of age and over, course audit is free of charge. Registration fee for each reduced-rate course audit is \$5. Students are responsible for fees if associated with a course to cover the cost of materials.

Miscellaneous Fees

Health Service Fee (residents and full-time undergraduate students)	\$110
First-Year Orientation Fee (first semester only)	\$214
International Welcome Week Fee	\$255
Application Fee	\$25
Laundry Fee	\$31

Reservation Deposits (these deposits are credited to the student's account but are not refundable)

Registration Deposit (Required of all new students)	\$100
Housing Deposit (Resident students only)	\$100

Housing deposit must be paid prior to housing registration in the spring semester.

Late Registration	\$50
Late Payment	\$55
Adding/Dropping Classes after first day of semester (per add/drop form)	\$20

Graduation Fee (non-refundable)	\$100
Late Graduation Fee (non-refundable)	\$35
Fee for Certificate Programs Completion	\$15
Transcript (\$2.50 surcharge for mailed copies)	\$5
Fee for finalizing each incomplete "G" grade	\$35
Parking and vehicle registration	\$98

STUDY ABROAD PROGRAM

Enrollment in third-party and exchange programs (STAB 100 and STAB 200)	\$451
Enrollment in faculty-led programs (AN295, BA525, BLS300, ED340, ND289, ND390, NSCI275, PY399, SP450, SP451)	\$54

COOPERATIVE EDUCATION (PER SEMESTER)

Non-credit Internship	\$101
Tuition (per credit)	\$1,112

COLLEGE GRADUATES DISCOUNT

A Saint Vincent College discount equal to ½ tuition is available to students who hold a Bachelor of Arts or Science degree from any accredited college or university and who are enrolled at Saint Vincent College in classes for academic credit.

REFUND POLICY

The policy for refund of tuition and fees upon withdrawal from individual courses or from Saint Vincent College applies only to withdrawal processed on the Portal or on official College withdrawal forms. A 95 percent refund will be given in the fall and spring semesters within the first 15 calendar days of the course. A 40 percent refund will be granted between days 16-30 of the course. On the 31st day of each course no tuition or fees will be granted. A 95 percent refund will be given in the summer within the first seven calendar days of the course. Beginning the eighth day, no refund will be granted. Note that refunds, if any, depend on the dates noted on the official withdrawal forms. A student who feels that special circumstances warrant an exception from established policy may present an appeal to the Assistant Vice President for Student Success and Retention.

FINANCIAL AID

Saint Vincent College offers a comprehensive program of financial aid in the form of scholarships, grants, loans, and part-time employment and coordinates programs from federal, state, and outside agencies. The yearly estimated cost of attending Saint Vincent College is based upon tuition, fees, living

expenses, books and supplies, transportation, and personal expenses. Saint Vincent College expects that the family of a financial aid applicant will assist the student to the greatest extent permitted by their resources and that the student will help by means of summer and college employment and college savings. All students are strongly encouraged to seek scholarship aid from outside sources.

APPLICATION FOR FINANCIAL AID

The application for federal and state aid is the Free Application for Federal Student Aid (FAFSA) and requires a yearly renewal. Applications are available each year on Oct. 1. May 1 is the priority filing deadline for filing the FAFSA. Applications processed after this date will be processed on a funds-available basis for campus-based aid programs. The information on this federal form will be sent to the student's state agency. Students who do not file the FAFSA will not be eligible to receive federal or state aid, but may qualify for most institutional aid programs and outside scholarships. Some institutional funds require the FAFSA to be filed to determine a student's need.

FINANCIAL AID QUESTIONS

The Financial Aid Office is located on the first floor of Alfred Hall. Normal hours of operation are Monday-Friday, 8:30 a.m. – 4:30 p.m. Correspondence should be addressed to 300 Fraser Purchase Road, Latrobe, PA 15650-2690. Phone – 724-805-2555, 800-782-5549. Fax – 724-805-2953. Email – financialaid@stvincent.edu.

OFFICE OF VOCATIONAL REHABILITATION

Students who have disabilities may receive educational benefits through the Office of Vocational Rehabilitation (OVR). To be eligible, students must satisfy the disability and financial requirements of the Office. For further information regarding this assistance, the student should contact the Office of Vocational Rehabilitation at the local Careerlink office. A representative of the Office is available monthly at the Saint Vincent College Office of Admission and Financial Aid or you can contact OVR at 1-800-762-4223.

ACADEMIC SCHOLARSHIPS AND SAINT VINCENT COLLEGE AWARDS

Saint Vincent College awards academic scholarships and grants to full-time degree-seeking freshmen for excellence in academic achievement based upon the high school record and scores from the SAT or ACT. All candidates must be a graduate of an accredited secondary high school. Saint Vincent College scholarships and awards are granted for a maximum of eight semesters and are available in the fall and spring semesters.

ALUMNI GRANT

The Alumni Grant is awarded to incoming students based on correspondence with an alumnus or alumna of Saint Vincent College. Alumni Grant applications must be submitted by May 1.

BENEDICTINE PASTOR'S AWARD

First-time freshmen and transfer students who are registered members (at least one year prior to the start date at Saint Vincent College) of parishes staffed by Benedictine monks of Saint Vincent Archabbey are eligible for this award. A Benedictine Pastor's Award form or letter from the Pastor verifying membership is required by May 1.

CATHOLIC HIGH SCHOOL GRADUATE GRANTS

The Catholic High School Grant is awarded to students who are Roman Catholic high school graduates enrolling full-time in the fall semester immediately following high school graduation.

FIRST-GENERATION GRANTS

The First Generation Grant is awarded to students for whom neither parent has received a bachelor's degree.

OUT-OF-STATE GRANTS

The Out-of-State Grant is awarded to non-Pennsylvania residents.

TRANSFER GRANTS

Transfer Grants are awarded to students who are transferring to Saint Vincent College from another college or university. The award is based on academic achievement at the previous school.

ENDOWED SCHOLARSHIPS

Endowed scholarships are generally need-based and are supported by the generosity of alumni and private donors to the Saint Vincent College Scholarship Endowment Fund. Completion of the FAFSA is required. Restrictions may apply.

SPECIALIZED SCHOLARSHIPS

AURELIUS SCHOLARSHIP

The Aurelius Scholarship is awarded on the basis of superior academic credentials and potential, including high school performance, test scores, declared major, and interest in the program. Administered by the Alex G. McKenna School of Business, Economics, and Government, the program is offered to motivated students interested in Western intellectual tradition and awards a limited number of competitive scholarships.

THE FRED ROGERS SCHOLARS PROGRAM

The Fred Rogers Scholars Program includes a merit-based scholarship in addition to academic, research, and public service

programs for students aspiring to serve children through their professions. Incoming first-year students of all majors are invited to apply for this four-year, merit-based scholarship program designed to support students to pursue diverse careers that improve the lives of children and families.

WIMMER SCHOLARSHIP

The Wimmer Scholarship competition is a general knowledge examination open to graduating high school seniors. Seniors must have applied for admission by the date of the exam and have a cumulative high school QPA of at least 3.5 to be eligible for the competition. The first-place winner will receive a full tuition, room and board scholarship for eight semesters. The second-through fifth-place winners will receive a full-tuition scholarship for eight semesters.

STANLEY BLACK & DECKER SCHOLARSHIPS

Stanley Black & Decker Scholarships are available for first-generation college students majoring in Engineering Science, Mathematics, Physics, or Marketing.

STEP SCHOLARSHIPS

Science, Technology, Engineering, and Math Talent Expansion Program. Five four-year scholarships are awarded to incoming freshmen majoring in Bioinformatics, Biochemistry, or minoring in Biotechnology.

CLARE BOOTHE LUCE SCHOLARSHIP PROGRAM

Saint Vincent College is partnering with the Clare Boothe Luce (CBL) Program of the Henry Luce Foundation to support and inspire women in science and engineering. CBL Scholarships will be awarded to four exceptional female students majoring in Computing, Engineering, or Physics.

PALMER SCHOLARS PROGRAM

The Arnold D. and Winifred W. Palmer Scholars Program was established through the generous support from the Palmer Family and the Arnold D. and Winifred W. Palmer Foundation to provide opportunities for graduates of Greater Latrobe Senior High School with exemplary academic and leadership skills.

HOME-SCHOOLED GRADUATE GRANTS

This grant is extended to graduates of home-schooled high school programs who enroll as full-time students in the fall semester immediately following their high school graduation.

VETERAN EDUCATIONAL BENEFITS

The Financial Aid Office assists veterans, guardsmen, reservists, spouses, and dependents in receiving military educational benefits. Saint Vincent College participates

in the VA Yellow Ribbon Program which will cover up to 100 percent of tuition costs for eligible veterans or their dependents. All veterans are strongly encouraged to complete the FAFSA. Eligibility for federal and state aid is in addition to VA benefits.

Federal law and Veterans Administration regulations specify the conditions under which student veterans, eligible dependents, and reservists are paid VA educational benefits. The law requires that educational benefits be discontinued when the student ceases to make satisfactory progress toward completion of his or her degree. Saint Vincent College requires students receiving VA educational benefits to meet the same SAP standards necessary to receive federal and financial aid. The standards include:

- Maintain at least a cumulative 2.0 GPA
- Complete 67% of all classes attempted
- Complete your degree-seeking program of study within a 150% timeframe

When a student receiving educational benefits fails to maintain the prescribed standards of progress and is placed on suspension without successfully appealing, the VA will be informed promptly in order that benefit payments can be discontinued in accordance with the law. The termination date will be the last day of the semester in which the student's progress became unsatisfactory.

NATIONAL GUARD EDUCATIONAL ASSISTANCE PROGRAM

Pennsylvania students who have enlisted in the PA National Guard may be eligible for annual grants from the Department of Military Affairs.

FEDERAL PELL GRANT

The federal Pell grant is awarded as a result of the FAFSA and is based on the Expected Family Contribution (EFC).

FEDERAL SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT

The SEOG grant is awarded to those with the highest need based on the results of the FAFSA. Each school receives limited funding for this award and those with the lowest EFC are considered on a first-come, first-served basis.

PENNSYLVANIA HIGHER EDUCATION ASSISTANCE AGENCY GRANT (PHEAA)

The PHEAA grant is awarded to eligible residents of Pennsylvania. Students must complete the FAFSA yearly by May 1 for consideration.

STATE GRANT AID

A number of states offer grants to students attending college outside of their home state. Eligibility and application requirements differ

from state to state. Students should check with their state agency.

FEDERAL DIRECT STUDENT LOANS

Subsidized and unsubsidized loans are awarded to students who wish to borrow. The maximum yearly amount for a dependent student is \$5,500 for freshmen, \$6,500 for sophomores, and \$7,500 for juniors and seniors. Dependent undergraduate students also have a \$31,000 aggregate limit.

FEDERAL DIRECT PARENT PLUS LOANS

The PLUS loan is a credit-based loan available to parents of dependent undergraduate students to help cover the remaining cost of attendance after other forms of financial aid have been applied.

PRIVATE ALTERNATIVE LOANS

Private alternative credit-based loans are available to students or parents to help cover the remaining cost of attendance after other forms of financial aid have been applied. Student borrowers will typically require a credit-worthy co-signer.

TUITION WAIVERS

A tuition waiver may be granted to Saint Vincent College eligible faculty and staff members, their spouses, and dependents. Saint Vincent College also participates with the Council of Independent Colleges and The Tuition Exchange for students from families of full-time employees of other participating institutions. This program is administered by the Admission and Financial Aid Offices. The number of waivers available each year for these programs may be limited according to funds availability and number of applicants – incoming to and outgoing from Saint Vincent College.

WITHDRAWALS AND TITLE IV REFUND POLICY

The federal government mandates that students who withdraw from all classes may only keep the federal financial aid (i.e., Title IV funds) they have "earned" up to the time of withdrawal. Title IV funds that have been disbursed in excess of the earned amount must be returned by the college and/or the student to the federal government. Thus, the student could owe aid funds to the college, the federal government, or both.

The Financial Aid Office is notified when a student has officially withdrawn from the college via the Assistant Vice President for Student Success and Retention. The calculation for Return of Title IV funds is based upon the date on which a student initiates the withdrawal process by indicating intent to withdraw. Students who unofficially withdraw by ceasing to attend classes, or students who do not complete all modules in a semester, are also subject to the Title IV

Refund Policy. Students who fail to earn a passing grade in at least one class for a term may also be subject to the Title IV Refund Policy.

To determine the amount of aid the student has earned up to the time of withdrawal, the Financial Aid Office divides the number of calendar days the student has attended classes by the total number of calendar days in the semester (minus any scheduled breaks of five days or more). The resulting percentage is then multiplied by the total federal funds that were disbursed to the student account for the semester.

This calculation determines the amount of aid earned by the student that he or she may keep. The unearned amount must be returned to the Department of Education by the college and/or the student. The Financial Aid Office will notify and provide instructions to students who are required to return funds to the Department of Education.

Funds are returned to the following Title IV source in this order:

- Unsubsidized Federal Direct Loans
- Subsidized Federal Direct Loans
- Federal Direct Graduate PLUS loans
- Federal Direct PLUS (parent) loans
- Federal Pell Grants
- Federal SEOG

REDUCED ENROLLMENT

Students dropping from full-time to part-time up to and including the 31st day of the class may become ineligible for or eligible for a lesser amount of institutional and endowed funds awarded for that semester regardless of the tuition refund policy. Eligibility for financial aid from federal, state, or private sources may also be adjusted in accordance with the regulation pertaining to each source, which could result in a balance due to the College. In addition, dropping from full-time to part-time after the add/drop period may affect eligibility for future aid if the student does not meet the minimum satisfactory academic progress requirements.

SATISFACTORY ACADEMIC PROGRESS

In compliance with the Department of Education's policy for receiving financial aid, academic performance will be reviewed annually to ensure students are maintaining Satisfactory Academic Progress (SAP). All students will be measured at the end of each spring semester. Components of the SAP requirement include a measure of cumulative GPA, pace of completion, and total attempted credits. Students who are determined to have not met the minimum SAP requirements will be denied federal and institutional financial aid. An appeal process is available to students who have experienced personal illness or accident, death of an immediate family member, or other extraordinary circumstances that have prevented the student

from attending classes and successfully completing course work. Documentation of such extraordinary circumstances will be required. A student whose financial aid has been terminated and for whom an appeal is not granted may regain eligibility for financial aid only after the student has corrected the deficiency in credits earned and minimum cumulative GPA by completing required course work at SVC without the benefit of federal or institutional aid, or by transfer of credits from another institution.

Minimum Cumulative GPA Requirement – 1.50 at the end of the freshman year, 2.0 at the end of the sophomore and subsequent years. Certain Saint Vincent College awards require a cumulative GPA greater than 2.0 which is noted upon notification of the award.

Pace of Completion – all students must have successfully completed at least 67 percent of cumulative credits attempted.

Total Attempted Credits – Attempted credits cannot exceed 150 percent of the credits required as defined by the College's published length of the specific program.

Full-time students receiving the PHEAA state grant are required to complete 24 credits per year, not including repeated course work. Students receiving aid from other outside agencies are bound by the academic progress policy of the awarding agency.

ANNUAL REVIEW

A review of financial aid awards is made at the close of each academic year by the Committee on Scholarships and Financial Aid of Saint Vincent College. The termination of any financial aid award is made by this committee as a result of this process.

ACADEMIC PROGRAMS AND REGULATIONS

Knowledge of Requirements

Although advisors will assist the student about matters such as course and program selection, the ultimate responsibility for knowledge of requirements, course prerequisites, and for verification of the accuracy of records maintained by the Registrar remains with the student. Consequently, students should be familiar with the contents of this *Bulletin*, and monitor their progress toward graduation.

CORE CURRICULUM

The faculty establishes a core curriculum with the intention of providing all students with a general education to serve as the context for more specialized studies. The core curriculum requirements are as follows:

History	6 credits
Philosophy	6 credits
English	9 credits
Theology	9 credits
Fine Arts	3 credits
Modern and Classical Languages	6 credits
Social Sciences	9 credits
Natural Sciences	8 credits
Mathematics	3/4 credits
First Year Seminar*	
(In addition to a typical 3/4 credit course)	

Total 60/61 credits

*Waived for transfer students who transferred 24 or more credits upon acceptance.

Descriptions of requirements in each respective area of the core curriculum are as follows:

I. Humanities (36 credits)

A. History (six credits)

Student must take three (3) credits from History courses numbered 100 to 124. The remaining three (3) credits must be completed at the 200 level. It is strongly recommended that the 100-level course be completed before students take the 200-level course. If six (6) credits are earned and transferred from another institution or are AP credits, the core is met.

B. Philosophy (six credits)

PL 101 First Philosophy is required as the first course in philosophy and must be taken at Saint Vincent College. It is a prerequisite for all other philosophy courses except PL 120 Logic. The remaining three (3) credits may be satisfied by taking any other course that the department offers numbered PL 120 or above.

C. English (nine credits)

EL 102 Language and Rhetoric is required in the first year and must be taken at Saint Vincent College. Six (6) additional credits are required, three (3) of which must be a literature course. The remaining three (3) credits may be satisfied by any other course the English Department offers. Engineering (3-2) majors must complete EL 102 and three additional English credits to fulfill the English core.

D. Theology (nine credits)

TH 119 First Theology is required as the first course in Theology and is taken in the first year and it must be taken at Saint Vincent College. The remaining six (6) credit requirement will be fulfilled by two theology courses, one at the 200 level and one at the 300 level courses). Engineering (3-2) majors must complete TH 119 and three additional theology credits to fulfill the theology core.

E. Modern and Classical Languages (six credits)

Six (6) credits of intermediate or advanced

level courses in foreign language are required. The two courses must be in the same language. Placement inventories are completed by all entering first-year and transfer students to identify the appropriate level of instruction.

SPECIAL EXCEPTIONS

1) Students whose first language is not English, most typically international students, fulfill the language requirement by their demonstrated proficiency in English. They are not required to complete another language, but they must make the request in person to the Registrar.

2) Students who place into the Intermediate II (204) level or advanced course may fulfill the requirements by successfully completing the course they place into and (a) completing a 3-4-credit course in another foreign language, (b) completing three (3) credits in an approved study abroad program, or (c) completing a three (3)-credit course, which extends one's cultural knowledge. Students exercising option (c) must take a course related to the language used to satisfy the core requirement. (*The culture course is a specific requirement for the core in Modern and Classical Languages and cannot be used to satisfy other core, minor, or major requirements. Consult the chairperson of the Department of Modern and Classical Languages for the current list of approved courses for each language*). Students who wish to exercise one of the above options must have the approval of the chairperson of the Modern and Classical Languages Department prior to registering for the course.

II. Fine Arts (three credits)

Three credits of music (MU) or art (AR) at the 100 level must be completed at Saint Vincent College.

III. Social Sciences (nine credits)

Courses offered in Business Administration, Economics, Politics, Psychological Sciences, Sociology/Anthropology, Criminology, Law and Society, 100 level Communication courses, and two courses from Education, ED 100 or ED 109 for education certification students or education majors, fulfill the social science requirement. A maximum of six (6) credits from any one discipline is allowed to fulfill the core curriculum requirement.

IV. Mathematics (three credits)

Any course offered by the Mathematics Department numbered MA 104 or higher satisfies the core curriculum requirement and must be completed at Saint Vincent College.

V. Natural Science (eight credits)

The natural science core curriculum requirement can be satisfied by successfully completing one 100-level course with laboratory, four (4) credits, in natural sciences

(NSCI), and one 200-level course with laboratory, four (4) credits, in the natural sciences (NSCI); successfully completing any two 100-level courses with laboratory, four (4) credits, each course from within any discipline of the natural sciences (Biology, Chemistry, Environmental Science, and Physics), four (4) credits; or successfully completing any combination of one 100-level course with laboratory, four (4) credits, within a discipline of the natural sciences and a natural sciences (NSCI) course with laboratory, four (4) credits.

VI. First-Year Seminar

All students will take one course designated as First-Year Seminar which will also satisfy a core curriculum requirement to include one additional meeting time per week and one additional credit awarded.

FS 179 First-Year Seminar Skills

This course is required of all students who do not successfully complete First-Year Seminar. Through lecture presentations, in-class activities, out-of-class assignments, and appropriate tests, the course provides students with review and assessment of skills identified as target skills for all First-Year Seminar courses taught in the previous semester. Three (3) credits. No pass/fail. Permission of/ placement by First-Year Seminar Director required.

CORE SUBSTITUTIONS

In the 3/2 Engineering Program and the Actuarial Science Program, special core substitutions are listed under the Departmental listings. Students pursuing an Early Childhood Education major may satisfy their history core requirement by taking HI 106, Topics in U.S. History to 1865, and HI 107, Topics in U.S. History since 1865, rather than by taking one 100-level class and one 200-level class.

The Goals of the Saint Vincent College Core Curriculum

Saint Vincent College students learn “first what is necessary, then what is useful, and finally what is beautiful and will contribute to their refinement” (Archabbot Boniface Wimmer, O.S.B.). The core curriculum provides all students with a broadly-based education which provides a general body of knowledge in the humanities and fine arts, social sciences, natural sciences, and mathematics, an interdisciplinary view of that knowledge base, and the skills to increase that general body of knowledge throughout their lives.

Study of the various disciplines that comprise the core curriculum provides

students with a body of knowledge which includes both content and skills, including the vocabularies and languages of the disciplines, the theoretical frameworks of the disciplines, the problem-solving techniques of the disciplines, and the underlying assumptions and limitations of the disciplines. This body of knowledge provides a context for more specialized studies and prepares students for the many transitions they will experience in life. During their lifetimes, individuals will experience changes in their physical, emotional, intellectual, and spiritual lives. In addition, many students will change their careers several times in their lives. The core curriculum provides a firm foundation of knowledge to prepare for the future.

The core curriculum at Saint Vincent College is interdisciplinary; the body of knowledge in one discipline overlaps and interacts with those in other disciplines. Students learn that the answers to many problems require an interaction among disciplines. Constructing connections between disciplines enriches the student's body of knowledge and develops independent learning skills.

Knowledge gained during formal education is not static and must continue to grow throughout students' lives if they are to adapt to change. To prepare students for change, the core curriculum also provides students with the ability to be independent learners. Students become active in continuing to develop their body of knowledge. In addition, the ability to learn has a value in itself, because learning opens the gate to the “service and comprehension of life itself” (Whitehead). Learning is the entrance to a richer and broader experience of life.

The faculty of Saint Vincent College place great value upon the core curriculum. In addition to the general goals that are described above, we also believe that the core curriculum promotes the goals that are described in the following sections.

TO FORM HABITS OF ORDERED INQUIRY, LOGICAL THINKING, AND CRITICAL ANALYSIS

At its best, learning involves finding coherent answers to questions that are intelligently framed. Ordered inquiry has a deeper dimension which is not satisfied with merely holding that something is true, but also strives to show the evidence on which the truth claim is based and to know the process by which evidence is gathered. Undergraduates in all disciplines ought to be able to ask fundamental and critical questions about the core disciplines: What kind of knowledge is involved in the core discipline? What assumptions underlie the core discipline? Are these assumptions evident, certain, plausible, or merely conventional and convenient? This

kind of fundamental inquiry can transform students into independent, logical thinkers who can learn on their own and explore new ideas. Logical thinking and critical analysis are strengthened by practice in a variety of settings, courses, and disciplines.

Students practiced in these habits can

- a) analyze the reasons leading to specific ideas;
- b) evaluate the views of others based on appropriate evidence;
- c) use directly collected data or data given to them to construct knowledge by organizing (synthesizing, sequencing, or interpreting) the new information with previous background; and
- d) critically review habitual assumptions in order to accommodate existing beliefs and assimilate new knowledge.

TO DEVELOP SKILLS IN INFORMATION LITERACY

Accurate and well-chosen information is necessary for living an examined life, but the vast quantity and varying quality of sources can pose challenges to that search. Information literacy encompasses critical knowledge and skills that aid in the successful and ethical use of information in any discipline or career. Broad familiarity with and expertise in using both traditional and electronic information sources and strategies helps students to ask intelligent questions, develop insightful answers, and become independent and lifelong learners. Persons who are information literate have an appreciation of information of lasting value, and can become contributing members of academic and professional communities.

The information literate student can

- a) determine the nature and extent of the information needed for inquiry;
- b) access needed information effectively, efficiently, and ethically;
- c) evaluate information and its sources critically and incorporate selected information into his or her knowledge base and value system.

TO DEVELOP EFFECTIVE COMMUNICATION SKILLS

Human communication occurs, either explicitly or implicitly, to persuade, inform, reveal, and entertain. Whether writing or speaking, an effective communicator places primary importance on the needs of the audience when presenting information. When reading or listening, that person receives the message without distorting it due to preconceptions or biases and can critically evaluate the content of the message, regardless of the source. Effective interpersonal communication also requires responsive listening: the ability to respond, clarify, affirm, and share meaning. Ideally, effective

communication skills should be developed in both the person's native language and in one or more foreign languages.

Students who are effective communicators can

- a) share their experiences and ideas with others, through both speaking and by writing, in an organized and confident style;
- b) demonstrate understanding of what others have said or written by paraphrasing and thoughtfully responding;
- c) critically analyze both their own and others' communications in an honest and creative manner; and
- d) discern and appreciate different forms and styles of writing, and use them in their own writing.

TO PROMOTE AN UNDERSTANDING OF LITERARY STUDY

Literary art expresses our identities, histories, cultures, and possibilities. Poetry, fiction, creative non-fiction, and dramatic literature draw from and refresh our imaginations and renew our intellectual and emotional response to lived experience. Through creative writing, we engage language to construct the world anew. Through sensitively and critically reading and writing about literary texts of disparate cultures and historical moments, we experience the wonder of language and learn about ourselves and others.

Students who are fluent in literary study

- a) detect stylistic and rhetorical nuance;
- b) analyze meaning;
- c) place texts into literary, historical, and cultural contexts;
- d) grow in understanding of humanity and diverse cultures and identities by relating literature to self;
- e) write critically and creatively, employing a process approach and the Six Principles of Good Writing.

TO FOSTER HISTORICAL AWARENESS

Societies, institutions, and ideas develop over time as a result of many forces (including, but not limited to, political, economic, scientific, philosophic, military, religious, and cultural). Awareness of these forces allows us to better understand why a particular institution or idea arose or fell at a particular time. A faithful reference to past events and the critical interpretation of those events can also deepen our awareness of freedom and the limitations on that freedom. This historical awareness is essential for any personal or institutional growth.

A person with historical awareness can

- a) identify the particular forces most relevant to the development of an idea or institution, and trace the interactions of those forces through inception, development, transformation, and decline;

b) relate historical forces to one's own growth and the development of various cultures; and

c) understand a text or other artifact in its historical context.

TO DEVELOP AN UNDERSTANDING OF PHILOSOPHICAL THOUGHT

The Benedictine character of the institution provides a context for the study of philosophy at Saint Vincent College. Both by historical fact and through the very nature of the Benedictine approach to spiritual understanding, the tools of philosophical thought are indispensable to a complete Catholic, Benedictine, liberal arts education. Each of us can develop deeper insights into our own personal lives and the cumulative history of humankind through the study of philosophical systems of thought. Philosophical approaches to knowledge demand logical thought and a critical evaluation of principles, and they encourage such things as receptivity to new ways of looking at issues, honest reflection upon our values, aesthetic appreciation, and a consideration of intellectual and moral ideals.

Philosophical literacy is demonstrated when a person can

- a) identify and understand some of the specific philosophical systems of thought;
- b) critically re-examine values and moral ideals; and
- c) apply philosophical principles and tools to intellectual, moral, and social issues.

TO FOSTER AN UNDERSTANDING OF THEOLOGY

The educational philosophy of Saint Vincent College affirms that a liberal education cannot be complete without the study of theology. A fuller understanding of both civilizations and individuals requires a knowledge of the religious traditions that shape their developments. Humans grapple with issues of morality and value, as well as with ultimate existential questions of human origin and life's purpose, frequently turning to religious faith for guidance. Education in the Catholic, Benedictine tradition emphasizes the study of Catholic Theology while remaining open to truth and beauty wherever they are found.

Competence in theology is demonstrated when one can

- a) understand the meaning of the Scriptures and the various methods necessary for further study;
- b) understand the relevance of the Scripture and Christian beliefs to contemporary issues and contexts; and
- c) understand Catholic theology and its relationship to other cultures and religions.

TO PROMOTE UNDERSTANDING OF THE NATURAL SCIENCES

Science contributes to our knowledge of the natural world through careful and creative application of systematic processes. An educated person should be familiar with the process by which scientific knowledge is obtained through objective observation, the formulation of questions, the testing and verification of hypotheses, and the development of explanatory theories. An educated person also should be familiar with some of the major observations and theoretical models of science that guide scientific developments. Finally, one should understand the impact science has had on daily life and the human condition.

Scientific literacy is demonstrated when a person can

- a) describe the nature of scientific knowledge, use the scientific method, and comprehend, present, and critique scientific work;
- b) explain the most fundamental observations and models developed in the process of scientific inquiry; and
- c) evaluate the impact science has had on the human condition.

TO DEVELOP UNDERSTANDING OF THE SOCIAL SCIENCES

As social beings, we should strive to understand the forces that operate to influence the activities of individuals, groups, and societies. The social sciences provide an avenue to greater appreciation of the political, economic, sociological, psychological, and cultural factors that govern our actions. As with the natural sciences, students should be familiar with some of the major observations and theoretical models of the social sciences, and they should be familiar with the methodologies used by social scientists. This knowledge can help us better understand our own actions as well as our interactions with, and dependence upon, others.

Understanding of the social sciences is demonstrated when students can

- a) recognize problems that can be addressed using the methods of the social sciences, as well as problems that cannot be so addressed;
- b) apply the facts, theories, and perspectives of the social sciences to better understand themselves, the society in which they live, and other societies; and
- c) identify some of the observations and theoretical models relevant to specific social sciences.

TO DEVELOP MATHEMATICAL SKILLS AND QUANTITATIVE LITERACY

Mathematics is a family of completely abstract languages, each of which aims at complete precision and rigorous thinking. It

is a primary instrument by which scientific knowledge is discovered and exhibited. Because mathematics is a formal science of relations, its study may strengthen the capacity for logical thought, critical analysis, problem-solving, and the precise use of natural languages. In its pure form, mathematics reflects the human mind's attempt to order and discover patterns in nature; in its applications, mathematics reflects the fact that much knowledge is inherently quantitative and can be reached only through methodologies that depend on it.

Mathematical skills and quantitative literacy are demonstrated when a person can

- a) understand at least one mathematical language beyond elementary arithmetic;
- b) effectively communicate and interpret quantitative information as appropriate to the discipline;
- c) accurately apply appropriate mathematical reasoning and skills as appropriate to the discipline.

TO DEVELOP AN APPRECIATION OF THE FINE ARTS

In the spirit of the goals of our founder, Boniface Wimmer, who believed that it was important to teach not only what is necessary and useful, but also to teach about what is beautiful, we believe it is important for our students to be exposed to the fine arts, not only in the form of the many excellent cultural events available on campus, but also as an integrated part of their classroom learning. As it is important for students to know and understand the workings of the natural world, as well as the structure of society, it is also important for them to recognize and understand this aspect of human expression. Art is often an expression of spiritual, emotional, as well as political and social identities in many cultures, and so understanding the artistic productions of their own and other cultures can enable students to know the world better, and better to know themselves. Students will develop a systematic understanding and appreciation in the arts, especially in the areas of music and the graphic and plastic arts; recognize the aesthetic, spiritual, and functional qualities of art, both in history and in contemporary life; understand both the commonalities and the unique artistic contributions of artists in their own cultural traditions and in the traditions of other cultures.

Graduation Requirements

A candidate for graduation must satisfy the following requirements:

- Complete a minimum of 124 credits;
- Satisfy the requirements of the core curriculum;

- Fulfill the requirements for the major(s) as specified by the department(s);
- Achieve an overall grade point average of 2.0 as well as a grade point average of 2.0 in the major at Saint Vincent College;
- Satisfy the capstone requirement as specified by the major department(s); and
- Obtain financial clearance from the Business Office.

GRADUATION APPLICATION

Students who plan to graduate must file an application for graduation during the first term of their senior year. Application forms are available on the Registration and Records page of the portal or in the Registrar's Office. Upon receipt of the completed application, the Registrar will register the graduating student in an exit interview course (zero credits, pass/fail). Completed applications for May and August graduation are due to the Registrar by November 15; December graduation applications are due by September 15.

Students who have special permission to take a course away from Saint Vincent during their final semester, must make sure that the Office of the Registrar receives a final, official transcript from the other institution or a grade from the instructor by noon the Thursday before the graduation date. Students in the 3/2 Engineering Program must have an official transcript reflecting the successful completion of at least three, full-time semesters (a minimum of 45 credits) in engineering from the cooperative school sent to the Office of the Registrar before the graduation date.

GRADUATION PARTICIPATION

To participate in graduation ceremonies, students must be in good academic standing, must have fulfilled all financial obligations, and must have completed degree requirements (including the core, major requirements, and overall 124 required credits) or be within four credits of the overall number of credits required for graduation given their major degree program. Only those who have fulfilled all degree requirements and have no financial obligations to the College will receive a diploma.

Majors and Minors

Major requirements are specified by the departments in the section titled **Courses of Instruction**. Students have the option of completing a double major. In addition, students also have the option of completing a minor or minors. For successful completion of a minor, a grade point average of 2.0 in the minor is required. Additional information about requirements for minors is given under

the departments in the section titled **Courses of Instruction**.

Special Programs

ACADEMIC HONOR SOCIETIES

The College sponsors chapters of national or international academic honor societies to recognize students' academic excellence. Membership in an academic honor society stimulates professional growth and provides practical and leadership experience to enhance one's academic pursuits. Currently the College sponsors two general academic honor societies: Alpha Lambda Delta recognizes excellence among students in their first year of study in higher education; Alpha Chi recognizes academic excellence among college juniors and seniors. In addition there are honor societies in the following disciplines: Anthropology (Lambda Alpha); Biology (Beta Beta Beta); Physics (Sigma Pi Sigma); Economics (Omicron Delta Epsilon); History (Phi Alpha Theta); Psychology (Psi Chi); Education (Kappa Delta Pi); Business (Delta Mu Delta); English (Sigma Tau Delta); Communication (Lambda Pi Eta); International Foreign Language (Phi Sigma Iota); Sociology (Alpha Kappa Delta); Theology (Theta Alpha Kappa); Computing and Information Systems (Alpha Iota Mu); Mathematics (Pi Mu Epsilon); Criminology (Alpha Phi Sigma); Chemistry (Gamma Sigma Epsilon).

ACCELERATED PODIATRIC MEDICINE

See Pre-Health Profession section of this *Bulletin*.

ACCELERATED OSTEOPATHIC MEDICINE

See Pre-Health Profession section of this *Bulletin*.

ACTUARIAL SCIENCE (3-2 PROGRAM)

Course of Instruction under Mathematics, Actuarial Science (Mathematics, 3-2).

ARMY AND AIR FORCE RESERVE OFFICER TRAINING CORPS (ROTC)

Saint Vincent College students may participate in a military officer training program in either the U.S. Army (through the University of Pittsburgh-Greensburg) or the U.S. Air Force (through the University of Pittsburgh-Main Campus). Transportation is provided to the University of Pittsburgh-Greensburg for the Army program but is not for the Air Force program at the University of Pittsburgh-Main Campus. All credits of the Professional Officers Course or Advanced Military Science may be applied as electives at Saint Vincent, but no credit is granted for general military courses. Interested

students should contact the ARMY ROTC representative at ccb24@pitt.edu or the Air Force ROTC representative at 412-624-6396.

CERTIFICATE PROGRAMS

The College offers undergraduate certificate programs in Biotechnology, Addiction Specialist Training and Global Engagement. These programs meet the needs of people whose career situation would benefit from a structured training program in the area of certification. For successful completion of a certificate, a grade point average of 2.0 is required for the undergraduate certificate.

Specific course requirements are found under the particular department concerned. For further information, contact the Office of Admission and Financial Aid.

CONTINUING EDUCATION

Students not necessarily pursuing a degree may enroll in credit courses for personal or professional advancement. They should complete a Continuing Education Application when registering. Persons 30 years of age or older may audit any course at half-price tuition, and persons 65 or older may audit credit courses tuition free. Registration fee for each reduced-rate course audit is \$5.

For information contact the Office of the Coordinator of Graduate and Continuing Education.

ENGINEERING (3-2 PROGRAM)

Courses of Instruction under Engineering.

NURSING (2-2 PROGRAM)

Courses of Instruction under Nursing.

PRE-COLLEGE PROGRAM

High school students may take courses in the regular college curriculum with approval of their high school guidance counselor and the Coordinator of Graduate and Continuing Education. A list of appropriate courses will be decided upon by the coordinator and the student's guidance counselor. Students must complete a Pre-College Application along with a letter signed by their high school guidance counselor to be eligible. Pre-College students will receive half-price tuition.

INDEPENDENT STUDY

A student who wishes to pursue a special project in an area not sufficiently covered by the regular courses may request a faculty member to direct and supervise independent work. If accepted by the faculty member for independent study, the student should register for an independent study course in the department. Credits are determined by the faculty member and the School Dean. The Independent Study Program is restricted to juniors and seniors. A course required for the major, a minor, or the College

core curriculum may not be taken as an independent study.

INTERDISCIPLINARY WRITING PROGRAM

Through the Interdisciplinary Writing Program, trained faculty members provide students with concerted writing instruction in selected disciplinary courses. In these "Writing Designated" (WD) courses, students practically apply both the cross-curricular principles for producing good writing as well as discipline-specific conventions for the specific course. Thus, students learn how to write like professionals in their fields while adhering to Saint Vincent College's Six Principles of Good Writing that span all rhetorical situations. WD courses may combine a measure of informal and formal writing, asking students to write to learn and write to communicate. In a typical WD course, students may respond to reading assignments, integrate ideas and information from various sources, complete sequenced assignments, and revise papers based on peer reviews or instructor feedback. Though students are not required to take WD courses, they are strongly encouraged to do so because WD courses sharpen students' thinking and writing in the sciences, social sciences, business fields, as well as in the humanities.

STUDY ABROAD

The mission of the SVC Office of International Education is to provide students of all majors and backgrounds with access to high-quality, affordable study abroad programs. Students can take classes in their major, earn credit toward the Core, complete an internship, or study a foreign language. Program length varies from one-two weeks, summer session, full semester, to academic year. From initial advising and program matching through pre-departure orientation and return to campus, the SVC Office of International Education is committed to communicating openly and sharing resources that help students make informed decisions about their international education experience.

Students seeking short-term, for-credit study abroad opportunities can choose from one to two-week programs offered each academic year. Such programs allow for structured discipline-specific group travel led by a Saint Vincent College faculty member. The travel portion of most faculty-led programs occurs over spring and summer breaks. Cost varies; financial assistance is available for some programs.

Students wishing to study abroad for a full semester or a four-week or more summer program choose between exchange universities and approved third-party organizations. All financial aid is transferrable for exchange programs. While institutional aid does not transfer to third-party study

abroad programs, all federal, state, and non-institutional aid may be applied. Students are encouraged to apply for scholarship funding through the SVC Endowment for Study Abroad for four-week or more education abroad programs. Students may be eligible to apply for additional funding, as well. Students participating in four-week or more study abroad programs are required to enroll in a pre-departure orientation course the semester prior to travel. While abroad, students maintain access to online advising tools and resources.

SERVICE LEARNING AND COMMUNITY OUTREACH

Saint Vincent College students have the opportunity to enroll in a diversity of courses that integrate service into the curriculum. Through academic course work and service opportunities, faculty and students build partnerships with community organizations committed to serving the marginalized. Faculty challenge students to reflect, write, and discuss their experiences, using course content to enhance student understanding of how the service experience expands classroom learning. Service Learning courses provide students with transformative experiences that create a foundation of compassion, reflection, and problem-solving for future opportunities.

SUMMER SESSIONS

The College offers a variety of courses during its summer program. This includes three-, six-, and seven-week sessions. Classes are held both during the day and in the evening. Campus residence is available. Information may be obtained by contacting the Coordinator of Graduate Admissions and Continuing Education.

THE FRED ROGERS CENTER

Planned under Fred's guidance and established in 2003 at Saint Vincent College in his hometown of Latrobe, Pennsylvania, the Fred Rogers Center supports and enriches the important work of those who help children learn and grow across multiple disciplines, including early learning, education, communication, health, media, and more. By focusing our work on strengthening human relationships and promoting meaningful uses of technology and media, we support the current practice and ongoing development of child-serving professionals; expand educational opportunities for all undergraduate students (including the Fred Rogers Scholars); and collaborate in public service and applied research with educational and research institutions and community organizations. Our work is rooted in the southwestern Pennsylvania region, and continues to grow across the

United States and around the world. Fred Rogers offered a distinctly deep, simple, and compassionate voice for the healthy social and emotional development of children and adults. As the official home of the Fred Rogers Archive, the Center also makes available unique resources that help to deepen our collective understanding of the rich legacy of Fred Rogers and illuminates its continued relevance and applications today.

FRED ROGERS SCHOLARS

Incoming first-year students of all majors are invited to apply for this four-year, merit-based scholarship program designed to educate and inspire those students who are interested in pursuing careers that help children become confident, competent, and caring human beings. Applicants to the Fred Rogers Scholars Program will be high school seniors applying to and/or admitted to Saint Vincent College, with a minimum 3.50 GPA, various career and graduate school goals, a strong interest in helping children, and an interest in the work of Fred Rogers. Participation from students across all majors is strongly encouraged. Students are encouraged to connect their particular area of interest with the work of Fred Rogers in efforts to develop specialized knowledge in how Fred's legacy integrates with their areas of study and extend Fred's practice and principles in a variety of professions.

In **Year One** of the program, students will be inducted into the Fred Rogers Scholars and receive an introduction to Fred Rogers and the Archive. During the fall and spring semesters, the students will meet regularly to discuss readings and activities, visit the Archive, and engage with the FRS team of advisors. Students will work with the team of advisors to prepare research on a topic of their choice, related to the work of Fred Rogers.

Year Two of the program will be dedicated to the completion of the individual research in preparation of a group service-learning project related to the work of Fred Rogers. During the fall semester, students will meet regularly and begin to plan their individual research as a component to the planning of the group service project. During the spring semester, students will begin to plan the service project, including how it relates to Fred Rogers, as well as all necessary contacts to complete the project.

In **Year Three** of the program, students will complete their group service project and work with the FRS team of advisors to define the personal culminating project they will pursue. The projects must be related to the work of Fred Rogers and should be related to the student's major and expected career plans. Students will identify an advisory team member to work with, and will jointly define the project goals and methods.

In **Year Four** of the program, students will work with their identified FRS advisory team mentor to conduct a culminating project. The project will result in a deliverable defined by the student and mentor and will include a brief presentation at the end of the spring semester.

Complete the **Fred Rogers Scholars Application Form** to apply to the program no later than Jan. 15.

Honors Program

In concert with the mission of the College and the goals of the core curriculum, the Honors Program at Saint Vincent College strives to bring together accomplished students who share a commitment to excellence and a love of learning and to provide these students with academic challenges and enriching experiences that nurture and enhance rigorous intellectual development.

THE HONORS EXPERIENCE

Faculty of the Honors Program design special courses exclusively available to students in the Honors Program. By design, Honors courses challenge and reward students who seek engaging academic work and substantial intellectual development. Students in an Honors course tend to play a more active role in the learning process through, for example, discussions, presentations, and projects. The quality of assignments, not the quantity, distinguishes an Honors course.

The Honors seminar, the culminating experience in the Honors curriculum, challenges students to integrate the various disciplines they have studied to address a particular issue or theme.

In addition to the Honors curriculum, the Honors Program sponsors on-campus colloquia, forums for discussion of current cultural or political events, opportunities for service, and enriching off-campus excursions. Honors students play an important role in the Saint Vincent Student Research Conference and are strongly encouraged to present their scholarly or creative work at regional and national professional conferences.

THE HONORS CURRICULUM

Students seeking to graduate as Honors Scholars must take a minimum of five Honors classes plus the Honors Seminar. Students may remain in the program if their GPA remains above 3.0 and they continue to participate in Honors classes and at least one major Honors Program event per year.

Recommended schedules are outlined below. Students who enter the program as sophomores or juniors would need to increase the number of Honors electives.

TYPICAL SCHEDULE FOR HONORS COURSES

First Year

First Theology Honors Section
Language and Rhetoric: Honors Section
Honors Course (optional)

Sophomore and Junior Year

First Philosophy: Honors Section
Two Honors Courses

Junior or Senior Year

Honors Seminar
Honors Course (optional)

FORMAL RECOGNITION OF HONORS

All Honors classes are noted individually on the transcript. Students who successfully complete the Honors Curriculum receive recognition at graduation and a special designation on the transcript as a College Scholar of the Honors Program. The Honors Program Committee will review the records of the Honors Program students based on published criteria of grades and participation in Honors events.

APPLICATION PROCESS

Entry to the program will be based on the student's academic work and evidence of the student's motivation to pursue challenging course work. Students who are not accepted to the program may reapply at a later date using additional materials.

ENTERING FIRST-YEAR STUDENTS

Entering first-year students are invited to apply to the Honors Program as an extension of their Application for Admission to the College by submitting the application materials listed below. The Honors Program Admission Committee will also review the high school transcript and the ACT or SAT scores that are part of the general application to the College.

STUDENTS CURRENTLY ENROLLED AT SAINT VINCENT COLLEGE

Students currently at Saint Vincent are invited to apply to the program by submitting the application materials listed below. The Honors Program committee will obtain student transcripts for each applicant from the Registrar.

HONORS PROGRAM APPLICATION MATERIALS (REQUIRED OF ALL APPLICANTS)

Student name must appear on each item.

- Two letters of recommendation.
- A short essay (maximum 600 words)

that explains why the student would like to be part of the Honors Program. The essay should focus on personal experience with and interest in:

- exploring and discussing original works and commentary.

– sharing a commitment to a vigorous intellectual life by investing a significant effort in research, writing, and other forms of creative expression.

– integrating cultural events and independent scholarly work.

• A sample of original, individual work, which represents a student’s knowledge, ability, and creativity. This should be an academic essay that demonstrates the student’s writing ability. Projects that primarily string together quoted sources and do not include substantial portions of original writing by the applicant are not appropriate. Work created as part of a collaborative project is also not appropriate.

DEADLINE FOR SUBMISSION

Incoming First-year Students:

March 1 or until the program is filled.

Students Currently Enrolled at SVC:

Students currently enrolled at Saint Vincent College are invited to apply to the Honors Program anytime during the year. However, students must submit their application three weeks prior to registration if they wish to enroll in Honors courses the following semester.

Regulations

STUDENT IDENTITY VERIFICATION

Upon paid commitment to enroll in the College, each student is issued a unique ID, username, and password by the Information Technology Office. Students are encouraged to change their password upon the first login. This information is required to access the campus network which includes the portal, email, and the learning management system. This process is followed for enrollment in onsite, hybrid, and online courses. There are no additional fees for student identity verification.

REGISTRATION

Registration information is announced by the Registrar’s Office. Information concerning registration for courses at Saint Vincent College is available via MySV Portal so that students may plan course sequence and properly register for desired courses. Students will not receive credit for classes for which they are not properly registered. All students are expected to register for themselves. *Academic registration is concluded for a student when the schedule has been approved by an advisor, registration has been processed via the Portal or by filing the appropriate form in the Registrar’s office and the financial clearance is obtained through the Business Office.* Registration changes must be processed by noted deadlines. Non-attendance of a course for which a student

has registered does not constitute official withdrawal. Students may not attend a course for which they have not registered.

ACADEMIC TERMS

The academic year is separated into fall, spring, and summer semesters. Fall and spring are 15 weeks in length with an additional week for final examinations. Summer classes are 3 weeks or 6 weeks in length. All semester-length classes and summer sessions adhere to the college credit hour policy as verified by the Registrar.

CREDIT HOURS

All courses are recorded in terms of credits, or semester hours. A semester hour for lecture classes is defined as one lecture, recitation, or class period of 50 minutes duration per week for one semester. Recommended out-of-class study is twice in-class time. A semester hour for laboratories is defined as three (3) contact hours per week for one semester.

ONLINE/HYBRID COURSES

Online courses are delivered 100 percent asynchronously online. A hybrid course requires at least 50 percent of the instructional time delivered either synchronously online or in the classroom. Please note that for the purposes of this definition synchronous online instruction is considered to be the same as in class meetings for determining the percentage for the hybrid definition. A course delivered as 100 percent synchronous online should still be considered a hybrid.

SYSTEM OF GRADING

Grades are recorded by letter using a plus (+), minus (-) system; grade points are used to compute averages.

Letter Grade	Grade Points (per credit hour)	Number Grade
A	4.00	93-100
A-	3.70	90-92
B+	3.30	87-89
B	3.00	83-86
B-	2.70	80-82
C+	2.30	77-79
C	2.00	73-76
C-	1.70	70-72
D+	1.30	67-69
D	1.00	60-66
F	0.00	0-59

GRADE POINT AVERAGE

Records are evaluated through a grade-point average. This average is obtained by dividing the total number of credits taken into the grade points earned.

OTHER GRADING SYMBOLS

AP — Advanced Placement Award. Credit is given, but grade points are not.

CL — CLEP Examination. Credit is given, but grade points are not.

EX — Experiential Learning. Credit is given, but grade points are not.

G — Incomplete. An incomplete course must be completed within one month of the beginning of the following semester or the grade becomes an F. Under extenuating circumstances, the Registrar upon the request of the instructor may grant an extension of time up to the end of the following semester.

IP — Course In Progress. Only issued to students who are unable to complete course work in one semester due to the nature of the research, data collection, field work, or internship. Students have three semesters to complete IP work.

P — Pass. The student passed the course with at least the equivalent of a “C-” (1.70 or 70-72) or higher. Credit is given, but grade points are not.

T — Transfer course. Credit is given for transfer work from another accredited institution, but grade points are not.

X — Audit. No credit or grade points are given for auditing a course.

W — Withdrawal. No credit given and no effect on grade point average.

WF — Withdrew Failing. No credit given, but is computed in grade point average.

Withdrawal from courses is official only if processed appropriately via the Portal or in the Registrar’s office. Deadlines on withdrawals are indicated on the academic calendar. Failure to withdraw from a course officially will result in the student receiving a failing grade in the course. Refunds are based on the date the withdrawal is processed.

CLASS STANDING

The number of credits a student has earned toward graduation determines class standing.

Freshmen	0-23 credits
Sophomores	24-53 credits
Juniors	54-86 credits
Seniors	87+ credits

WITHDRAWAL FROM COLLEGE

Students who withdraw from the College are required to contact the Assistant Vice President for Student Success and Retention and complete an official withdrawal form and exit survey. This is especially important if the withdrawal is during the period when the student is entitled to a refund. Refunds are based on the date the withdrawal is processed.

ADD-DROP FEE

Add/Drops are free through the first day of classes. Beginning with the second day of classes a \$20 fee per process will be charged. No fee will be charged for changes caused by the college administration.

PASS-FAIL OPTION

The pass-fail option is available to encourage the motivated student to engage in more challenging course work without jeopardizing the overall grade point average. Students may elect one course each semester on a pass-fail basis. Pass-fail courses do not satisfy core curriculum, major or minor requirements. The course will carry credit toward graduation, but it will not be used in the computation of the student's grade point average, if a P is earned. An F is computed as a failing grade in the student's GPA. In order to earn a P, the student must earn the grade of C- or better (1.7 or 70-72). A grade of D+ or lower will be recorded as an F.

Students may elect to take a course on a pass-fail basis up to the date indicated on the academic calendar. Once the student has declared the pass-fail option, a change back to the letter grade is not permitted.

AUDIT

Students may audit courses. An audit signifies that the student will not be asked to meet the course requirements such as written assignments or examinations, but that he or she has the privilege of class attendance and participation. No credits toward graduation can be earned for audited courses and no grade can be given. Students who have taken a course and received a grade should not register for the course again as an audit. By auditing a course that was already taken for credit (including transfer and AP credits), the credits will be lost. Tuition for an audited course is identical to the tuition for students below the age of 29. Course audit for persons over 30 years of age up to 64 years of age is one half of the regular tuition. For persons 65 years of age and older, course audit is free of charge. Registration for each reduced rate credit course is \$5. Student is responsible for any fees associated with a course to cover the cost of materials.

DEAN'S LIST

A semester grade point average of 3.50 places the full-time matriculated student on the Dean's List. A minimum of 12 credits of completed courses is required during a semester in order for a student to be eligible for the Dean's List. Because averages will be computed before the period for removal of incompletes, students requesting incompletes waive their right to be named to the Dean's List for that semester.

ABSENCE FROM CLASS AND MAKE-UP EXAMS

Attendance is expected in all courses. Absences are strongly discouraged because they are detrimental to the successful completion of a course. Absences, as well as make-up exams, are handled at the discretion

of the individual faculty member. Instructors may choose to consider attendance in assigning grades. For the attendance policy and penalties for absence or lateness in a particular course, consult the instructor.

EXCUSED ABSENCES FOR PARTICIPATION IN INTERCOLLEGIATE SPORTS AND OTHER COLLEGE ACTIVITIES

The College officially sponsors the following intercollegiate sports: cross country, swimming, football, volleyball, track, lacrosse, baseball, golf, basketball, soccer, softball, tennis, and bowling. Before deciding to participate in a sport which necessitates absence from class, the student should carefully weigh the consequences of absences—even though officially excused—upon academic performance. Absences from class for participation in events in these sports will be considered excused absences provided proper procedures are followed. Although an excused absence will not be counted by the professor as a class missed, it does not relieve the student from the responsibility of learning course material. An excused absence simply means that the absence will not be counted by the professor as a missed class cut. Furthermore, any absence prevents a student from participating fully in the "process" of a course.

If a student determines that participation in athletics seriously interferes with academic performance, the student would be well advised not to participate. When planning registration, athletes should consult game schedules so that no more than four class sessions will be missed for intercollegiate competition. The student should rely heavily on the judgment of the professor and faculty advisor in cases where athletic participation appears to be jeopardizing academic progress. If a student's grade point average falls below the required minimum as stated in the Academic Warning System section, the student is prevented by College policy from participating in intercollegiate sports.

As soon as a student is placed on the official roster, the student will inform each professor regarding participation in an intercollegiate sport, and will provide a schedule of games which may conflict with the class schedule. The student will make provisions for make-up exams and the like in advance of the examination date so that the student is not penalized for the excused absence.

For each absence, the student will present an official excuse signed by the coach for the particular game which necessitates the absence. The policy and procedures outlined are for official intercollegiate sports.

EXCUSED ABSENCES FOR COMMUTER STUDENTS DUE TO INCLEMENT WEATHER

Commuter students should exercise good judgment about driving to campus for classes during inclement weather. If a student determines that travel conditions are hazardous, she/he should remain at home. However, the student must notify the instructor in advance of the scheduled class meeting.

COURSES TAKEN ELSEWHERE (TRANSFER COURSES)

Prior to taking a course at another accredited institution a student must work with his/her advisor to complete a Transfer Course Approval form that should be submitted to the Registrar's Office for final approval. Courses taken at other accredited institutions in which a grade of C- or better, a 1.70 grade point average, or a 70 number grade or above will be accepted by Saint Vincent College toward a student's graduation. Because only one course in each field is required to complete the core, the Mathematics and Fine Arts requirements must be completed at Saint Vincent. Once matriculated, students may transfer credit for no more than a total of five (5) courses with no more than one course applied to the requirement of a given core area. In order for the transfer work to be documented on a student's record, an official transcript must be sent to the Registrar's Office as soon as possible upon completion of the course. Courses will be documented with the grade of "T" which will not count toward the student's GPA.

For registration purposes for currently enrolled students, transfer credits must be received by March 15 to be included in credits completed for the following fall registration; transfer credits must be received by Oct. 15 to be included in credits completed for the following spring registration.

CHANGE OF MAJOR OR MINOR

A student must file a change-of-major/minor form with the Registrar in order to change a major/minor. Students pursuing majors that include concentrations should declare the concentration with the Registrar as soon as one has been identified. If a student changes a major/minor, including changing from an undeclared major, a C-, 1.70 or lower received in previous courses and not required by the new major/minor will not be used in the computation of the GPA if the student requests it. Undeclared students must demonstrate that a course was taken when considering a major. This information must be verified in writing by the Director of Undeclared Students. The student must request the change in computation on a form available from the Registrar. Credit for

these courses cannot be claimed in the future including for graduation.

Although these grades are not computed in the grade point average, they remain on the transcript.

REPETITION OF COURSES

A student may repeat a course in which a C-, 1.70 or lower has been earned if the student registers for the same course number a second time. The last grade shall replace the first in computing the grade point average even if the second grade is lower. The previous grade received is not removed from the transcript, but noted as a repeat. Only the credits earned in the repeated courses count toward graduation.

RECORDS POLICY AND DIRECTORY INFORMATION

The College makes available a statement informing students and parents of their rights under the "Family Educational Rights and Privacy Act of 1974" (the Buckley Amendment). The purpose of this act is to establish procedures which govern access to and release of student records kept by the College. Questions about the access to and release of student records should be directed to the Registrar and/or the Office of Student Affairs. Copies of the Buckley Amendment together with the College statement are made available in the offices of the Registrar and the Office of Student Affairs. Students have the right to file a complaint with the Department of Health, Education, and Welfare concerning failure of the College to comply with the Act.

Academic transcripts, grade reports, and other correspondence concerned with the student's status at Saint Vincent are sent directly to the students. Therefore, the parts of the *Bulletin* and/or the *Student Handbook* entitled "Academic Warning System," "Academic Dismissal," and "Corrective Action" should be carefully noted by the students as well as parents and other persons financially responsible for the education of students. Students and other interested parties outlined in the Act as entitled to access to the students' records will be requested by the College to follow ordinary request procedures established by the offices involved. Access to or release of student records under circumstances other than those provided for in the Act will not be permitted by the College without a signed waiver of the student.

Because academic transcripts, grade reports, and other correspondence concerning a student's status are forwarded directly to the student, it is strongly advised that parents or others financially responsible for the education of the student anticipate this arrangement by working out a satisfactory agreement between themselves and the student relative to records and correspondence from Saint Vincent College.

A student's record maintained in the Registrar's Office will be kept intact for five (5) years after the student graduates, withdraws, or is dismissed. At the end of the five years, the files will be purged with the exception of the academic transcript.

According to the Family Educational Rights and Privacy Act, a student has the right to refuse disclosure of personally identifiable information. That includes name; address (local, home, and e-mail); telephone number (local and home); place and date of birth; dates of attendance; major field of study and class level; degrees, honors, and awards; previous institutions attended; past and present participation in officially recognized activities and sports; and height and weight of athletic team members. To withhold disclosure of such information, written notification must be received in the Registrar's Office by the end of the first week of each semester. A form must be filed annually to renew the request to withhold information. Saint Vincent College assumes that failure by any student to request specifically the withholding of personally identifiable information indicates approval for disclosure of such information.

GRADE APPEALS

The instructor has jurisdiction in determining grades; however, the student has the right to appeal a final grade that the student believes to be in error. The appeal process may involve the following:

1. The student confers with the instructor involved.
2. The student and instructor (preferably together) confer with the chairperson of the department.
3. The student and instructor (preferably together) confer with the Dean of the School to which the department is attached.
4. In rare cases, when the foregoing steps do not resolve the issue, the student may initiate a formal written appeal to the Vice President for Academic Affairs. Normally, the Vice President for Academic Affairs will forward such appeal to the appropriate committee for its review and recommendation. A formal appeal should not be entered upon lightly by a student, nor lightly, dismissed by an instructor. A formal written grade appeal may be made no later than the fourth week of the following semester.

STUDENT CONCERNS REGARDING ACADEMIC MATTERS

In the event that a student has a concern about a particular course, the following procedures should be followed. First, the student should schedule an appointment with the professor to discuss the problem or concern. After this meeting, if the student believes that the concern has not been

resolved, the next step is to meet with the faculty member's chairperson or dean. If after this meeting the matter remains unresolved the student should contact the Vice President for Academic Affairs who will work with the student, faculty member and the chairperson or dean to resolve the matter.

ACADEMIC HONESTY

Saint Vincent College assumes that all students come for a serious purpose and expects them to be responsible individuals who demand of themselves high standards of honesty and personal conduct. Therefore, it is college policy to have as few rules and regulations as are consistent with efficient administration and general welfare.

Fundamental to the principle of independent learning and professional growth is the requirement of honesty and integrity in the performance of academic assignments, both in the classroom and outside, and in the conduct of personal life. Accordingly, Saint Vincent College holds its students to the highest standards of intellectual integrity and thus the attempt of any student to present as his or her own work which he or she has not performed or to pass any examinations by improper means is regarded by the faculty as a most serious offense. In any case of academic dishonesty, the faculty member together with the Assistant Vice President for Student Success and Retention, who confers with the student, decide on the appropriate sanction. Depending on the seriousness of the offense, possible sanctions are failure for the assignment, failure for the course, suspension, or expulsion. If a student receives the sanction of a failure for the course during the withdrawal period and drops the course, a WF will be recorded on the transcript.

SATISFACTORY PROGRESS

The Academic Status Committee meets after each semester to review the status of students who have not achieved a grade point average of 2.0 or above. Among the criteria which the committee uses to evaluate a student's progress are the following: number of credits earned, progress within the major and the core curriculum, and evaluations of faculty members contained in progress reports. Special circumstances affecting the performance of an individual student are also considered. If the student is not making satisfactory progress, he or she is dismissed. A student may be readmitted to the college if acceptable remedial work is done.

ACADEMIC WARNING SYSTEM

1. The College demands of every student an academic average of 2.0 at each semester grading period. If a student fails to attain this 2.0 average, or a cumulative average of 2.0, the Academic Status Committee issues a letter of academic warning with a copy to the

student's advisor, departmental chairperson, and parents. A freshman or sophomore student (first through fourth semester) who has not achieved at least a cumulative GPA of 1.75 or higher may not participate in formal extracurricular activities. Junior and senior students (fifth through eighth semesters) must achieve at least a cumulative GPA of 2.0 or higher in order to participate in formal extracurricular activities. Any transfer student who has junior status or above (by credits) at the end of their first semester at Saint Vincent College must follow the same guidelines as the third- and fourth-year student. Examples of formal extracurricular activities include the student newspaper, intercollegiate sports, student government, and drama.

2. In the case of unsatisfactory achievement (below 2.0) at midsemester of the freshman year, a student should consult his or her advisor.

ACADEMIC DISMISSAL

1. A student may be dismissed by the College administration for failing to attain a cumulative average of 2.0 by the end of the fourth semester.

2. A student may be dismissed before the fourth semester if extraordinary academic circumstances warrant dismissal.

3. If a student's cumulative average falls below 2.0 in the junior or senior year, one warning letter is issued. If the required cumulative average is not attained at the end of the following semester, the student is subject to dismissal.

4. An academically dismissed student may be readmitted to the College if he or she does acceptable remedial work. Typically, a student is required to complete two semesters of work at another institution and earn a grade point average of 2.50. Once readmitted, the student must maintain the required cumulative average at each grading period. A second dismissal is final.

STANDARDS OF SATISFACTORY ACADEMIC PROGRESS FOR FINANCIAL AID

To be eligible for financial aid, a student must meet specific minimal academic standards. See "Standards of Satisfactory Academic Progress for Financial Aid" in the Financial Aid section of this *Bulletin*.

SECOND MAJOR

A student may elect to graduate with two majors. In that event, the student must file a completed Declaration of Second Major Form in the Registrar's Office. The student must meet all requirements for each major at the time of graduation, and must be certified for graduation by the appropriate chairperson. The student's transcript lists both majors. Upon graduation the student is awarded one degree, a BA or BS degree. Where a department offers major programs leading

to either a BA or a BS degree, the student will earn the degree for which they meet the requirements.

SECOND DEGREE

A student who wishes to attain a second undergraduate degree after receiving a baccalaureate degree from Saint Vincent College or another college must apply through the Office of Admission, and complete a program of study that includes:

a) a minimum of 30 credits beyond those required of the prior degree; b) a major program in a different field from the initial degree; and c) the completion of the core curriculum requirements in effect at the time of admission as a candidate for a second degree. The student must achieve a 2.0 minimum grade point average in the credit hours earned toward the second bachelor's degree. After the evaluation of transfer credits and admission to Saint Vincent College, all remaining credits toward the second degree must be taken at Saint Vincent. Upon successful completion of degree requirements, a second degree is awarded to the student.

GRADUATE COURSE POLICY

Undergraduate students may enroll in graduate level courses with the approval of the program director(s) and provided they are taken as electives in excess of the 124 credits required for graduation.

In the event that an undergraduate enrolls in a graduate course, the course will appear on both the undergraduate and graduate transcripts. If students choose to matriculate into a graduate program at the College, the credits from the graduate courses taken at the College previously will then be applied to their graduate program, if applicable. The grades of these classes will be included in the students' cumulative GPA for both the undergraduate and graduate programs.

Graduate courses taken as an undergraduate student are subject to the policies outlined in the Graduate Bulletin, including probationary academic status and dismissal, and the approval of the program director(s).

CHANGES OF REQUIREMENTS

Academic requirements in effect at the time a student enrolls in the college generally remain applicable to that student. However, the college maintains discretion to modify programs and to add or delete courses at any time. When such a change is made, work done toward the fulfillment of a requirement that was completed before the change was made will continue to be recognized. New courses or requirements may, however, be applied to the uncompleted portion of a student's program.

If a student is readmitted to the College, requirements for graduation are determined

by the *Bulletin* in effect at the time of entry as a readmitted degree student.

HONORS

To graduate with honors (cum laude) a student must have a cumulative grade point average of 3.50 to 3.69; with high honors (magna cum laude), 3.70 to 3.89; with highest honors (summa cum laude), 3.90 to 4.00.

TRANSCRIPT REQUEST POLICY

Unofficial Transcripts

1. Only currently enrolled students may receive a copy of their unofficial transcript. This may be done by making a request in person and presenting a validated identification card. No fee is involved, but the student must be financially cleared by the Business Office.

2. In compliance with "The Family Educational Rights and Privacy Act of 1974" officials of Saint Vincent College who have a legitimate educational interest in a student may have unofficial copies of a student's transcript for their use only; parents, or those who can prove financial responsibility for a student, may receive an unofficial copy for their use only; no one else may receive or view a student's transcript without a written waiver from that student.

3. All other requests must be for an official transcript.

Official Transcripts

Saint Vincent College has partnered with Parchment Exchange to provide an electronic transcript request and fulfillment process. This online process, available 24/7, offers advanced security features and improved efficiency that includes access to real-time, end-to-end tracking.

To order a transcript, go to www.stvincent.edu and click on the Academics Tab. The link will connect to Parchment Exchange where you will submit your request and payment and receive tracking information. Transcript orders to electronic destinations are \$5 and paper requests are \$7.50. Additional fees for expedited mailing may apply.

All financial obligations to the College must be met before transcript requests can be honored. Any questions should be directed to the Registrar at registrar@stvincent.edu.

STUDENT SERVICES AND ACTIVITIES

This section of the *Bulletin* describes student services and activities.

ADVISING

The College, recognizing the value of the faculty-student relationship, considers the academic advising of students to be an important element of education. Each student is assigned a faculty advisor by name. Students must meet with their faculty advisor on a regular basis.

ATHLETICS

Physical activity is an essential aspect of a well-rounded college education. Saint Vincent College has intercollegiate teams in baseball, men's and women's basketball, women's bowling, men's and women's cross country, football, men's and women's golf, men's and women's lacrosse, men's and women's soccer, softball, men's and women's swimming, men's and women's tennis, men's and women's indoor track, men's and women's outdoor track, and women's volleyball. The college is a member of the National Collegiate Athletic Association and follows the rules of NCAA.

The intramural program provides a wide variety of sports to meet the needs, demands, and interests of Saint Vincent College students. An invitation is extended to all students, faculty, and staff to take part in the program. Leagues and/or tournaments are operated in basketball, flag football, volleyball, softball, deck hockey, and tennis. Some popular non-traditional sports are also offered such as Ultimate Frisbee, kick ball, and dodge ball. Aerobics is a very popular part of the intramural program. Saint Vincent College is a member of the National Intramural-Recreational Sports Association (NIRSA) and has participated in regional flag football championships.

Facilities on campus are available for those interested in weight lifting, basketball, swimming, and physical conditioning. A soccer field, lacrosse field, tennis courts, baseball field, softball field, football field, and basketball court are utilized by the students for outdoor sports.

CAREER AND PROFESSIONAL DEVELOPMENT CENTER

The Career and Professional Development Center is here throughout the student's entire four-year experience offering assistance with résumé and cover letter writing, career planning, job searching, internship programs, graduate school preparation, and interviewing techniques. A Career Consultant will also

assist in the career exploration process by administering instruments that can help students use the information to focus on a major or career. In addition to meeting one-on-one with a consultant, students are encouraged to attend Career and Professional Development Center events which offer advice on various career topics presented by the consultants, Saint Vincent College alumni and local employers. We offer opportunities to network with alumni and employers through on-campus events as well as off-campus job fairs. We also encourage students to use Handshake which promotes hundreds of positions including campus jobs, internships, and full-time opportunities. The Career and Professional Development Center also provides students with several resources on all career-related topics which can be found on our website or portal pages.

STUDENT EMPLOYMENT OPPORTUNITIES

Saint Vincent College offers part-time, seasonal, and career-related employment on-campus making every effort to provide opportunities which are both educationally valuable and financially rewarding. Wages are paid directly to the student on a monthly basis. To learn more about the student employment program, please visit the Career and Professional Development Center.

INTERNSHIP OPPORTUNITIES

Participating in an internship provides opportunities for students to supplement academic preparation with practical work experiences related to the student's major and career choice. Internships help students acquire marketable, career-related experience as they learn to apply theoretical knowledge to a work environment. General elective or required academic credits may be earned and applied to fulfill graduation requirements. Students may work full-time or part-time during the fall, spring, and/or summer months within business, industry, government, and non-profit agencies. Students may receive compensation that helps to defray the cost of educational expenses. Applications, program information, internship forms, and related internship search materials are available on the portal.

Please note, if the internship is being done for credit, the credit must be received within the current academic year. For example, if the internship is completed during the summer semester, the credit may be received in the summer, fall, or spring of the academic year. If completed during the fall semester, credit may be received that fall, or spring and if completed in the spring, the students can receive the credit for that spring only. The credit cannot transfer into the next academic year. Additionally, credits may not be split among semesters; all credits must be posted

to one semester. No matter when the credits will be received, internship forms should be submitted to the Career and Professional Development Center within two weeks of the start of the internship experience. The forms, which include the "Add/Drop Form," the "Faculty-Student-Employer Agreement," and the "Code of Conduct" must be signed by all parties before submitting them to the Career and Professional Development Center. All forms can be found on the portal. If credit is not being sought for the internship, it should still be reported for tracking purposes. All of this paperwork is located on the portal under Student Services > Career and Professional Development Center > Student Internship Forms. Please also note that you will receive a \$20.00 late fee for any paperwork submitted after the deadlines. The deadlines are as follows: July 15 (for summer credit); September 30 (for fall credit); February 15 (for spring credit). Paperwork must also be received no later than two weeks prior to the last day of class. Any student submitting paperwork, after this date, will not be granted credit.

CLUBS AND ORGANIZATIONS

The College affords the opportunity for students to participate in a variety of extracurricular activities. More than 60 clubs and organizations are available encompassing students' broad curricular and co-curricular interests. In addition to clubs affiliated with many academic majors, the Student Affairs Department supports clubs that complement a variety of student interests. A sampling of these clubs covers interests such as politics, service, theatre, health and fitness, and the outdoors. The College recognizes the diverse, changing interests of the students and provides support and assistance to students who choose to develop a club not currently organized on campus. Information about clubs and organizations may be obtained from the Office of Campus Life.

DISABILITY SUPPORT SERVICES

Students with physical, learning, or psychological disabilities who submit the appropriate documentation to the Assistant Dean of Studies may be eligible to receive reasonable academic accommodations. Disability support services within the office of Academic Affairs works closely with each student to assess individual needs and implement the appropriate accommodations. Qualified students with disabilities have an equal opportunity to fully participate in all aspects of the educational environment at Saint Vincent College. Confidentiality of student records is strictly maintained. Reasonable academic accommodations do not alter course requirements. The Notification of Approved Academic

Accommodations indicates the effective date of all approved accommodations and is not retroactive. Grievances against academic accommodations and disability support services should be made in writing within four weeks of the incident and submitted to the Assistant Vice President for Student Success and Retention. Saint Vincent College acts in compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990.

OPPORTUNITY SVC/ACT 101/STUDENT SUPPORT SERVICES (SSS – TRIO) PROGRAM

The Opportunity SVC/Act 101/Student Support Services (SSS – TRIO) Program is an academic support system funded, in part, by the College, the Commonwealth of Pennsylvania through Act 101 and by the U.S. Department of Education through the Student Support Services (SSS – TRIO) Program. The professional staff provides individual academic advising, helps students identify personal goals, and encourages them to achieve their highest potential. In addition, the staff is available to assist students with academic strategies, time management, and test-taking.

• ND 178 Principles of Academic Success

Principles of Academic Success is designed to assist students in developing the academic skills necessary for success in college. Topics will include note taking, test preparation, and time management. The instructor, occasional guest lecturers and other support service personnel on campus, will present information to the students. One credit.

• Study Center

The Study Center is a convenient, quiet facility supervised by the Opportunity Program and reserved for student study and computer use. It is located on the 2nd Floor of Alfred Hall. The Study Center is open 24 hours for student use. Designated peer tutors work in the Study Center at specified times.

• Tutoring

Tutoring is provided by academic departments and the Opportunity Program. Information about tutoring availability can be obtained from Departmental Chairpersons, the Opportunity Program staff, Schoology, the SVC Portal, and the *Tutorial Bulletin*.

RESIDENCE LIFE

Housing on campus is available in six residence halls for approximately 1,283 students. All students must sign the Residence Hall Contract that is binding for one academic year. First-year students under the age of 21 and living more than 50 miles from Saint Vincent College must reside on campus.

Saint Benedict Hall serves as the center for the first-year student population. Upperclass students are housed in double-occupancy rooms in Bonaventure and Gerard Halls, single- and double-occupancy rooms in Wimmer Hall, apartments and two-room suites housing four persons in Rooney Hall, and two-room suites housing two persons in Aurelius Hall. Housing in most residence halls is single sex by floor. Students may be consolidated if they are living alone in a double-occupancy room and do not wish to purchase the room as a single.

A student taking fewer than 12 credit hours per semester, a registered student not attending classes, or a non-matriculated student may not reside on campus. Exceptions to the residence rule may be made by the Director of Residence Life. Fifth-year, continuing education, and part-time students are housed based on availability once all other students are housed. Additional information and housing policies are contained in the Student Handbook.

Within each residence hall, each floor, neighborhood, or living area is led by at least one student para-professional (Prefect). Prefects are selected on the basis of maturity, leadership qualities, and the ability to create community. The Prefect works to maintain community within the residence hall as well as plans, promotes, and fosters programs of interest to the residents. Each residence hall is supervised by a Residence Hall Director (RHD) and Assistant Residence Hall Director(s) (ARHD). These staff members are post-Baccalaureate adults who have experience in student life issues and student life management. The Residence Hall Director sets the tone for the residential building and is the chief operations officer of that area.

The Director of Residence Life is responsible for the overall operations and development of the residence halls and oversees the housing assignment process.

STUDENT ACCIDENT AND SICKNESS INSURANCE

All students are encouraged to participate in a health insurance program that offers major medical insurance coverage. A variety of plans and providers are available for American born and international students. Students are referred to the website HealthCare.gov to apply for health insurance. The College does not endorse any specific insurance policy and encourages students to determine their insurance needs in consultation with their insurance company and health care provider. The College requires international students to have insurance coverage which includes repatriation and medical evacuation. Within the first week of the fall semester, all international students must demonstrate that such coverage exists. If the student does not have insurance coverage or if the terms

of the coverage do not include repatriation and medical evacuation, then the student must enroll in an insurance plan that covers such contingencies. Students may contact the Office of International Education for more information. Also, all athletes are required to have health insurance prior to participating in any athletic event.

STUDENT ASSOCIATIONS

Student clubs and committees on campus are coordinated through the Office of Campus Life, the Club Advisor, and the Student Government Association. Leadership ability and energy are made evident in the daily operation of these organizations' array of activities. These activities range from the academic to the social, encompassing hobbies, athletics, politics, society at large, as well as the Saint Vincent College community. Membership in College organizations is available to all Saint Vincent College students.

WELLNESS CENTER: HEALTH AND COUNSELING SERVICES

The Wellness Center, located on the first floor of the Carey Student Center, is a resource for both health and counseling issues. Counseling service helps students get the most out of their college experience by providing support in dealing with the choices and challenges that are part of college life. Individual counseling, mental health screening programs, and educational workshops are available to all students. All counseling services are free and confidential.

Saint Vincent operates a well-equipped outpatient healthcare facility staffed by two registered nurses, under the supervision of two family practice physicians. The physicians offer on-campus visits twice a week. Over the counter and in-stock prescription medications are provided to the student at no additional charge.

The Wellness Center sponsors and promotes many wellness events that are both educational and fun. The Wellness Center espouses a holistic philosophy and attitude which fosters the importance of balance in the college experience. Office hours are available from 8:30 a.m. – 4:30 p.m., Monday through Friday.

UNDERGRADUATE COURSES OF INSTRUCTION

Saint Vincent College awards two baccalaureate degrees: the Bachelor of Arts (B.A.) and the Bachelor of Science (B.S.). The degree program consists of the major, the core curriculum, and electives. Recommended electives are at times indicated by the departments. Second majors and minors are optional. Requirements of the core curriculum are given in the section “Academic Program and Regulations.”

Major and minor courses of study may be selected at Saint Vincent College from the following:

ALEX G. MCKENNA SCHOOL OF BUSINESS, ECONOMICS AND GOVERNMENT

MAJORS:

Accounting
Business Economics
Business Education Information Technology
Criminology, Law and Society
 Legal Studies
Economics
Economics and Mathematics
Finance
 Behavioral Finance
 Computational Finance
 Corporate Finance
 Investment Management CFP
 Investment Management CFA
Finance and Mathematics
International Business
Management
 Sports Management
Marketing
 Sports Marketing
Political Science
Politics
Public Policy

MINORS:

Accounting
Criminology, Law and Society
Economics
Entrepreneurship
Finance
Forensic Studies–Computer Security
Forensic Studies–Financial Investigations
Forensic Studies–Natural Science
Global Security
International Business
Legal Studies
Management
Marketing
Operational Excellence
Politics
Public Administration

SCHOOL OF ARTS, HUMANITIES AND SOCIAL SCIENCES

MAJORS:

Anthropology
Art Education
Communication
Digital Art and Media
 Graphic Design
 Video and Animation
Education (PreK-4 and Middle Grade)
English
French
History
Liberal Arts
Music
Music Performance
Philosophy
Philosophy and Politics
Philosophy and Theology
Psychology
 Mental Health
Psychology Education
Public History
Sociology
Spanish
Studio Art
Theology

MINORS:

Anthropology
Art History
Biological Psychology
Children’s Literature
Children’s Studies
Chinese Language and Culture
Communication
Creative Writing
Digital Art and Media
Disability Studies
Disability Studies with Certification
Education K-12
English
French
German
History
International Studies
Italian
Latin
Literary Translation
Medieval Studies
Music
Music History
Peace and Justice Studies
Philosophy
Psychology
Public Health
Public History
Sacred Music
Secondary Education
Sociology
Spanish
STEM Education (Science, Technology, Engineering, and Mathematics)
Studio Art
Theology

CERTIFICATES:

Addiction Specialist
Benedictine Leadership Studies
Global Engagement

HERBERT W. BOYER SCHOOL OF NATURAL SCIENCES, MATHEMATICS AND COMPUTING

MAJORS:

Biochemistry
Bioinformatics
Biology
Chemistry
Computer Science
Cybersecurity
Engineering
 Environmental Engineering
 Chemical Engineering
 Materials Engineering
 Mechanical Engineering
Environmental Chemistry
Environmental Science
Information Systems
Integrated Science
 Allied Health
 Applied Physics
 Chemical and Biological Analysis
 Pharmacy
 Science, Technology, and Society
Mathematics
Mathematics/Actuarial Science (3-2)
Mathematics/Engineering (3-2)
Nursing (2-2) in collaboration with Carlow University
Physics
Physics Education

MINORS:

Biochemistry
Biology
Biotechnology
Chemistry
Computer Science
Cybersecurity
Environmental Science
Environmental Studies
Information Systems
Mathematics
Physics

CERTIFICATES:

Biotechnology

Saint Vincent College courses that are numbered at the 100 level are considered “survey” courses. Typically first-year students register for these courses. Courses numbered 200 and above are considered upper-level courses.

A schedule is published at the beginning of each semester, indicating the instructor, time and place of meeting for the courses offered. Courses listed in the *Bulletin* may not be available every semester. The administration may cancel courses for which there is insufficient registration.

DEPARTMENT STRUCTURE

The Alex G. McKenna School of Business, Economics, and Government has been organized effective July 1, 2001. The following majors are included with the McKenna School: Accounting, Economics, Economics and Mathematics, Business Economics, Business Education, Criminology, Finance, Finance and Mathematics, International Business, Management, Marketing, Political Science, Politics, and Public Policy. Finance tracks are available in behavioral, corporate, computational, and investment management. The McKenna School also offers a sports marketing and sports management track.

The School of Arts, Humanities, and Social Sciences was established in July of 2018. The School includes the departments of Anthropology, Communication, Education, English, Fine Arts, History, Liberal Arts, Modern and Classical Languages, Music, Philosophy, Psychology, Sociology, and Theology. The Saint Vincent Gallery and the College's Stage and Theatre programs are also part of the School; the Saint Vincent College Drug and Alcohol Prevention Projects and the Fred Rogers Center for Early Learning and Children's Media are associated with the School.

Formed in 2004, the Herbert W. Boyer School of Natural Sciences, Mathematics, and Computing houses the departments of Biology, Chemistry, Computing and Information Systems, Engineering, Interdisciplinary Science, Mathematics, and Physics. In addition to the majors of these departments, the School offers majors in Biochemistry, Bioinformatics, Engineering Science, Integrated Science, and Environmental Science. Nursing is offered in collaboration with Carlow University.

Teacher certification may be obtained in Biology, Chemistry, Science Education, Mathematics, and Physics. Cooperative programs with other institutions of higher education enable students to pursue degrees in engineering, occupational therapy, pharmacy, physical therapy, and physician assistant.

ALLIED HEALTH PROFESSIONS

Dr. Daryle Fish, Ph.D., Albert Gahr, O.S.B.
Co-Chairpersons of the Allied Health Committee

The Allied Health professions refers to undergraduate preparation for study in physician assistant, pharmacy, physical therapy, occupational therapy, and many others. Students interested in these areas can major in Integrated Science: Allied Health or they can also choose to major in one of the traditional science majors such as biology or chemistry. Students then apply to the professional school of their choice.

Admission to professional schools is highly competitive and the Allied Health Committee, composed of faculty from within and outside the natural sciences, works closely with individual students to determine where abilities and interests should be directed. During the freshman and sophomore years, the Committee aids students in course selection, guides them toward extracurricular experiences necessary to be competitive, and provides opportunities for students to learn about admissions, schools, and careers.

COOPERATIVE PROGRAMS IN THE HEALTH PROFESSIONS WITH CHATHAM UNIVERSITY

Br. Albert Gahr, *Coordinator of the Chatham Programs*

Through a cooperative agreement between Saint Vincent College and Chatham University, students have the opportunity to complete four years of study at Saint Vincent College, and then transfer to Chatham University to complete a degree in Physical Therapy or Physician Assistant. Both programs require students to maintain a 3.5 GPA and to take the General Graduate Record Exam (GRE) and to have the scores sent to Chatham University. Students applying to the Physician Assistant Program must submit a completed application through the Centralized Application Service for Physician Assistant (CASPA) by Oct. 1 of their senior year. All PA candidates will have an on-campus interview. Students applying to the Physical Therapy Program must provide evidence of volunteer hours in a physical therapy facility and three letters of reference (at least one letter must be from a physical therapist and one from an academic). In addition, students must submit a completed application through Physical Therapy Centralized Application Services (PTCAS) by Oct. 1 of their senior year. All PT candidates will have an on-campus interview, and must submit a writing sample. Course requirements for both programs are given below.

Pre-requisites for admission to: MASTER OF PHYSICIAN ASSISTANT STUDIES (MPAS) AT CHATHAM UNIVERSITY

Required Courses

General Biology I and II with Lab 8
General Chemistry I and II with Lab 8
Anatomy and Physiology with Lab 8
Microbiology with Lab 4
Introduction to Psychological Science 3
Medical Terminology 1

Recommended Courses

Molecular Genetics with Lab 4
Biostatistics 3
Lifespan Development Psychology 3

PRE-PHYSICAL THERAPY CURRICULUM FOR DIRECT ENTRY INTO THE DOCTOR OF PHYSICAL THERAPY (DPT) STUDIES AT CHATHAM UNIVERSITY

Required Courses

General Biology I and II with Lab 8
General Chemistry I and II with Lab 8
Anatomy and Physiology with Labs 8
General Physics I and II with Lab 8
Introduction to Psychological Science 3
Biostatistics 3
Lifespan Development Psychology 3

COOPERATIVE PROGRAMS IN THE HEALTH PROFESSIONS WITH DUQUESNE UNIVERSITY

Daryle H. Fish, *Coordinator of the Pharmacy Program*

Through a cooperative agreement between Saint Vincent College and Duquesne University, students have the opportunity to complete two to three years of study at Saint Vincent College, and then transfer to Duquesne University to complete a degree in Pharmacy. This unique program allows students to begin their college education in the friendly educational community of Saint Vincent College which is known for its small class sizes and individualized attention. It is here that a student will gain a strong background in the sciences coupled with a liberal arts foundation that features the strong Catholic, Benedictine values of our institution. Many of our students hone their athletic and leadership skills by participating in collegiate athletics, intramural sports, student government, clubs, and services activities. At Duquesne University, a student will complete his/her formal education in the urban setting of Pittsburgh that is known for its world-class health care. Upon completing this course of study, students are prepared to enter the dynamic health care industry with an education that is firmly grounded in Catholic ideals. These programs of study are both rigorous and rewarding, allowing students to enter the health professions with a world-class education.

ELIGIBILITY

Students seeking admission to the Duquesne-SVC cooperative program in Pharmacy must maintain at least a 3.0 cumulative GPA and a 3.0 or higher in their science courses at Saint Vincent College. Duquesne will accept college credits from two-year schools for non-science courses, but all science courses must be taken at a four-year college or university. Duquesne does not accept transfer students to these programs. Entry to these programs at Duquesne is only available through the SVC-Duquesne cooperative. Students who intend to pursue the SVC-Duquesne cooperative must declare that intention in the first semester of their freshman year.

APPLICATION

The Duquesne-SVC cooperative programs are competitive and have limited seats available. As such, maintaining the required academic GPA does not guarantee that a student is selected for one of the available seats — admission to Duquesne is not guaranteed. Students submit an application, personal statement, critical review essay, CV, high school transcript, all college transcripts, and three letters of reference to the Coordinator of the Duquesne Cooperative Programs the fall semester before transferring to Duquesne. Students interested in the Pharmacy program should see the Pharmacy program advisor for additional information regarding the application process to that program. The Allied Health Committee recommends candidates to Duquesne based on academic performance, moral character, and the materials presented to the program coordinator.

NOTE: Duquesne University reserves the right to make

modifications to admission requirements while this *Bulletin* is still in publication. For the current admission requirements please contact your advisor. The program advisors will inform current students of any changes and work with them to modify their course of study. In order to receive a recommendation from the committee, students should clearly demonstrate that they are able to be enrolled full time in course work that includes multiple science and math courses and maintain a grade point average as specified for the specific programs. Students should enroll in a minimum of 16-18 credit hours each semester.

While credits from other institutions may be transferred to Saint Vincent College, once a student is matriculated, taking additional courses off campus is discouraged. Taking science courses at Saint Vincent during summer school is discouraged. The program coordinator and the Allied Health Committee periodically review the progress of the students enrolled in the programs and students will receive written feedback from the program coordinator.

A third option available to students interested in these professions is to complete a four-year degree at Saint Vincent and study the health-related profession of their choice in graduate school. Each year Saint Vincent has a number of students who initially enroll in these cooperative programs elect to stay at Saint Vincent and complete a Bachelor's Degree in a course of study such as Biology, Biochemistry, or Integrated Sciences. After completion of their degree from Saint Vincent, the students are eligible to transfer to any of the regional universities and complete a course of study in a health-related field which includes Pharmacy, Physician Assistant, Physical Therapy, and Occupational Therapy.

PHARMACY

The cooperative program between Saint Vincent College and Duquesne University School of Pharmacy is a six-year doctorate program leading to the Doctor of Pharmacy (Pharm.D.) degree. To practice pharmacy, students must pass a state licensure examination. Duquesne University requires that all students who wish to transfer into their program complete the PCAT exam and interview as part of the application process. The required course of study while at Saint Vincent College follows:

Typical First-Year Schedule

Fall Semester

BL 150	General Biology I	3
BL 151	General Biology I Laboratory	1
CH 101	General Chemistry I	3
CH 103	General Chemistry I Laboratory	1
TH 119	First Theology	3
or		
EL 102	Language and Rhetoric	3
PL 101	First Philosophy	3
	First-Year Seminar	1
Total Fall		15

Spring Semester

BL 152	General Biology II	3
BL 153	General Biology II Laboratory	1
CH 102	General Chemistry II	3
CH 104	General Chemistry II Laboratory	1
TH 119	First Theology	3
or		
EL 102	Language and Rhetoric	3
PY 100	Introduction to Psychological Science	3
MA 109	Calculus with Applications I	4
or		
MA 111	Analytical Calculus I	4
Total Spring		18

Typical Sophomore Year Schedule

Fall Semester

CH 221	Organic Chemistry I	3
CH 223	Organic Chemistry I Laboratory	1
PH 111	General Physics I	3
PH 113	General Physics I Laboratory	1
EL	English Literature	3
EC 101	Microeconomics	3
or		
EC 102	Macroeconomics	3
	Global Diversity ¹	3
Total Fall		17

Spring Semester

CH 222	Organic Chemistry II	3
CH 224	Organic Chemistry II Laboratory	1
	Ethics ²	3
	Faith and Reasoning ³	3
	Fine Arts	3
BL 260	Biostatistics	3
Total Spring		16

¹ Global Diversity includes one of the following: TH 380 World Religions, TH 385 Buddhism, HI 108 Traditional East Asian Societies, HI 109 Modern East Asian Societies, HI 233 History of Latin America, HI 270 The Rise of Chinese Civilization, HI 280 Islamic Civilization I, HI 123 Global History I (preferred), HI 102 Western Civilization I, or SO 101 Introduction to Sociology

² Ethics includes one of the following: PL 215 Ethics, PL 216 Ethical Problems, TH 275 Catholic Sexual Ethics, PL 218 Bioethics, or TH 280 Catholic Bioethics

³ Faith and Reasoning includes one of the following: PL 235 Philosophy of God, PL 240 Influence of Philosophy on Theology, TH 255 Religion and Politics, TH 300 Systematic Theology, TH 325 Vatican II History and Theology, TH 344 Classics in Catholic Theology, TH 348 Film, Fiction and Faith, TH 366 Religious Beliefs of Abraham Lincoln

In addition to the above requirements, all students who apply to Duquesne's Pharmacy school will be required to submit scores for the Pharmacy College Admission Test (PCAT). An interview will also be required for admission.

BENEDICTINE LEADERSHIP STUDIES CERTIFICATE

Dr. Michael Krom, *Director*

Prof. Mark Abramovic (Business Administration),
Dr. Melinda Farrington (Communication), Dr. Jerome Foss (Politics), Dr. Bill Hisker (Business Administration),
Dr. Jason Jividen (Politics), Nathan Munsch, O.S.B. (Theology),
Dr. Catherine Petraney (Theology), Dr. Michael Urick (Business Administration)

The Benedictine Leadership Studies (BLS) program will allow students to analyze who they are as an individual called to serve and promote the common good of their community, and to develop a meaningful understanding of God's purpose for their life, using the teachings of the Catholic Church and Benedictine spirituality as guides.

The Rule of Saint Benedict serves as the cornerstone leadership model for the program, offering a deeper understanding of leadership in the student's personal and professional life and in service to local, national, and global communities. BLS is a virtue-based, ethical structure for the study of leadership. The program is grounded in the Benedictine Wisdom Tradition, which has been developing since *The Rule of St. Benedict* was published 1,500 years ago. Its 10 core principles, or hallmarks, are derived from *The Rule* and form the core of BLS.

The 10 hallmarks distilled from *The Rule of Saint Benedict* are:

- Love
- Prayer
- Stability
- *Conversatio*
- Obedience
- Discipline
- Humility
- Stewardship
- Hospitality
- Community

The 10 Hallmarks shape the character of the BLS program. As a BLS fellow, the student will be educated in the virtues associated with the Hallmarks, and encouraged to develop them in ways appropriate to his or her future profession and vocation. Love of God and neighbor as self, purposeful reflection, commitment to one's obligations, openness to truth, steady work habits, humble regard for others, and a respect for creation are all attributes encouraged by the program. Recognizing that all leadership takes place in the context of communities, whether they be civic, natural or supernatural, the BLS program seeks to cultivate the complete human person: body, soul, and spirit.

STUDENT LEARNING OUTCOMES

- 1) To explain the meaning of each of the 10 hallmarks and how they bear on one another in a Benedictine leader;
- 2) To analyze both historical and contemporary examples in terms of the 10 hallmarks;
- 3) To apply the 10 hallmarks to reflection on one's own character and life as a whole.

Students will maintain an online portfolio throughout their four years as a BLS fellow. The portfolio will contain examples of their work, reflection on the skills they have gained, and thoughts on how they are growing in understanding and implementing the hallmarks in their life. In addition to serving as an assessment tool for BLS faculty showing how effective our programming is in

meeting the BLS Objectives, this portfolio may be shared with family, friends, and prospective employers.

PROGRAM STRUCTURE

There are five major components of the BLS Certificate:

- 1) BLS Coursework
- 2) Retreat Workshops
- 3) Experiential Learning
- 4) Self-Leadership Exercises
- 5) Rome Capstone Course

1) BLS Coursework

In order to receive a Benedictine Leadership Studies certificate, a student must complete 16-20 BLS credits. Up to 15 of these credits can count toward the college's core curriculum, and at least one artifact from each of these courses must be included in his or her portfolio.

TH 342	BLS Benedictine Heritage (BLS-designated section)	3
PS 100	BLS Principles of American Politics (BLS-designated section)	3
PL 215	BLS Ethics (BLS-designated section)	3
BA 280	Leadership	3
BLS 200	Leadership and the Eternal City	1
BLS 250	Internship	0-1+
BLS 300	Rome Capstone Seminar	0-3*

+ An internship of at least 45 hours will be completed during the junior year. In addition to meeting the standard requirements for an SVC internship as stipulated by the Career and Professional Development Center, the student will write an essay in which he or she analyzes his or her experience in terms of the hallmarks. If the student completes an internship course with another program, he or she may petition to count that course as the equivalent of BLS 250. If accepted, the student will be asked to complete the essay assignment to fulfill the BLS internship and take BLS 250 as a 0 credit course. Likewise, students who already have 19 credits in each of their junior-year semesters will take BLS 250 as 0 credit so as to avoid paying overload fees.

* The Rome Capstone seminar is normally scheduled in the spring semester of the senior year. Exceptions are made for those in 3-2 programs (e.g., Engineering) and for those whose major program has spring break requirements in the senior year (e.g., Education and Psychology). These students take BLS 300 in the spring of their junior year. In addition, students take BLS 200 the fall semester prior to taking the Rome seminar. Students receive 0-3 credits for the Rome seminar so as to avoid paying for an overload if they are already taking 17-19 credits.

In addition to these required courses, BLS Certificate students will take one of the following electives (3 credits).

HI 102	Ancient Greece and Rome
TH 204	Psalms and Wisdom Literature
PL 271/PS 261	Catholic Political Thought

After academic course work and other components of the BLS program are satisfactorily completed, a Benedictine Leadership Studies certificate will be awarded, upon completion of an academic degree at Saint Vincent College.

2) Retreat Workshops

Each semester the students will join with the other fellows in their cohort in a retreat workshop based on the Benedictine Hallmarks. In addition to the required reading and participation in discussion, they will write a brief reflection on what they learned about the specified hallmark(s) and include this in their portfolio.

3) Experiential Learning

To pursue the BLS Certificate students must participate in experiential learning activities each semester of their four years, and complete a reflection on what hallmark(s) they put into practice, to be included in their portfolio. Examples of experiential learning activities are a team-building ropes course, career planning activities and service learning projects. In addition, they will be required to complete a 0-1 credit internship during their junior year.

4) Self-Leadership Exercises

Students will be asked throughout their four years to reflect on how they are integrating the 10 hallmarks into their self-understanding and daily life. It is central to the program that they reflect on how their future profession and vocation will be shaped by their commitment to being a Benedictine leader. To facilitate this process, students will participate each semester in reflective exercises. Working with a Benedictine mentor, they will write a personal narrative based on these reflective exercises each academic year.

5) Rome Capstone Course

In the spring semester of their senior year (with the exceptions previously noted), students will enroll in BLS 300: Rome Capstone Seminar. The core component of the course is a spring break trip to Rome which will contain academic content relating to specific examples of leaders directly related to the academic and Benedictine heritage material covered during the week. A member of the Saint Vincent College faculty and a Benedictine monk will coordinate and co-teach the material presented in the course. The academic essay that students will write after the trip, reflecting on the models of leadership presented by the leaders of Roman history studied throughout the week, will be included in their portfolio.

BLS-200 LEADERSHIP AND THE ETERNAL CITY

This course is designed to prepare BLS students for the Rome trip. It must be taken in the Fall prior to taking the trip. Students will work through a reading packet on the history of Rome focusing on leadership. Those students who already have 19 credits in their schedule may take this course for 0 credit, 0 or 1 credit.

BLS-250 INTERNSHIP

The Internship will be taken during the junior year and will consist of a minimum of 45 hours. In addition to meeting the standard requirements for an SVC internship as stipulated by Career Services, BLS students will write an essay in which they analyze their experience in terms of the Hallmarks. Those students who already do an internship course with another program can petition to count that course as the equivalent of BLS 250. If accepted, they will be asked to complete the essay assignment to fulfill the BLS internship and take BLS 250 as a 0-credit course. Likewise, students who already have 19 credits in each of their junior year semesters will take BLS 250 as 0 credit, 0 or 1 credit.

BLS-300 ROME CAPSTONE SEMINAR

This is the capstone course for the Benedictine Leadership Studies Program. The core component of the course is a one-week international trip to Rome which will contain academic content relating to specific examples of leaders directly relating to the areas visited during the week and Benedictine heritage content. A member of the Saint Vincent College faculty and a Benedictine Monk will coordinate and co-teach the material covered in the course. Pre- and post-trip materials will also be included in the course and will be included in the final grade determination. 0 to 3 credits.

BIOINFORMATICS

Michael Sierk, *Director*

Bruce Bethke; Matthew Fisher; Cynthia Martincic

Bioinformatics is the study of biology and medicine using the analytical tools of mathematics and computer science. Technologies spawned by the Human Genome Project have produced an avalanche of biological and biomedical data in the last two decades, with more being generated constantly. In order to make sense of this data, computational and statistical techniques are essential, in addition to a solid understanding of biology.

The goal of the B.S. degree is to train students well in both computer science and biology, along with some training in math and chemistry. This will prepare students for a variety of options including:

- entering the workforce in the health care, biotechnology, and pharmaceutical industries, or in research institutes affiliated with governments, universities, and hospitals.
- graduate programs at the Master's or Doctoral level.
- pre-professional training programs such as medical school or dental school.

This is a growing field with a wide range of career opportunities at all degree levels; demand is high for individuals with the combination of biological knowledge and computational skills.

Bioinformatics at Saint Vincent College provides students with a distinctive combination of analytical and scientific training coupled with a broad-based liberal arts education. This mixture is a natural fit at Saint Vincent, allowing students to experience interdisciplinary connections both among the sciences and in relation to the world around them. Students may complete a Biology Track or a Computational Track in order to complete the major. Opportunities for exploring individual interests within and across disciplines are encouraged, including summer internships and research experiences, and students are able to design and carry out their own bioinformatics project as a capstone experience.

BIOINFORMATICS STUDENT LEARNING OUTCOMES

The degree in Bioinformatics is designed to:

- To train students deeply in both computer science and biology, along with some math and chemistry.
- To provide students with a solid foundational understanding of cellular and molecular biology.
- To develop students' abilities to solve biological problems using computational tools.
- To develop students' abilities to communicate effectively both orally and in writing.
- To allow students to demonstrate their knowledge and skills by developing and carrying out a capstone project.
- To provide students with the opportunity to participate in internships that complement and enhance their academic training.
- To prepare students for a variety of career options including:
 - graduate programs at the Master's or Doctoral level
 - pre-professional training programs, such as medical school or dental school
 - entering the workforce in the healthcare, biotechnology and pharmaceutical industries, or in research institutes affiliated with governments, universities, and hospitals

BIOLOGY TRACK

Requirements for a Bachelor of Science degree in Bioinformatics (See core curriculum requirements.)

Major Requirements (63 credits)

The student must complete the requirements listed in the following categories:

Biology Requirements (22 credits)

BL 150	General Biology I	3
BL 151	General Biology Laboratory	1
BL 152	General Biology II	3
BL 153	General Biology Laboratory II	1
BL 208	Cell Biology	3
BL 209	Cell Biology Laboratory	1
BL 214	Molecular Genetics	3
BL 215	Molecular Genetics Laboratory	1
BL 260	Biostatistics	3

Choose one of the courses listed below. The associated lab is recommended but not required.

BL 212	Microbiology	3
BL 216	Biotechnology	3
BL 222	Developmental Biology	3
BL 224	Physiology	3
BL 234	Evolution and Systematics	3
BL 250	Medical Microbiology	3
CH 251	Proteins and Metabolism	3
CH 252	Nucleic Acids and Membranes	3

Computing and Information Systems Requirements (15 credits)

CS 102	Fundamentals of IT and Computing	3
CS 110	C++ Programming I	3
CS 170	Discrete Structures I	3
CS 265	Information Systems Management	3

Choose one from the following courses:

CS 171	Discrete Structures II	3
CS 205	Website Design and Programming	3
CS 214	Introduction to Mobile Application Programming	3
CS 250	User Interface Design	3
CS 255	Introduction to Artificial Intelligence ¹	3
CS 270	Introduction to Numerical Computation	3
CS 305	Web Technologies ²	3

¹Requires CS 111 as a prerequisite

²Requires CS 111 or CS 205 as a prerequisite

Bioinformatics Requirements (10 credits)

BIN 218	Bioinformatics, Genomics, and Proteomics	3
BIN 219	Biomedical Informatics	3
BIN 357	Bioinformatics Junior Seminar	1
BIN 358	Bioinformatics Senior Research	2
BIN 359	Bioinformatics Senior Seminar	1

Chemistry Requirements (12 credits)

CH 101	General Chemistry I	3
CH 102	General Chemistry II	3
CH 103	General Chemistry Laboratory I	1
CH 104	General Chemistry Laboratory II	1
CH 221	Organic Chemistry I	3
CH 223	Organic Chemistry I Laboratory	1

Mathematics Requirements (4 credits)

MA 109	Calculus with Applications I	4
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or
MA 111 Analytical Calculus I 4

**General Chemistry I and II (or General Biology I and II) with laboratory fulfill the Natural Science core requirement. Calculus with Applications I or Analytical Calculus I fulfills the Mathematics core requirement.*

***Students with no computing background may want to take CS 102 Fundamentals of IT and Computing in the fall of their freshman year as an elective.*

****Students interested in applying for medical or dental school should take CH 222/224 Organic Chemistry II and laboratory.*

*****Students interested in applying for medical school must take CH 251 Proteins and Metabolism in the fall of their junior year. This course requires CH 221-224 as a prerequisite.*

Typical First-Year Schedule

	Fall	Spring
General Biology I and II and labs	4	4
Introduction to Visual Basic Programming		3
General Chemistry I and II and labs	4	4
Language and Rhetoric/First Theology	3	3
Elective	3	
First-Year Seminar	1	
Total:	15	14

COMPUTATION TRACK

Requirements for a Bachelor of Science degree in Bioinformatics
(See core curriculum requirements.)

Major Requirements (64 credits)

The student must complete the requirements listed in the following categories:

Biology Requirements (17 credits)

BL 150	General Biology I	3
BL 151	General Biology Laboratory I	1
BL 152	General Biology II	3
BL 153	General Biology Laboratory II	1
BL 208	Cell Biology	3
BL 209	Cell Biology Lab is recommended	
BL 260	Biostatistics	3

Choose one of the courses listed below. The associated lab is recommended but not required.

BL 212	Microbiology	3
BL 214	Molecular Genetics	3
BL 216	Biotechnology	3
BL 222	Developmental Biology	3
BL 224	Physiology	3
BL 234	Evolution and Systematics	3
BL 250	Medical Microbiology	3
CH 251	Proteins and Metabolism	3
CH 252	Nucleic Acids and Membranes	3

Computing and Information Systems Requirements (21 credits)

CS 110	C++ Programming I	3
CS 111	C++ Programming II	3
CS 170	Discrete Structures I	3
CS 221	Data Structures	3
CS 350	Database Concepts and Information Structures	3
CS 351	Information Systems Analysis and Design	3

or
CS 355 Software Engineering 3

Choose one from the following courses:

CS 171	Discrete Structures II	3
CS 214	Introduction to Mobile Application Programming	3
CS 250	User Interface Design	3
CS 255	Introduction to Artificial Intelligence	3
CS 270	Introduction to Numerical Computation	3
CS 305	Web Technologies	3
CS 310	Programming Languages	3

Bioinformatics Requirements (10 credits)

BIN 218	Bioinformatics, Genomics, and Proteomics	3
BIN 219	Biomedical Informatics	3
BIN 357	Bioinformatics Junior Seminar	1
BIN 358	Bioinformatics Senior Research	2
BIN 359	Bioinformatics Senior Seminar	1

Chemistry Requirements (8 credits)

CH 101	General Chemistry I	3
CH 102	General Chemistry II	3
CH 103	General Chemistry Laboratory I	1
CH 104	General Chemistry Laboratory II	1

Mathematics Requirements (8 credits)

MA 111	Analytical Calculus I	4
MA 112	Analytical Calculus II	4

**General Chemistry I and II (or General Biology I and II) with laboratory fulfill the Natural Science core requirement. Analytical Calculus I fulfills the Mathematics core requirement.*

***Students with no computing background may want to take CS 102 Fundamentals of IT and Computing in the fall of their freshman year as an elective.*

Typical First-Year Schedule

	Fall	Spring
C++ Programming I and II	3	3
General Biology I and II and labs	4	4
Language and Rhetoric/First Theology	3	3
Elective	3	3
First-Year Seminar	1	
Total:	14	13

BIOINFORMATICS COURSE DESCRIPTIONS

BIN-00X BIOINFORMATICS EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. Zero credits. Pass/Fail.

BIN-218 BIOINFORMATICS, GENOMICS

An introduction to various techniques used in bioinformatics, including the algorithms and statistical concepts upon which they are based. The focus is on comparison and analysis of DNA and protein sequences. Students will learn about the types of biological questions that can be addressed using computational methods, and develop a deeper understanding of the computational tools available to address these questions. This understanding will be demonstrated in an end-of-semester project. Topics covered will include pairwise sequence alignment, sequence database searching,

multiple sequence alignment, genome analysis, protein structure analysis, and microarray analysis. Students majoring in any of the natural sciences, computing and information systems, or mathematics are encouraged to take the course. Prerequisites: BL 150-154 (for Biology and Bioinformatics majors) or NSCI 230- 231 (for all others). Offered every other fall semester (Fall 2013). Three credits.

BIN-219 BIOMEDICAL INFORMATICS

An introduction to a variety of data types, databases, and data structures used in bioinformatics. The focus is on relational databases and integration of diverse data types in a biomedical context. Students will learn how existing database tools, such as Microsoft Access, can be used in biomedical informatics using data from clinical trials as an example. Topics covered will include relational databases, data modeling, and integration of biological data. Also covered will be introductions to various biomedical assays (e.g. flow cytometry, enzyme-linked immunosorbent assays) and the types of data they produce. Students majoring in any of the natural sciences, computing and information systems, or mathematics are welcome to take the course. Prerequisites: BL 150-154 (for Biology and Bioinformatics majors) or NSCI 230-231 (for all others). Offered every other fall semester (Fall 2014). Three credits.

BIN-333 BIOINFORMATICS INDEPENDENT STUDY

The student will pursue a faculty-directed course of study. Variable credit. May be repeated.

BIN-357 BIOINFORMATICS JUNIOR SEMINAR

The capstone senior project is initiated in this course during the spring semester of the junior year. Under the supervision of a faculty member, the student will select a project, research the literature, and develop a formal plan for undertaking the project. The student will produce a written project proposal and give an oral presentation at the end of the semester. Spring semester. One credit.

BIN-358 BIOINFORMATICS SENIOR RESEARCH

Students conduct the body of their capstone senior research project in this course, typically during the fall of the senior year. Projects may be individual or a team project, and students may have co-advisors from different departments. Fall semester. Prerequisite: BIN 357. Two credits.

BIN-359 BIOINFORMATICS SENIOR SEMINAR

The capstone senior project initiated in BIN 358 is completed in this course. The student will give written and oral presentations on the project at the end of the semester. Two credits. Spring semester. Prerequisite: BIN 358.

BIN-550 BIOINFORMATICS INTERNSHIP

Work experience program extending the learning experience beyond the college into the world of work, through internships, fieldwork, and cooperative programs. Students may or may not be paid depending on the site. May be repeated. Variable credit.



BIOLOGY

Jennifer L. Koehl, *Chairperson*

Shawn Anderson, O.S.B.; James G. Barnett; Bruce D. Bethke;

Michelle Duennes; Albert Gahr, O.S.B.; Matthew Hillwig;

James S. Kellam; Michael Rhodes

The biology program lays a foundation for graduate study in biology, and for training in the professions and technologies based upon the biological sciences. It is the philosophy of the department that as undergraduates, students should be broadly trained; should be knowledgeable in an area of specialization; should understand the process by which scientists ask and pursue the answers to questions; and should be acquainted with ethical principles and issues as they relate to the field of biology.

Both the B.A. and B.S. degrees are awarded in biology. Bachelor of Science students must complete 36 credits in biology while Bachelor of Arts students must complete 33 credits. Students begin in the first-year with General Biology (BL 150-153) where cellular, organismal, and population biology are introduced. Subsequently, they select one of these three sub-disciplines as an area of concentration. During the sophomore, junior, and senior years, they complete Cell Biology, one advanced course with lab in each of the three areas of concentration, and an additional advanced course with lab in their chosen concentration. Additionally, during the last semester of the junior year and through the senior year, students plan and complete a senior research project under the supervision of individual faculty.

Students are also required to complete one year of General Chemistry, one year of Organic Chemistry, and one year of Physics. B.S. students must complete one year of Calculus while one semester of Calculus is required of students electing the B.A. degree. It is strongly recommended that B.A. students complete a second semester of Calculus, and that all students complete one semester of Statistics before their senior year. Further, since questions of an ethical and moral nature often arise in biology and related fields, students are encouraged to include a bioethics course in their curriculum.

General Biology is a prerequisite for all advanced courses and, with the exception of General Biology, only courses above BL 200 may be applied toward the total biology credits required.

In individual circumstances and with permission of the chairperson, a course may be substituted for one of the required courses listed under the cellular, organismal, and population concentrations. Students should work closely with their advisors and are cautioned to give careful and serious consideration to the selection of courses because requirements and recommended courses may differ among professional and graduate schools.

BIOLOGY STUDENT LEARNING OUTCOMES:

Upon completion from the Saint Vincent College Biology program, graduates will be able:

- To learn and apply biological concepts from the perspective of cellular and molecular biology, organismal biology, and population biology.
- To recall and integrate concepts within our three subdisciplines: cellular/molecular, organismal, and population biology.
- Be able to read and critically interpret scientific literature.
- To develop scientific lab skills and field techniques.
- Collect, analyze, and interpret scientific data.
- To effectively communicate biological information both orally and in writing.
- To provide opportunities for students to learn the Catholic position on bioethical issues.

Teacher Preparation

For Teacher Certification in Biology (7-12) the candidate must satisfy the following:

NSCI 150 Earth Systems Science 3

NSCI 151 Earth Systems Science Lab 1

See Education Department guidelines to plan the core classes and other courses required for certification.

REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE IN BIOLOGY

(See core curriculum requirements.)

Major Requirements (61 credits):

BL 150, 152 General Biology I and II 6

BL 151, 153 General Biology Laboratory I and II 2

BL 208 Cell Biology 3

BL 209 Cell Biology Laboratory 1

BL 301 Junior Research Seminar 2

BL 302 Research Project 2

BL 303 Research Thesis 1

CH 101, 102 General Chemistry I and II 6

CH 103, 104 General Chemistry Laboratory I and II 2

CH 221, 222 Organic Chemistry I and II 6

CH 223, 224 Organic Chemistry Laboratory I and II 2

PH 109, 110 College Physics I and II 6

PH 113, 114 General Physics Laboratory I and II 2

MA 109 Calculus with Applications I 4

Fulfill the requirements for one area of concentration:

Cell and Molecular Biology Concentration:

BL 212 Microbiology 3

BL 213 Microbiology Laboratory 1

or

BL 216 Biotechnology 3

BL 217 Biotechnology Laboratory 1

or

BL 222 Developmental Biology 3

BL 223 Developmental Biology Laboratory 1

and

BL 214 Molecular Genetics 3

BL 215 Molecular Genetics Laboratory 1

One course with laboratory from each of the organismal and population biology areas. 8

Organismal Biology Concentration:

BL 220 Comparative Vertebrate Anatomy 3

BL 221 Comparative Vertebrate Anatomy Laboratory 1

or

BL 226 Neuroscience 3

BL 227 Neuroscience Laboratory 1

or

BL 228 Wildlife Biology 3

BL 229 Wildlife Biology Laboratory 1

and

BL 224 Physiology 3

BL 225 Physiology Laboratory 1

One course with laboratory from each of the cellular and population areas. 8

Population Biology Concentration:

BL 232 Ecology 3

BL 233 Ecology Laboratory 1

or		
BL 252	Invertebrate Zoology	3
BL 253	Invertebrate Zoology Laboratory	1
or		
BL 240	Conservation Biology	3
BL 241	Conservation Biology Laboratory	1
and		
BL 234	Evolution and Systematics	3
BL 235	Evolution and Systematics Laboratory	1
One course with laboratory from each of the cellular and organismal areas.		8
Strongly Recommended:		
BL 260	Biostatistics	3
or		
PY 203	Statistics I	3
and		
TH 280	Catholic Bioethics	3
or		
PL 218	Bioethics	3

REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE IN BIOLOGY

(See core curriculum requirements.)

Major Requirements (68 credits):

BL 150, 152	General Biology I and II	6
BL 151, 153	General Biology Laboratory I and II	2
BL 208	Cell Biology	3
BL 209	Cell Biology Laboratory	1
BL 301	Junior Research Seminar	2
BL 302	Research Project	2
BL 303	Research Thesis	1
CH 101, 102	General Chemistry I and II	6
CH 103, 104	General Chemistry Laboratory I and II	2
CH 221, 222	Organic Chemistry I and II	6
CH 223, 224	Organic Chemistry Laboratory I and II	2
PH 109, 110	College Physics I and II	6
PH 113, 114	General Physics Laboratory I and II	2
MA 109, 110	Calculus with Applications I and II	8
	Elective Course in Biology	3

(Any three-credit, 200-level biology course, CH 251, CH 252, BIN 218, or BIN 219 qualifies as an elective course in biology)



Fulfill the requirements for one area of concentration:

Cell and Molecular Biology Concentration:

BL 212	Microbiology	3
BL 213	Microbiology Laboratory	1
or		
BL 216	Biotechnology	3
BL 217	Biotechnology Laboratory	1
or		
BL 222	Developmental Biology	3
BL 223	Developmental Biology Laboratory	1
and		
BL 214	Molecular Genetics	3
BL 215	Molecular Genetics Laboratory	1
One course with laboratory from each of the organismal and population areas.		8

Organismal Biology Concentration:

BL 220	Comparative Vertebrate Anatomy	3
BL 221	Comparative Vertebrate Anatomy Laboratory	1
or		
BL 226	Neuroscience	3
BL 227	Neuroscience Laboratory	1
or		
BL 228	Wildlife Biology	3
BL 229	Wildlife Biology Laboratory	1
and		
BL 224	Physiology	3
BL 225	Physiology Laboratory	1
One course with laboratory from each of the cellular and population areas.		8

Population Biology Concentration:

BL 232	Ecology	3
BL 233	Ecology Laboratory	1
or		
BL 252	Invertebrate Zoology	3
BL 253	Invertebrate Zoology Laboratory	1
or		
BL 240	Conservation Biology	3
BL 241	Conservation Biology Laboratory	1
and		
BL 234	Evolution and Systematics	3
BL 235	Evolution and Systematics Laboratory	1
One course with laboratory from each of the cellular and organismal areas.		8

Strongly Recommended:

BL 260	Biostatistics	3
or		
PY 203	Statistics I	3
and		
TH 280	Catholic Bioethics	3
or		
PL 218	Bioethics	3

Requirements for Minor in Biology (26 credits):

All students must complete the following courses:

BL 150, 152	General Biology I and II	6
BL 151, 153	General Biology Laboratory I and II	2
CH 101, 102	General Chemistry I and II	6
CH 103, 104	General Chemistry Laboratory I and II	2

Additionally, students must complete 10 credits from the courses listed below. Two lecture-laboratory course combinations, each

combination from a different area of concentration, must be included. Students may complete the remaining credits in any concentration. BL 260 Biostatistics may also be used to satisfy the remaining credits.

Cell and Molecular Biology Concentration:

BL 208	Cell Biology	3
BL 209	Cell Laboratory	1
BL 212	Microbiology	3
BL 213	Microbiology Laboratory	1
BL 214	Molecular Genetics	3
BL 215	Molecular Genetics Laboratory	1
BL 216	Biotechnology	3
BL 217	Biotechnology Laboratory	1
BL 222	Developmental Biology	3
BL 223	Developmental Biology Laboratory	1
BL 242	Histology	2
BL 243	Histology Laboratory	1
BL 250	Medical Microbiology	3
CH 251	Proteins and Metabolism	3
CH 253	Proteins and Metabolism Laboratory	1
CH 252	Nucleic Acids and Membranes	3
CH 254	Nucleic Acids and Membranes Laboratory	1
BIN 218	Bioinformatics, Genomics, and Proteomics	3
BIN 219	Biomedical Informatics	3

Organismal Biology Concentration:

BL 220	Comparative Vertebrate Anatomy	3
BL 221	Comparative Vertebrate Anatomy Laboratory	1
BL 224	Physiology	3
BL 225	Physiology Laboratory	1
BL 228	Wildlife Biology	3
BL 229	Wildlife Biology Laboratory	1
BL 230	Ornithology	3
BL 226	Neuroscience	3
BL 227	Neuroscience Laboratory	1

Population Biology Concentration:

BL 232	Ecology	1
BL 233	Ecology Laboratory	1
BL 234	Evolution and Systematics	3
BL 235	Evolution and Systematics Laboratory	1
BL 238	Aquatic Ecology and Toxicology	3
BL 239	Aquatic Ecology and Toxicology Laboratory	1
BL 240	Conservation Biology	3
BL 241	Conservation Biology Laboratory	1
BL 252	Invertebrate Zoology	3
BL 253	Invertebrate Zoology Laboratory	1

Typical First-Year Schedule

First Semester (15-16 credits):

BL 150	General Biology I	3
BL 151	General Biology Laboratory I	1
CH 101	General Chemistry I	3
CH 103	General Chemistry Laboratory I	1
EL 102	Language and Rhetoric	3
or		
TH 119	First Theology Core course (History, Social Science, etc.)	3
or		
	Calculus	4

All students must take one course designated as a First-Year Seminar to satisfy a core curriculum requirement.

Second Semester (17-18 credits):

BL 152	General Biology II	3
BL 153	General Biology Laboratory II	1
CH 102	General Chemistry II	3
CH 104	General Chemistry II Laboratory	1
EL 102	Language and Rhetoric	3
or		
TH 119	First Theology Core course (History, Social Science, etc.)	3
	Core course or Calculus	3-4

BIOLOGY COURSE DESCRIPTIONS

BL-103 WORLD SERIES OF BIRDS

The World Series of Birding is a competition held by the Audubon Society in New Jersey during mid-May of each year. Teams from around the world compete to find the most bird species in a single 24-hour period. In preparation for the event, students will be introduced to the identifying characteristics of about 12 species per weekly meeting, with the expectation that they learn 150+ species by the end of the semester. Attendance on one 15-hour Saturday field trip is required, plus the actual competition held at the end of the semester. The team will arrive in Cape May, New Jersey, two days before the competition in order to refine skills and scout locations. The extended weekend trip close to graduation makes it difficult for seniors to participate. This is a Service Learning course in which our team works with others to collect scientifically valuable data on bird migration and distributions. Students enrolling in this course need not have prior birding experience, but enthusiasm is essential. One credit.

BL-150 GENERAL BIOLOGY I

This year-long course with BL 152 is intended for science majors. The first semester addresses the biology of cells, and animal physiology, development, and taxonomy. The second semester continues with plant biology, classical and molecular genetics, and ecology and evolution. At the conclusion of the course, Biology majors select cell and molecular biology, organismal biology, or population biology as an area of concentration for subsequent work. A passing grade in BL 150 is required for BL 152. Periodically offered as a first-year seminar. Fall semester and summer. Three credits.

BL-151 GENERAL BIOLOGY I LABORATORY

This course introduces scientific method, statistics, laboratory techniques, and the use of instruments as students perform experiments that reinforce and expand upon ideas presented in BL-150. Fall semester and summer. One credit.

BL-152 GENERAL BIOLOGY II

This year-long course with BL 150 is intended for science majors. The first semester addresses the biology of cells, and animal physiology, development, and taxonomy. The second semester continues with plant biology, classical and molecular genetics, and ecology and evolution. At the conclusion of the course, Biology majors select cell and molecular biology, organismal biology, or population biology as an area of concentration for subsequent work. A passing grade in BL 150 is required for BL 152. Spring semester and summer. Three credits.

BL-153 GENERAL BIOLOGY II LABORATORY

This course introduces scientific method, statistics, laboratory techniques, and the use of instruments as students perform experiments that reinforce and expand upon ideas presented in BL 150 and 152. Spring semester and summer. One credit.

BL-208 CELL BIOLOGY

This course is an intensive examination of cell ultrastructure and function. Emphasis is placed on the role of specific organelles in cellular processes such as membrane structure, function, biogenesis, and recycling; protein structure, assembly, modification, and trafficking; energy transduction; intracellular transport; cellular locomotion; cell cycle control and programmed cell death; and cell-to-cell communication. Techniques employed in the study of cellular components and processes, including microscopy, are integrated into the course content; as is the relationship of individual cells within the environment of an integrated multicellular organism. Prerequisites: BL 150-153. Fall semester. Three credits.

BL-209 CELL BIOLOGY LABORATORY

The laboratory is designed to familiarize students with the general methods used to study the physical nature of cells and their inherent biochemical processes. Experimental techniques performed range from the measurements of cell growth rates to the differential purification and biochemical analysis of subcellular components. The use of fluorescence microscopy to localize specific proteins in situ, using digital image capture and analysis will be profiled. Throughout the laboratory an emphasis will be placed on the use of digital technologies to facilitate quantitative analysis of biological processes. Prerequisites: BL 150-153. Fall semester. One credit.

BL-212 MICROBIOLOGY

This course will introduce students to microbiology, the study of microorganisms with a focus on bacteria and viruses. The course will include discussions and lectures on the history of microbiology, microbial growth and metabolism, and microbial genetics. The impact of microorganisms in the environment, interactions with other organisms, and microbial diseases, treatments, and the human immune response will be studied. Prerequisites BL150-153. Spring semester. Three credits.

BL-213 MICROBIOLOGY LAB

Students will learn how to properly handle, grow, and identify microorganisms. Students will study microorganisms in the environment including biofilms, the effect of antibiotics on bacteria, identification of food contaminants, and various factors that contribute to changes in microbial growth. The lab will focus on bacteria. Prerequisites: BL 150-153. Spring semester. One credit.

BL-214 MOLECULAR GENETICS

This course focuses on the gene, both in the context of genome structure and organization, and the coordination of individual gene expression. Specific emphasis is placed on the interaction between DNA and protein in relation to the regulation of gene expression, DNA replication, and recombination; the critical role of chromatin structure in gene organization and expression; and the molecular events in transcription, translation, and mutation. Structure and function comparisons are made between prokaryotes and eukaryotes using the bacterium *Escherichia coli*, the simple eukaryote *Saccharomyces cerevisiae* (baker's yeast), and humans, as paradigm organisms. Special attention is given to the techniques employed in molecular genetic analysis, including recombinant DNA methodologies and the relationship between molecular

genetics and the fields of bioinformatics and biotechnology. Prerequisites: BL 150-153. Fall semester. Three credits.

BL-215 MOLECULAR GENETICS LABORATORY

This course is a hands-on engagement of the foundational methodologies used to elucidate, manipulate, and quantify gene anatomy and expression. The technologies employed for cloning vector design and construction, molecular cloning, gene transfer, nucleic acid isolation, hybridization analysis, DNA amplification, RT-PCR, DNA sequencing, and, genetic sequence and database analyses are explored theoretically and in practical application. Prerequisites: BL 150-153. Fall semester. One credit.

BL-216 BIOTECHNOLOGY

This course engages the rapidly developing field of biotechnology through careful dissection of the technologies and their applications. Topics including cell-based and cell-free food and beverage biotechnology, heterologous protein expression in prokaryotic and eukaryotic systems, the design and production of the transgenic plants and animals, stem cell technologies, reproductive and therapeutic cloning strategies, genome engineering, somatic and germline gene therapy approaches, vaccine development, DNA forensics, bioremediation, biofuels, and high throughput screening are examined in detail with consideration given to both their potential and realized industrial, medical, and environmental applications. Emphasis is placed on the technical considerations unique to each technology, although safety and ethical considerations will also be addressed. Offered in even-numbered years. Prerequisites: BL 150-153. Spring semester. Three credits.

BL-217 BIOTECHNOLOGY LABORATORY

This course provides students with significant hands-on experience performing techniques critical to the biotechnology industry. Laboratory exercises involve food biotechnology, biosensor construction, forensic DNA analysis, recombinant protein production and purification in both prokaryotic and eukaryotic systems, plant and animal cell culture, and gene transfer to cultured plant and animal cells. Must be concurrently enrolled in BL216 Biotechnology. Offered in even-numbered years. Prerequisites: BL 150-153. Spring semester. Three credits.

BL-220 COMPARATIVE VERTEBRATE ANATOMY

This course endeavors to provide a comprehensive comparison of vertebrate structure and function in the major body systems. Animals being discussed range from fish to reptiles, to mammals. Human comparisons are also included with each body system. This course is taken concurrently with Comparative Vertebrate Anatomy Laboratory. Prerequisites: BL 150-153. Fall semester. Three credits.

BL-221 COMPARATIVE VERTEBRATE ANATOMY LABORATORY

The first part of this course is the comparative analysis of vertebrate skeletal structure. Animals under study include sharks, fish, amphibians, reptiles, birds, and mammals. The second part of the course involves an intensive study of mammalian gross anatomy through dissection of a cat. Body systems to be studied include the muscular, digestive, urogenital, reproductive, circulatory, and nervous systems. Prerequisites: BL 150-153. Fall semester. One credit.

BL-222 DEVELOPMENTAL BIOLOGY

This course provides a comprehensive study of both invertebrate and vertebrate embryology with a particular focus on important model organisms. The course will also provide an overview

of plant developmental mechanisms. Areas of study include gametogenesis, fertilization, early embryological events, and organogenesis. This course will focus on both classical embryological and modern molecular and genetic techniques. In addition, the course incorporates a component that discusses the bioethical issues surrounding important areas in developmental biology such as cloning and stem cell research. Taken concurrently with Developmental Biology Laboratory. Prerequisites: BL 150-153. Offered odd-numbered years in spring semester. Three credits.

BL-223 DEVELOPMENTAL BIOLOGY LABORATORY

This course provides students with hands-on experiences in both classical and molecular developmental biological techniques. The course consists of two distinct units. The first unit focuses on the preservation and developmental staging of invertebrate and vertebrate embryonic model organisms. The second part focuses on the theory and practice of using molecular techniques (RT-PCR, In-Situ Hybridization, etc.) to investigate gene expression patterning during normal and abnormal embryonic development. Must be concurrently enrolled in BL 222 Developmental Biology. Prerequisites: BL 150-153. Offered odd-numbered years in spring semester. One credit.

BL-224 PHYSIOLOGY

Detailed study of organ system function with emphasis on humans. The systems studied include neuromuscular, cardiovascular, respiratory, renal, digestive, and endocrine. Homeostasis, regulatory mechanisms, and the functional relationships between systems are emphasized. Prerequisites: BL 150-153. Offered spring semester. Three credits.

BL-225 PHYSIOLOGY LABORATORY

Hypothesis-driven laboratory experiments designed to explore organ system function in mammals, including humans. Students work extensively with computers to acquire, process, and present data. Prerequisites: BL150-153. Offered spring semester. One credit.

BL-226 NEUROSCIENCE

This course provides an application of the fundamental concepts of neuroscience to brain areas, pathways and processes, simple and complex behaviors, as well as mental diseases and disorders. Emphasis is given to the structure and function of the human brain. The course combines lectures, discussions, case studies, and independent projects to allow students to explore topics across the breadth of the field of neuroscience. These topics include neuroanatomy, neurophysiology, neuropharmacology, and behavioral and cognitive neuroscience. Prerequisites: BL 150-153. Offered even-numbered years in spring semester. Three credits.

BL-227 NEUROSCIENCE LABORATORY

This laboratory exposes students to a variety of techniques used by neuroscientists. These techniques include neuroanatomical and histological procedures, neurophysiological methods, neuropharmacological investigations, as well as commonly used approaches to explore brain-behavior relationships. Some laboratories incorporate computer simulations. Prerequisites: BL 150-153. Offered even-numbered years in spring semester. One credit.

BL-228 WILDLIFE BIOLOGY

This course combines elements of animal natural history, physiology, and behavior to survey how animals cope with short-term and seasonal changes in their environment. In particular, we will discuss the challenges animals face in maintaining homeostasis during periods of reproduction, migration, hibernation and torpor, resource scarcity, and heightened competition or predation risk. We will

examine strategies used by a variety of vertebrate and invertebrate species. Prerequisites: BL 150-153. Offered odd-numbered years in fall semester. Three credits.

BL-229 WILDLIFE BIOLOGY LABORATORY

The objectives for lab and field activities in this course include instruction on animal capture techniques and the study of animal resource use in relation to habitat and microclimate. Prerequisites: BL 150-153. Offered odd-numbered years in fall semester. One credit.

BL-230 ORNITHOLOGY

For thousands of years people have marveled at the beauty, the diversity, and the abilities of birds, particularly their ability to fly. Feathers are unique to birds, and birds are also known for their migratory behavior, singing ability, and parental care. While this course will cover these topics in depth, we will also examine how the study of birds can generate new insights relating to issues affecting all animals, including the nature of intelligence, communication, evolution, and ecological interactions. Class periods will feature lecture, multimedia demonstrations, and discussion of scientific literature. There will be a significant number of field trips to observe, identify, and capture birds in their native habitats. Prerequisites: BL 150-153. Offered odd-numbered years in spring semester. Three credits.

BL-232 ECOLOGY

This is a general course emphasizing physical-chemical-biological relationships. Evolutionary trends are considered. Topics include energy relations, biogeochemistry, population growth, and the structure and function of communities and ecosystems. Prerequisites: BL 150-153. Fall semester. Three credits.

BL-233 ECOLOGY LABORATORY

Lab and field experiences paralleling Ecology 232 are designed to teach specific techniques of research design, field sampling, and data analysis in terrestrial and freshwater ecosystems. Prerequisites: BL 150-153. Fall semester. One credit.

BL-234 EVOLUTION AND SYSTEMATICS

The theory and evidence of the gradual evolution of organisms and taxonomic relationships of animals and plants. Offered in odd-numbered years. Prerequisites: BL 150-153. Spring semester. Three credits.

BL-235 EVOLUTION AND SYSTEMATICS LABORATORY

Laboratory experiments, computer simulations, and field trips are designed to study concepts presented in BL 234. Offered in odd-numbered years. Prerequisites: BL 150-153. Spring semester. One credit.

BL-238 AQUATIC ECOLOGY AND TOXICOLOGY

Freshwater and marine systems will be studied from physical, chemical, and biological perspectives. The impacts of natural and human disturbances, particularly toxins, will be examined using primary and secondary research literature. Prerequisites: BL 150-153. Three credits.

BL-239 AQUATIC ECOLOGY AND TOXICOLOGY LABORATORY

Laboratory experiments, computer simulations, and field work will parallel lecture topics. Collection and assessment of physical, chemical, and biological data will occur in streams, lakes, and wetlands. Prerequisites: BL 150-153. One credit.

BL-240 CONSERVATION BIOLOGY

The rate of global species extinctions today is comparable to that experienced in the Cretaceous when the dinosaurs fell from prominence. This course will examine the modern causes of extinction as well as the techniques in biology used to monitor and sometimes reverse declining populations of endangered animals and plants. Both a community- and species-centered approach to conservation are discussed. Other topics include mechanisms of evolution and population genetics, invasive species, habitat assessment, wildlife and fisheries management, and species conservation plans for both domestic and international populations. A significant portion of the course grade will be based on a comprehensive term paper and oral presentation. Prerequisites: BL 150-153. Offered even-numbered years in fall semester. Three credits.

BL-241 CONSERVATION BIOLOGY LABORATORY

The laboratory section will emphasize conservation techniques such as habitat assessment, animal and plant identification, animal capture, and field trips dedicated to learning about specific rare or endangered species and rare or endangered habitats. There will also be considerable time spent indoors doing computer modeling. Prerequisites: BL 150-153. Offered even-numbered years in fall semester. One credit.

BL-242 HISTOLOGY

A detailed study of the normal tissues of vertebrates from both a morphological and a functional viewpoint. Special emphasis is placed on the characteristics of human tissues. Students must take the laboratory concurrently. Prerequisites: BL 150-153. Two credits.

BL-243 HISTOLOGY LABORATORY

Each student gets experience in the preparation of slides as well as identifying tissues under the microscope. Prerequisites: BL 150-153. One credit.

BL-245 EXERCISE PHYSIOLOGY

This course represents an evaluation of how the body responds and adapts to both acute and chronic exercise stress at the subcellular through the organ and system level. Prerequisites: BL 150-153.

BL-250 MEDICAL MICROBIOLOGY

This course will introduce students to the study of pathogenic (disease-causing) microorganisms with a focus on bacteria and viruses. The course will include discussions and lectures and focus on microbial diseases, treatments and prevention, and the human immune response to microorganisms. Prerequisites: BL 150-153. Three credits.

BL-252 INVERTEBRATE ZOOLOGY

This course will cover the behavior, structure, physiology, classification, and distribution of invertebrates. It will be divided into four main topics: terrestrial invertebrates, aquatic freshwater invertebrates, aquatic marine invertebrates, and parasitic invertebrates. Offered in even-numbered years in the spring. Prerequisites: BL 150-153. Three credits.

BL-253 INVERTEBRATE ZOOLOGY LABORATORY

Lab and field experiences paralleling Invertebrate Zoology. This class will teach specific techniques for dissection of preserved invertebrates, invertebrate identification, research and data collection with live and preserved invertebrates, and field sampling and preservation of terrestrial and aquatic invertebrates. Offered in even numbered years in the spring. Prerequisites: BL 150-153. One credit.

BL-260 BIostatISTICS

This course deals with quantitative and statistical methodology in the biological sciences. It includes experimental design and the conventions of generating, analyzing, interpreting, and presenting biological data. Prerequisites: BL 150-153. Spring semester. Three credits.



BL-290 HUMAN DISSECTION LAB EXPERIENCE

The course objective will be to teach human anatomy through interactive lab dissection taught by two local practicing orthopedic surgeons. Each interactive lab dissection will focus on a different human anatomic body part or system – i.e., knee, foot, and ankle, cardiac, pulmonary, neurological, digestive, and circulatory. In addition to learning human anatomy surgical technique will be taught as part of the lab instruction. In addition to exploring the interrelationships between anatomic structure and function, the instructors will correlate the dissections to help teach common pathological processes and disorders such as arthritis, cardiac disease, lung disease, gastrointestinal disorders. Fee. One credit.

SENIOR RESEARCH PROGRAM

The Senior Research program introduces students to all facets of developing and completing a research project. It begins with BL 301 where the student writes a research proposal. He/she is introduced to biological literature searches, critical reading of primary research articles, formulation of biologically significant questions, experimental design, and long-range planning. The program continues in BL 302 where the student performs the proposed laboratory work. The student masters, adapts, and applies laboratory techniques to the solution of specific biological problems. Additionally, the student experiences the excitement of success and the frustration of setbacks common to all research. The program concludes with BL 303 where the student critically analyzes the data, integrates it with the findings of others, and presents the work in a written thesis format. Enrollment in the first phase of the program (BL 301) requires completion of General Biology and at least two upper level biology courses, with concurrent registration in a third. Students with a biology QPA less than 2.0 or with two or more grades below C in upper level biology lecture courses may not register for BL 301.

BL-301 JUNIOR RESEARCH SEMINAR

Design and plan a research project. Write a research proposal. Spring semester. Two credits.

BL-302 RESEARCH PROJECT

Perform the experimental phase of the research project. Prerequisite: BL 301. Fall semester. Two credits.

BL-303 RESEARCH THESIS

Write the senior research thesis. Prerequisite: BL 302. Spring semester. One credit.

BL-310 TEACHING BIOLOGY

Primarily laboratory instruction which includes lecturing, laboratory preparations, and assistance under the supervision of the faculty member in charge of the course. It is not substitute teaching and is intended to provide first-hand experience with the teaching process. Permission of instructor required. One credit.

BL-333 SPECIAL STUDY

The student will pursue a faculty-directed course of study. Permission of chairperson required. Variable credit. May be repeated.

BL-350 BIOLOGY INDEPENDENT RESEARCH PROJECT

The student will pursue research distinct from the Senior Research Project. Does not fulfill major or minor credit requirements. Variable credit. May be repeated.

BL-550 BIOLOGY INTERNSHIP

Work experience program extending the learning experience beyond the college into the world of work. Students are employed in an area related to their academic endeavor. Academic credits are P/F and are awarded by individual departments according to the extent of the work experience. Students may or may not be paid depending on the site. The purpose of the program is to integrate academic studies and employment activities. Does not fulfill major or minor credit requirements. Variable credit. May be repeated.

BIOTECHNOLOGY

Bruce Bethke, *Director*

Matthew Fisher; Michael Sierk

Biotechnology, the technological application of biological systems, is a dynamic, evolving field that has fundamentally changed the world we live in. Advances in this field have resulted in breakthrough medical discoveries, insights into the nature of living systems, an improved understanding of evolutionary biology, improved environmental remediation, enhanced agriculture, more efficient industrial processes, novel biomaterials, and even artificial intelligence. A natural consequence of these advances has not only been significant change, but also discussion and debate in the areas of public policy, ethics, religious teachings, and business practice.

At Saint Vincent College the biotechnology curriculum has strong foundations in biology, chemistry, mathematics, and computer science, coupled with hands-on laboratory and one-on-one research experiences. However, the curriculum also incorporates ethics, public policy, government, economics, business, and law. It is the interconnection of these fields that creates opportunity; and students with an encompassing interdisciplinary background are particularly well-prepared for careers in biotechnology that extend beyond the laboratory. This includes careers in the areas of medicine, research, agriculture, public health, environmental science, engineering, policy, education, and industry.

Students in the biotechnology program have the option of pursuing either a minor, or a more in-depth certification. The certification in biotechnology program sets students apart from their peers on the breadth of their scientific foundations, complemented by insights from interconnecting fields; while the minor in biotechnology is well-suited for students in the sciences wanting to explore the applications of what they are learning, from an interdisciplinary perspective.

CERTIFICATION IN BIOTECHNOLOGY

May be completed as a post-Baccalaureate Certificate (usually in one year), or concurrently with a traditional major course of study (may require an additional semester to complete).

(See core curriculum requirements.)

(See major requirements.)

Certification Requirements Prerequisites:

BL 150	General Biology I	3
BL 152	General Biology II	3
BL 151	General Biology Laboratory I	1
BL 153	General Biology Laboratory II	1
BL 208	Cell Biology	3
BL 209	Cell Biology Laboratory	1
BL 214	Molecular Genetics	3
BL 215	Molecular Genetics Laboratory	1
CH 101	General Chemistry I	3
CH 102	General Chemistry II	3
CH 103	General Chemistry Laboratory I	1
CH 104	General Chemistry Laboratory II	1
CH 221	Organic Chemistry I	3
CH 222	Organic Chemistry II	3
CH 223	Organic Chemistry Laboratory I	1
CH 224	Organic Chemistry Laboratory II	1
MA 109	Calculus with Applications I	4

Course Requirements (32 credits):

BIN 218	Bioinformatics, Genomics, and Proteomics	3
BL 216	Biotechnology	3
BL 217	Biotechnology Laboratory	1
BL 260	Biostatistics	3
CH 251	Proteins and Metabolism	3
CH 253	Proteins and Metabolism Laboratory	1
CH 252	Nucleic Acids and Membranes	3
CH 254	Nucleic Acids and Membranes Laboratory	1
BA 230	Introduction to Entrepreneurship	3
BL/BIN 550	Internship/Research Experience**	1
PL 218	Bioethics	3
or		
TH 280	Catholic Bioethics	3

4 credits (course and laboratory) selected from:

BL 220	Comparative Vertebrate Anatomy	3
BL 221	Comparative Vertebrate Anatomy Laboratory	1
BL 222	Developmental Biology	3
BL 223	Developmental Biology Laboratory	1
BL 224	Physiology	3
BL 225	Physiology Laboratory	1

3 credits selected from:

BA 170	Organizational Behavior	3
BA 220	Principles of Marketing	3
PS 390	Environmental Law and Policy	3

The Certification in Biotechnology requires, in addition to course work, an applied internship or research experience, either paid or unpaid (which can occur on or off campus, during the summer or during the school year).

At least 12 credits of the certificate course requirements must be completed at Saint Vincent College.

Minor in Biotechnology

To be completed concurrently with a traditional major course of study.

Minor Requirements (21 credits):

BIN 218	Bioinformatics, Genomics, and Proteomics	3
BL 214	Molecular Genetics*	3
BL 215	Molecular Genetics Laboratory	1
BL 216	Biotechnology*	3
BL 217	Biotechnology Laboratory	1
BA 230	Introduction to Entrepreneurship	3
BL/BIN 550	Internship/Research Experience**	1
PL 218	Bioethics	3
or		
TH 280	Catholic Bioethics	3

3 credits selected from:

BA 170	Organizational Behavior	3
BA 220	Principles of Marketing	3
PS 390	Environmental Law and Policy	3

*These courses require the General Biology series (BL 150-153) as a prerequisite.

**In addition to coursework, both the certification and the minor in Biotechnology require an applied internship or research experience, along with accompanying research documents.

BUSINESS ADMINISTRATION

Gary Quinlivan, *Dean*, Alex G. McKenna School of Business, Economics, and Government

Jeffrey Godwin, *Chairperson*

A. Mark Abramovic; Thomas W. Cline; Bonaventure Curtis, O.S.B.;

Zachary Davis; Robert J. DePasquale; Andrew Herr;

William J. Hisker; Thomas C. Holowaty; Matthias Hühn;

Myron Kirsch, O.S.B.; Bo Liang; Robert Markley; Justin Petrovich;

Nicholas Racculia; Terrance Smith; Michael Urick

Adjunct Faculty: David Adams; Jennifer Antkowiak;

Jeffrey Anzovino; Michael Arabia; Mark D'Amico;

Donald Ellenberger; Gregory Forsythe; Martha Fusco; Eric Gentis;

Janet Hammill; Sue Hozak; Janelle Imbrescia; Mark Kachmar;

William Kimbro; Eva Kunkel; James Kunkel; Richard Kunkle;

John Malone; James Meredith; George Miller; Anthony Mucha;

Daniel Niemiec; Robert Peretti; Joseph Polka; David Riehl; Nathan

Sylvester; Richard Williams; Thurman Wingrove; Charles Wolenter;

Joseph Yezovich

Professor Emeriti: Charles Fazzi; Peter Hutchinson

Executive in Residence: Rodger Lewis

The McKenna School of Business has seven undergraduate programs and one graduate program accredited by the Accreditation Council for Business Schools and Programs (ACBSP): Accounting, Business Economics, Business Education Information Technology, Finance, International Business, Management, and Marketing. The graduate program is a master's degree in management: Operational Excellence. The Economics, Criminology, and Politics programs are not accredited through the ACBSP; however, all programs in the McKenna School have regional accreditation through the Middle States Association. The ACBSP is one of the top two premier accrediting agencies for business schools worldwide. With a requirement for faculty professional development (e.g., publications and research) and courses primarily taught by faculty holding doctorates, ACBSP is the leading business accreditation program devoted to teaching excellence and service to students.

The Business Administration program of the McKenna School of Business, Economics, and Government is designed to provide a thorough academic and professional education in the study of business principles, practices, and systems. The McKenna School's business curriculum combines theoretical, quantitative, technical, and case studies and simulations in order to understand business life and activity within a dynamic market economy. The program delineates the nature and functions of the firm and private enterprise and the relationship of business to society as a whole. It seeks to help students learn to apply analytical skills and sound judgment to managerial operations and to solve business problems. Accordingly, the curriculum integrates the scientific method with the functional areas of business, providing students with the methodological tools to describe, predict, and explain the varied phenomena surrounding business problems.

The Business Administration program combined with the College's liberal arts curriculum helps students integrate professional goals with an educational foundation for life-long learning and the pursuit of a responsible and rewarding way of life. To further facilitate the development of the written communication skills needed in business settings, there is a writing component requirement in many of the business courses. To improve reasoning, judgment, and decision making under uncertainty, students are exposed to data analytic methods and statistical software. Development of teamwork and oral presentation skills are

also part of the curriculum.

The McKenna School encourages internships and other work experiences, which may be sought through the College's Career and Professional Development Center. The capstone experience for all business majors is achieved through the Business Policy and Strategy course. Basic civic knowledge, as well as economics, is part of the mission of the McKenna School: all business majors must take Principles of American Politics. In these ways and by working closely with its students, the goal of the business major is to help prepare students for successful professional careers or graduate studies in business and related fields.

The McKenna School offers the Bachelor of Science degree in Accounting, Business Economics, Business Education, Finance, International Business, Management, and Marketing. Dual majoring in business is possible, but you must complete a minimum of 21 non-overlapping credits from the first business major.

ACCOUNTING: 150-CREDIT FOUR-YEAR PLAN

For those students interested in pursuing professional certification as a CPA, the classes and sequence must be carefully chosen. By working closely with the academic advisor (i.e., an accounting professor), the student will optimize the preparation for the CPA exam at graduation and work to meet the 150-credit CPA licensure requirement during his/her four years at Saint Vincent College. Saint Vincent has been a leader in presenting an option for students to meet the 150-credit requirement, an option recognized in hiring by public accounting firms.

STUDENT PORTFOLIO REQUIREMENT

As a requirement to graduation, all McKenna School business majors are required to complete a student portfolio. The portfolio will be utilized by the student to construct résumés, to provide evidence of professional skills (including written, oral presentations, quantitative, and analytical skills) relevant to their major, and to serve as a platform for talking points during interviews. The portfolio is also used to assess the student's ethical development, writing ability, competency utilizing newer technologies applicable to business presentations and data analysis, and proficiency in business information systems. The portfolio contains the following documents:

- 1) business ethics paper written in BA 170 Organizational Behavior (first year);
- 2) updated business ethics paper written in BA 305 Business Ethics (junior second semester or senior year);
- 3) a résumé (completed during the first year and updated each year);
- 4) at least one experiential project(s) defined by major with a focus on business skill sets;
- 5) information systems analysis project;
- 6) evidence of an oral presentation from a 300 level or above business class;
- 7) term paper written in a 300 level or above business class;
- 8) optional: professional thesis

Unless noted below, all portfolio submissions must come from the portfolio grid, which can be obtained from the Dean's office. New opportunities for submission may be added to the grid over time. The business ethics component of the portfolio, designed by Dr. William Hisker, is unique and was considered path-breaking by our accrediting body, the Accreditation Council for Business Schools and Programs. Businesses want employees who have strong ethical values. The résumé will be utilized in internship and job searches. The experiential and information systems analysis projects provide evidence that the student possesses strong writing

skills, is comfortable with applications of advanced technologies relevant to his/her business discipline, and demonstrate a high level of understanding of the business discipline and tools utilized. An internship may be used to satisfy the experiential project requirement. Internships require a short synthesis paper evaluating the experience in light of the goals and objectives established on the Student/Faculty Agreement form completed as part of the application process. The synthesis paper must discuss how the student's internship experience utilized his or her relevant course work. Students must register for internship credit (BA 550) with the Career and Professional Development Center and the registrar's office. Evidence of oral communication may be satisfied by oral presentations delivered in a class setting—200 level or above business class or in an approved (by your business advisor) on-campus setting or off-campus activity. The required term paper is in addition to the senior-level business ethics paper. The term paper provides evidence of writing competency and the ability to write effectively and persuasively within the business discipline. The requirements underlying the professional thesis option, written in conjunction with BA 500, will be defined by the supervising professor.

Students may add or replace documents throughout their four years, but the required documents must be in the portfolio at the time of graduation. More than one submission in each defined area is permitted. The reason or purpose of the written work must be clear from the work itself or a copy of the project assignment must be attached to the submission.

All submissions to the portfolio are electronic and are to be completed in a timely fashion, as designated above, and in full prior to graduation. Executive Assistant to the Dean, Eva Kunkel, will provide an overview of the electronic portfolio at the beginning of each academic year. Questions regarding the portfolio may be addressed to Mrs. Kunkel.

TRANSFER CREDIT

The College reserves absolute discretion with regard to the transferability of work done at other institutions, and in unusual individual circumstances, waiving an academic requirement. When, in its discretion, and due to the individual circumstances involved, the College elects to make an exception in an individual case, such a waiver shall not be considered to establish a precedent applicable to any other individual. No transfer credit is awarded for any Business course at the 300 level or above unless the credit is from an accredited four-year degree-granting institution. Transfer credits for BA 200 Intermediate Accounting I and BA 201 Intermediate Accounting II require a challenge exam.

STUDENT GUIDE TO INTERNSHIP PROCEDURES AND REQUIREMENTS

All students are encouraged to take advantage of the opportunity to undertake an internship. The purpose of an internship is to allow the student to gain hands-on experience in practical settings. This provides for the application of classroom knowledge and assists students in making career-related decisions.

It is understood that the student is in a professional setting and should adhere to the highest standards of professional and ethical conduct. This includes, but is not limited to, seeking and following the direction of the site supervisor, as well as the theoretical expectations of the professor. Students will be required to complete the Student Internship Code of Conduct document that provides them with the necessary instructions in upholding the mission of the college, while performing internship functions.

A vital part of the internship experience includes finding a position. The student is encouraged and expected to find a suitable internship site based on expressed interests, the availability and willingness of the site to supervise a student, and stated career

goals. Personnel from the Career and Professional Development Center can assist students in all aspects of their internship search. The student's academic advisor, other McKenna School faculty, and the Dean are available for letters of recommendation and helpful suggestions, but securing the internship is the student's responsibility.

SCHEDULING AN INTERNSHIP

Students should start thinking about internships during sophomore or junior year, or at least one full semester prior to beginning the internship. Students should consider the types of internships available, when and where the internship might be, etc. This allows time to explore options, prepare a résumé, plan to arrange class or work schedules, etc. If a student does an internship during the summer, typically the student registers for credit the following fall semester.

CREDIT HOURS

Each student should meet with his/her academic advisor before setting up an internship to determine the number of credits required in the program of study. The number of work hours required per credit may vary depending upon the nature of the work. However, as a general rule, 135 hours of work for a period of 15 weeks earns three (3) credits. There is a four-credit maximum per internship. Students are limited to 12 credits of internship. Credits are based on the evaluation of the learning experience associated with the internship by the supervising McKenna professor.

CREDIT/GRADE

A student should register for credit if he/she would like to have the internship appear on his/her transcript. In all cases, the student will receive credit for the internship, but never a grade. McKenna School policy is that internships are graded on a pass-fail basis — in no case are letter grades (i.e., A, B, ...) to be given for internships. To receive credit, the student must communicate all details of the internship with his/her advisor for approval before beginning the internship.

MCKENNA SCHOOL INTERNSHIP DEADLINES

All paperwork is coordinated and filed through the Career and Professional Development Center. Summer internships take place in the summer and the credits are applied to the fall semester. All paperwork must be filed by June 15 with the faculty advisor and dean signing off. For fall semester internships, where the internship actually takes place in the fall, all paperwork must be filed by Sept. 30 with the faculty advisor and dean signing off. For spring semester internships, where the internship actually takes place in the spring, all paperwork must be filed by Feb. 15 with the faculty advisor and dean signing off.

ACADEMIC REQUIREMENTS FOR INTERNSHIPS

These are the general academic suggestions for internships for credit, but the specifics are to be determined by the academic advisor:

- a short synthesis paper evaluating the experience in light of the goals and objectives established on the Student/Faculty Agreement form completed as part of the application process
- a more in-depth paper or PowerPoint presentation, including evaluating the experience with relevant course work

Completed materials must be submitted a minimum of two weeks prior to the end of the term in which a student is registered for credit to assure the credits will be granted. For summer internships,

it is strongly recommended that the student turn in his/her materials soon after completing the internship while the experience is fresh in his/her mind.

SYNTHESIS PAPER

The synthesis paper serves as the final statement of the internship experience and consists of two sections:

Description of the placement: The first section details the particulars of the placement site. It tells about the agency, business, or site, what the functions of the organization are, who the clients or customers are, how the facility is staffed, and other related questions. Also use this section to describe how a student chose this particular organization and the position, department, or function that the student did during the internship.

Summary reflection: The second section of the paper is the most important and should be emphasized during the writing process. The purpose of this section is to describe what was learned and the effect of the experience on current studies and future plans. This section should also be used to evaluate the goals and objectives from the original student/faculty agreement form. Did the internship experience provide the student with insights about his/her major and incorporate relevant course work?

BUSINESS ADMINISTRATION STUDENT LEARNING OUTCOMES

Business Core Student Learning Outcomes

1. Students will have significant knowledge in the 12 core areas of: 1) Accounting; 2) Economics; 3) Finance; 4) Management; 5) Marketing; 6) Management Information Systems; 7) International Business; 8) Legal Environment of Business; 9) Statistics; 10) Quantitative Skills; 11) Strategic Management; and 12) Business Ethics.

Accounting Student Learning Outcomes:

1. Students will be able to accurately create financial statements according to GAAP.
2. Students will be able to interpret financial statements in making business decisions within organizations.
3. Students will be able to prepare tax returns.
4. Students will be able to utilize auditing principles and techniques.
5. Students will have the necessary knowledge to pass the CPA exam.

Business Economics Student Learning Outcomes

1. Students will demonstrate a comprehensive understanding of both theoretical and applied economics and apply rigorous analysis to economic issues and problems through the use of market-oriented theoretical models, quantitative techniques, and economic reasoning;
2. Students will deliver a presentation with an in-depth analysis on an economic topic;
3. Students will utilize statistical and econometric techniques to test theoretic models.

Finance Student Learning Outcomes

1. Students will analyze financial models underscored by a thorough understanding of the "why" and "how" questions in finance.
2. Students will demonstrate an understanding of the theoretical roots of finance by deriving equations and reading original works of great finance academics.
3. Students will apply theoretical models and knowledge in real-life settings through case analysis, security selection games, and senior-level portfolio projects.

International Business Student Learning Outcomes

1. Students will demonstrate a high degree of language proficiency in at least one foreign language;
2. Students will explain, apply, and analyze complex real-world business problems;
3. Students will explain, apply, and analyze international business transactions utilized by multinational corporations.

Management Student Learning Outcomes

1. Students will demonstrate the ability to create effective strategic plans.
2. Students will demonstrate an ability to work effectively with others in a team setting.
3. Students will demonstrate the use of best practices in Human Resources.
4. Students will demonstrate ethical decisions by utilizing ethical frameworks in analyzing business decisions.
5. Students will demonstrate how to increase job performance, motivation, and commitment of employees.

Marketing Student Learning Outcomes

1. Students will demonstrate expertise and the use of focus groups, experimental design, observational and survey research.
2. Students will demonstrate expertise in advertising campaigns, global marketing, and sales management.
3. Students will develop and be able to use applied data analytic tools relevant to the marketing discipline.
4. Students will demonstrate effective communication and project management skills.
5. Students will demonstrate critical thinking skills allowing them to ethically address complex real-world challenges and opportunities.

REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE IN BUSINESS ADMINISTRATION

Business core courses –required for all business majors (45 credits):*

BA 100	Financial Accounting I (freshman year)	3
BA 170	Organizational Behavior (freshman year)	3
BA 220	Principles of Marketing (sophomore year)	3
BA 265	Management Information Systems (sophomore year)	3
BA 305	Business Ethics (junior or senior year)	3
BA 320	Corporate Finance I (sophomore year)	3
BA 340	Business Law (junior year)	3
BA 350	Statistics I (sophomore year)	3
BA 350A	Statistics I Excel Lab	1
BA 351	Statistics II (sophomore year)	3
BA 351A	Statistics II Excel Lab	1
or		
EC 360	Econometrics	3
BA 495	Business Policy and Strategy (Capstone Class senior year)	3
EC 101	Principles of Microeconomics (freshman year)	3
EC 102	Principles of Macroeconomics (freshman year)	3
PS 100	Principles of American Politics	3
MA 109/111	Calculus I (freshman year)	4

*

Business Education Information Technology (BEIT) majors are exempt from BA 351 and may take MA 311 in place of BA 350. In addition, BEIT students take BA 102 Survey of Accounting in place of BA 100. For all business majors, the college's social science and mathematics core are satisfied by the business core.

Typical Schedule for First-Year:

		Fall	Spring
BA 100	Financial Accounting I	3	
BA 170	Organizational Behavior	3	or 3
BA 101	Financial Accounting II (Accounting and Finance majors)		3
BA 150	Managerial Accounting (BEIT, Management, Marketing, and International Business majors)		3
	Elementary Functions and/or Calculus I (MA 109 or MA 111)	3	4
TH 119	First Theology	3	or 3
EL 102	Language and Rhetoric	3	or 3
EC 101-102	Principles of Microeconomics and Macroeconomics	3	3

(If you are required to take MA 104 Elementary Functions before Calculus I, take Survey of Accounting fall freshman year.

After completing MA 104, take Financial Accounting I and the Principles of Economics classes.)

College Core – Foreign Language 3 3
All students will take one course designated as a First-Year Seminar which will satisfy a core curriculum requirement.

Accounting major requirements (27 credits) from the following:*

BA 101	Financial Accounting II**	3
BA 200	Intermediate Accounting I**	3
BA 201	Intermediate Accounting II**	3
BA 300	Cost Accounting I**	3
BA 301	Cost Accounting II	3
BA 310	Taxes I**	3
BA 311	Taxes II	3
BA 325	Analysis of Financial Statements	3
BA 400	Advanced Accounting	3
BA 405	Auditing**	3
BA 406	Forensic Auditing	3
BA 420	Accounting Information Systems	3
BA 440	Government and Not-for-Profit Accounting	3
BA 470	International Accounting**	3

*For those students pursuing a CPA, the classes chosen beyond those required must be carefully selected. Your advisor will guide you in the selection of courses to optimize your performance on the CPA exam.

**Required course

Total business credits required for the Business Administration accounting major is 72. After completing this major and the college core, you will have four credits for electives.

Business Economics major requirements (27 credits):

BA 101	Financial Accounting II	3
BA 321	Corporate Finance II	3
EC 201	Microeconomic Theory	3
EC 202	Macroeconomic Theory	3
EC 310	Labor Economics	3
EC 351	International Trade and Development	3

EC 353	International Finance	3
EC 360	Econometrics	3
EC 380	Game Theory	3

Total required for the Business Economics major is 72 credits. After completing this major and the college core, you will have four credits for electives. For the business core courses, BUEC majors must take BA 351 Statistics II and BA 351A Statistics I Excel Lab. BUEC students are also strongly encouraged to take MA 110/112 Calculus II. EC 353 International Finance cannot be used to satisfy a Finance minor. In addition to the Business Economics major, the Economics Department also offers both Bachelor of Arts and Bachelor of Science degrees in Economics. For more information, please see the Economics section.

Business Education Information Technology (15 credits):

(See the Education Department section of the Bulletin and your advisor for Education minor and teaching certification requirements.) Students receive Business, Computer, and Information Technology Certification–K-12.

BA 230	Introduction to Entrepreneurship	3
BA 250	Global Business Management	3
or		
BA 251	International Business	3
BA 310	Taxes I	3
CS 110	C++ Programming I	3
EL ---	An advanced writing class	3

BEIT majors must also take CA 235 Introduction to Web Design to fulfill their fine arts requirement. The McKenna School's college core recommendation is PL 215 Ethics or PL 216 Ethical Problems. In addition to that portion of the College core satisfied by the business core, three credits of the English requirements are fulfilled by the BEIT required courses. Total business credits required for the Business Education Information Technology major is 56. In addition BEIT students must complete 36 credits of Education requirements and the core curriculum. In total, Business Education majors must complete 142-143 credits of required classes.

Finance major requirements (27 to 40 credits):

The Finance major offers four possible advisement tracks, which are custom-designed for differing career paths. Finance students work closely with their advisor to determine which path is most suitable and preferable. Students completing one of the four following tracks will graduate with a B.S. in Finance.

Corporate Finance Track (27 credits):

BA 101	Financial Accounting II	3
BA 200	Intermediate Accounting I	3
BA 321	Corporate Finance II	3
BA 324	Advanced Personal Financial Planning	3
BA 325	Analysis of Financial Statements	3
BA/EC 353	International Finance	3
BA 362	Investments I: Securities	3
BA 363	Investments II: Derivatives	3
BA 385	Financial Institutions	3

Total business credits required for this track of the Business Administration Finance major is 72. After completing this major and the core curriculum, a student will have four (4) credits for electives. BA 420 Accounting Information Systems is recommended.

Investment Management CFA Track (27 credits):

BA 101	Financial Accounting II	3
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BA 324	Advanced Personal Financial Planning	3
BA/EC 353	International Finance	3
BA 362	Investments I: Securities	3
BA 363	Investments II: Derivatives	3
BA 385	Financial Institutions	3
BA 485	Financial Planning and Analysis	3
BA 488	Portfolio Theory	3
BA 489	Valuations and Modeling	3

Total business credits required for this track of the Business Administration Finance major is 72. After completing this major and the core curriculum, a student will have four (4) credits for electives.

Investment Management CFP Track (36 credits)

BA 101	Financial Accounting II (Freshman year)	3
BA 310	Taxes I	3
BA 311	Taxes II	3
BA 324	Advanced Personal Financial Planning	3
BA 353/EC 353	International Finance	3
BA 362	Investments I: Securities	3
BA 363	Investments II: Derivatives	3
BA 385	Financial Institutions	3
BA 484	Risk Management	3
BA 485	Financial Planning and Analysis	3
BA 488	Portfolio Theory	3
BA 489	Valuations and Modeling	3

Total business credits required for this track of the Business Administration Finance major is 81 credits. After completing this major and the core curriculum, a student will have completed 129 credits.

Computational Finance Track (+Mathematics Minor) (40 credits):

BA 101	Financial Accounting II	3
BA/EC 353	International Finance	3
BA 362	Investments I: Securities	3
BA 363	Investments II: Derivatives	3
BA 385	Financial Institutions	3
BA 488	Portfolio Theory	3
BA 489	Valuations and Modeling	3
MA 112	Analytical Calculus II	4
MA 211	Analytical Calculus III	4
MA 212	Ordinary and Partial Differential Equations	4
MA 251	Linear Algebra	3
MA 421	Real Analysis I	4

Total required credits for this track of the Business Administration Finance major is 85. After completing this major and the core curriculum, a student will have completed 133 credits.

Finance and Mathematics Major (58 credits):

BA 101	Financial Accounting II	3
BA/EC 353	International Finance	3
BA 362	Investments I: Securities	3
BA 363	Investments II: Derivatives	3
BA 385	Financial Institutions	3
BA 488	Portfolio Theory	3
BA 489	Valuations and Modeling	3
MA 112	Analytical Calculus II	4
MA 211	Analytical Calculus III	4
MA 212	Ordinary and Partial Differential Equations	4
MA 251	Linear Algebra	3
MA 321	Complex Variables	3

MA 421	Real Analysis I	4
MA 422	Real Analysis II	4
PH 111	General Physics I	3
PH 112	General Physics II	3
PH 113	General Physics I Lab	1
PH 114	General Physics II Lab	1
CS 110	C++ Programming I	3

This program satisfies the mathematics, natural science, and social science requirements of the core curriculum for the B.S.

Students should take MA 111 to satisfy the business core.

After completing the computation finance track major and the mathematics major, students will have completed 143 credits.

Behavioral Finance Track (39 credits):

BA 101	Financial Accounting II	3
BA 324	Advanced Personal Financial Planning	3
BA/EC 353	International Finance	3
BA 362	Investments I: Securities	3
BA 363	Investments II: Derivatives	3
BA 385	Financial Institutions	3
BA 488	Portfolio Theory	3
PY 100	Introduction to Psychology	3
PY 243	Abnormal Psychology	3
PY 244	Theories of Personality	3
PY 260	Social Psychology	3
PY 308	Cognitive Psychology	3
PY 309	Learning	3

After completing the behavioral finance track, students will have completed 132 credits.

International Business major requirements (35-41 credits):

BA 150	Managerial Accounting	3
BA 250	Global Business Management	3
BA/EC 353	International Finance	3
BA 395	Global Marketing	3
Modern Languages: Two courses beyond the intermediate level or take two classes of a second foreign language		6-8
One global history class		3
Choose 2 of the following:		
BA 251	International Business	3
BA 525	Global Experience	2
PS 242	International Politics	3
PS 243	Comparative Politics	3
PS 375	International Law	3
EC 351	International Trade	3

Complete a business minor (9-15 credits)

Students are required to complete a minor in Accounting, Finance, Marketing, or Operational Excellence. Majors are encouraged, but not required to study abroad for one semester. Three credits of history of the College core curriculum are satisfied by the required global history class. This major requires 125 to 130 total credits.

Management major requirements (21 credits):

BA 150	Managerial Accounting	3
BA 232	Human Resources Management	3
BA 250	Global Business Management	3
or		
BA 251	International Business	3
BA 280	Leadership	3
BA 398	Project Management I	3
BA 492	Operations Management	3
BA ----	BA 300 level or higher management class	3

Total business credits required for the Business Administration

Management major is 66. After completing this major and the core curriculum, a student will have 10 credits for electives.

In addition to the Management Major, the McKenna School offers a Sports Management Track. Students complete the entirety of the management major and at least three additional sports management classes.

Management: Sports Management Track (30 credits):

BA 150	Managerial Accounting	3
BA 209	Sports Administration	3
BA 232	Human Resources Management	3
BA 250	Global Business Management	3
or		
BA 251	International Business	3
BA 280	Leadership	3
BA 333	Sports Marketing	3
BA 398	Project Management	3
BA 492	Operations Management	3
BA ---	BA 231* Franchising or BA336 Essentials of Sales or BA335 Internet Marketing	3
PS 385	Sports Law	3

Strongly recommended class includes:

*BA 231 Franchising
Professional sports leagues throughout the world, particularly in North America, operate under a unique business model called franchising. This comprehensive course covers founding, managing, and advising sports franchises.

Total business credits required for the Sports Management Track is 75. After completing the core curriculum, the student will have one (1) elective credit to complete.

Marketing major requirements (24 credits):

BA 150	Managerial Accounting	3
BA 380	Consumer Behavior	3
BA 395	Global Marketing	3
BA 397	Marketing Research	3
BA 425	Strategic Marketing	3
BMAR	(BA 106 Data Visualization with Tableau, BA 231 Franchising, BA 330 Advertising and Promotion, BA 333 Sports Marketing, BA 335 Digital Analytics, BA 336 Essentials of Selling)	9

Total required for the Business Administration Marketing major is 69 credits. After completing this major and the college core, you will have seven (7) credits for electives.

Marketing: Sports Marketing Track (33 credits)*

BA 150	Managerial Accounting	3
BA 211	Sports Media and Promotion	3
BA 330	Advertising and Promotion	3
BA 333	Sports Marketing	3
BA 335	Digital Analytics	3
BA 380	Consumer Behavior	3
BA 395	Global Marketing	3
BA 397	Marketing Research	3
BA 425	Strategic Marketing	3
PS 385	Sports Law	3
BA --	Marketing Elective. BA 231 Franchising: strongly recommended. Professional sports leagues throughout the world, particularly in North America, operate under the unique business model (spring semester)	3 elective

Total business credits required for this track of the Business Administration Marketing major is 78 credits. After completing this major and the core curriculum, a student will have completed 125-126 credits.

**Recommended science class: NSCI 242 Science of Human Strength 4 credits, Covers principles of strength and conditioning and also satisfies a 200-level science requirement.*

Minors in Business

The Department recognizes that there are many students who wish to major in other departments of the College, but who would like to complete a minor in business. Most of the courses required for a minor are upper division courses in a particular field, rather than the subjects included within the business core that must be completed by all students majoring within the Department. A student must maintain at least a C (2.0) average in the specific courses required for a minor. Listed below are the courses required for each minor and those course prerequisites that are considered to be essential. The minor for business majors requires the completion of at least three non-overlapping classes beyond those in your major. If you attempt two or more minors, you must have at least three new non-overlapping classes for each minor.

Accounting

Required courses (4)

BA 100	Financial Accounting I	3
BA 101	Financial Accounting II	3
BA 200	Intermediate Accounting I	3
BA 201	Intermediate Accounting II	3
In addition to the above, any two of the following:		
BA 150	Managerial Accounting	3
or		
BA 300	Cost Accounting I	3
BA 301	Cost Accounting II	3
BA 310	Taxes I	3
BA 311	Taxes II	3
BA 325	Analysis of Financial Statements	3
BA 400	Advanced Accounting	3
BA 405	Auditing	3
BA 406	Forensic Auditing	3
BA 420	Accounting Information Systems	3
BA 440	Government and Not-for-Profit Accounting	3
BA 470	International Accounting	3

Entrepreneurship

Required courses (6-7)

BA 102	Survey of Accounting (non-business majors only)	3
or		
BA 100	Financial Accounting I AND	3
BA 150	Managerial Accounting	3
BA 170	Organizational Behavior	3
or		
BA 220	Principles of Marketing	3
BA 230	Introduction to Entrepreneurship	3
BA 231	Franchising	3
BA 322	Entrepreneurial Finance	3
BA 380	Consumer Behavior (Management majors must take this class for minor)	3
or		
BA 232	Human Resources (Marketing majors must take this class for minor)	3

Finance

Required courses (3)

BA 100	Financial Accounting I	3
BA 320	Corporate Finance I	3
BA 362	Investments I: Securities	3
BA 363	Investments II: Derivatives	3
In addition to the above, any two of the following:		
BA 321	Corporate Finance II	3
BA 325	Analysis of Financial Statements	3
BA/EC 353	International Finance*	3
BA 385	Financial Institutions	3
BA 484	Risk Management	3
BA 485	Financial Planning and Analysis	3
BA 488	Portfolio Theory	3
BA 489	Valuations and Modeling	3

* International Business majors cannot count this class toward the Finance minor.

International Business

BA 102	Survey of Accounting (non-business majors only)	3
or		
BA 100	Financial Accounting I AND	3
BA 150	Managerial Accounting	3
EC 101	Principles of Microeconomics	3
EC 102	Principles of Macroeconomics	3
BA 250	Global Business Management	3
BA/EC 353	International Finance	3
or		
PS 375	International Law	3
BA 395	Global Marketing	3
If you are a finance, marketing, management, or economics major, you must also take one of the following classes:		
BA 251	International Business	3
EC 351	International Trade (economics majors must choose a different class)	3
PS 242	International Politics	3
PS 243	Comparative Politics	3
PS 385	International Law	3

Management

Required courses (2-3)

BA 102	Survey of Accounting (non-business majors only)	3
or		
BA 100	Financial Accounting I AND	3
BA 150	Managerial Accounting	3
BA 170	Organizational Behavior	3
In addition to the above, any four of the following:		
BA 232	Human Resource Management	3
BA 250	Global Business Management	3
or		
BA 251	International Business	3
BA 280	Leadership	3
BA 322	Corporate Communications	3
BA 398	Project Management I	3
BA 468	Project Management II	4
BA 492	Operations Management	3

Marketing

Required courses (4-5)

BA 102	Survey of Accounting (non-business majors only)	3
or		

BA 100	Financial Accounting I AND	3
BA 150	Managerial Accounting	3
BA 220	Principles of Marketing	3
BA 330	Advertising and Promotion	3
BA 380	Consumer Behavior	3

In addition to the above, any two of the following:

BA 106	Data Visualization with Tableau	3
BA 231	Franchising	3
BA 333	Sports Marketing	3
BA 335	Digital Analytics	3
BA 336	Essentials of Selling	3
BA 395	Global Marketing	3
BA 397	Marketing Research	3
BA 425	Strategic Marketing	3

Operational Excellence

Required courses (7-9)

BA 102	Survey of Accounting (non-business majors only)	3
or		
BA 100	Financial Accounting I AND	
BA 150	Managerial Accounting	
or		
BA 101	Financial Accounting II	6
BA 170	Organizational Behavior	3
BA 280	Leadership (must be taken at SVC)	
or		
BA 493	Supply Chain Management	3
BA 386	Culture in Operational Excellence (First of OE sequence)	3
BA 471	Lean/Six Sigma Green Belt Preparation (Fourth of OE sequence)	3
BA 492	Operations Management (Second of OE sequence)	3
BA 494	Quantitative Methods, Quality, and Problem-Solving in Operational Excellence (Third of OE Sequence)	3

In addition to the above, Management majors choose any one of the following:

BA 364	Introduction to ERP Systems	3
BA 394	Lean Assessment	3
BA 467	Change management	3
BA 491	Operational Excellence in Service Industry with applications in the Health Care Professions	3
BA 499	Supply Chain Management II	3

BUSINESS ADMINISTRATION COURSE DESCRIPTIONS

BA-00P PORTFOLIO

As a requirement to graduation, all McKenna School business majors are required to complete a student portfolio. The portfolio will be utilized by the student to construct resumes, to provide evidence of professional skills (including written, oral presentations, quantitative, and analytical skills) relevant to their major, and to serve as a platform for talking points during interviews. The portfolio is also used to assess the student's ethical development, writing ability, competency utilizing newer technologies applicable to business presentations and data analysis, and proficiency in business information systems. The portfolio contains the following documents:

(1) Business Ethics paper written in BA 170 Organizational Behavior (Freshman year); (2) updated Business Ethics paper written in BA 305 Business Ethics (Junior second semester or Senior year); (3) a

resume (completed the Freshman year and updated each year); (4) at least one experiential project(s) defined by major with a focus on business skill sets; (5) information systems analysis project; (6) evidence of an oral presentation from a 300 level or above business class; (7) term paper written in a 300 level or above business class; and (8) Optional: Professional Thesis

All submissions to the portfolio are electronic and submitted to the Dean's Executive Assistant. Zero credits, offered every semester. Register for the class the semester you intend to graduate.

BA-00X BUSINESS EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. This course will be automatically added to your registration upon submission of the graduation application. Zero credits. Pass/Fail.

BA-100 FINANCIAL ACCOUNTING I

Topics include: a general introduction to accounting principles, basic financial statements, the double entry accounting system, the accounting cycle, worksheets and trial balances, merchandising operations, control accounts and subsidiary ledgers, special journals, and internal control and accounting for assets. Offered every semester. Periodically offered as a first-year seminar. Three credits.

BA-101 FINANCIAL ACCOUNTING II

Students examine generally accepted accounting principles as they apply to the preparation of financial statements of corporations and partnerships. Students prepare financial statements for corporations and partnerships. Students also prepare and utilize the statement of cash flow. Students study and discuss federal payroll taxes, especially employer liabilities and all journal entries. The course covers financial ratios to be used in the analysis of financial statements. The course analyzes long-term liabilities and all associated entries and also devotes a good deal of time to accounting for investments. Prerequisite: BA 100. Offered every semester. Three credits.

BA-102 SURVEY OF ACCOUNTING

Restricted to non-business majors only. This course examines topics common to BA 100 and BA 101, but at a level that is beneficial for non-business majors. Survey of Accounting is recommended to students who will eventually run their own business or be in an occupation that requires some degree of accounting knowledge. Topics include introduction to financial statements, internal controls, cash and accrual basis of accounting, and financial statement analysis. The course was especially designed as a prerequisite for our Entrepreneurial and Operational Excellence minors. Offered every semester. Three credits.

BA-103 PERSONAL FINANCIAL PLANNING

This is a course developed for all students to expose them to basic financial topics that they will encounter after graduation. The course will prepare students to make better/more informed financial decisions as they begin careers and assume family responsibilities. This is a very basic course and does not require any business courses as a prerequisite. The topics that will be covered in the course include: Money management skills (budgeting); consumer credit (loans, credit cards, leases, credit scores); major purchases (housing/autos); insurance/risk management (auto, home, health, life); personal investing (stocks, bonds, mutual funds); and investing for major goals (children's education, purchase house, retirement, etc.). Offered every semester. One credit.

BA-105 INTRODUCTION TO MANUFACTURING/ OPERATIONAL EXCELLENCE

The class, conducted in conjunction with the Kennametal

Foundation and Greater Latrobe Senior High School, provides an opportunity for students in 11th and 12th grade to learn about engineering and manufacturing through experiences at Kennametal's Technology Center in Latrobe and its manufacturing facilities. The students attend lectures taught by Kennametal employees (Innovators) and participate in projects and field trips at Kennametal twice weekly for 15 weeks. During the class time at the high school, students research various engineering careers, participate in projects, and develop career skills such as public speaking and resume writing. Students selected for the course are expected to have a strong foundation and interest in science and mathematics. The students are responsible for finding their own transportation to Kennametal's Technology Center and must be available Tuesdays and Thursdays for an additional class period after the end of the normal school day, in addition to the daily scheduled class time the last period of the day. Three credits.

BA-106 DATA VISUALIZATION WITH TABLEAU

This course teaches the essential and practical skills necessary to communicate information about data clearly and effectively through graphical means. Rendering data clearly and effectively with appropriate visual analytics reduces the time required to achieve understanding and helps in managing the ever-growing amount of available digital data. Students will learn to use Tableau during the class. Tableau software is one of the most popular commercial data visualization tools on the market today. In this course students will learn how to use this tool to quickly analyze, visualize, and share information. Tableau can help students see and understand their data, whether it's stored in flat files, databases, warehouses, cubes, or in the cloud. A laptop or iPad is required. Offered fall semester. Three credits.

BA-150 MANAGERIAL ACCOUNTING

A study of the use of accounting information in performing managerial functions including planning, controls, cost and financial analysis, costing behavior, and incremental costing. Emphasis is on the use of accounting as a tool for management decision making. Prerequisite: BA 100. Offered every semester. Three credits.

BA-170 ORGANIZATIONAL BEHAVIOR

A systematic study of the manager-subordinate relationship as it operates in the environment of an organization. Students develop managerial skills in leadership, motivation, communications, human relations, decision making, and policy formulation. Students learn ways in which these skills can be employed in organizations with established goals, technology, and structure. Special attention will be given to how the individual, the work group, and the organization interact to influence the behavior of the business organization and that of its human resources. Offered every semester. Periodically offered as a first-year seminar. Three credits.

BA-200 INTERMEDIATE ACCOUNTING I

Topics include a deeper coverage of compilation of the income statement and balance sheet; cash, inventories, tangible fixed assets, intangible assets, and miscellaneous topics, building on the foundation set in BA 100 and BA 101. Prerequisite: BA 101. Offered fall semester. Three credits.

BA-201 INTERMEDIATE ACCOUNTING II

This course continues with a deeper discussion of liabilities, investments, leases, stockholders' equity, statement of cash flows, and corrections of errors. Prerequisite: BA 200. Offered spring semester. Three credits.

BA-209 SPORTS ADMINISTRATION

This course will provide a broad overview of sport administration.

The course will introduce students to the essential areas required to work in the field of sport. Students will explore the foundations and principles on which sport administration operates. Topics of study will include, but not be limited to, the history of sport administration, budgeting, staff management, athletic event planning, and career opportunities in the sport industry. Prerequisite is BA 170. Offered spring semester (starting spring 2018). Three credits.

BA 211 SPORTS MEDIA AND PROMOTION

This course combines an analysis of the sports media industry with practical sports media management and promotional skills. The course will help students to understand the theoretical foundations for effective sport promotion and sales and how to incentivize, serve, and retain consumers and sponsors, and help them to develop the skills they will need to manage media promotion and coverage of sports organizations. Students will use real-world examples and group projects to assist in developing their preparedness to enter the field. No prerequisites. Offered spring semester. Three credits.

BA-220 PRINCIPLES OF MARKETING

This course is an introduction to the theoretical and practical foundations of marketing in a global-managerial framework. The primary marketing decisions variables (product design, pricing, distribution, sales, advertising, and promotion) are introduced and examined from both managerial and consumer perspectives. The relationships among marketing and the other functional areas of business (accounting, finance, and management) are emphasized. Applied economics, electronic commerce, and ethical decision making are interwoven with the substantive topics. Students are exposed to current events in the Wall Street Journal and participate in case studies, group activities, and marketing simulations. No prerequisites. Offered every semester. Three credits.

BA-225 MONEY AND BANKING

A study of the nature and value of money, with emphasis upon its relationship to economic activity. Special attention is given to monetary theory, especially stationary, steady state, and RE modeling. The course uses Frederic Mishkin's *The Economics of Money, Banking, and Financial Markets* and selected chapters from Bennett McCallum's *Monetary Economics: Theory and Policy*. The course also examines the socio-macroeconomic and financial consequences of monetary policies pursued by central banks. Time is devoted to financial institutions, the history of central banking, the risk and term structure of interest rates, monetary tools, aggregate demand and supply analysis, and global markets. Prerequisites: EC 101, EC 102, and BA 351 or EC 360. Cross-listed as EC 225. Offered as needed. Three credits.

BA-230 INTRODUCTION TO ENTREPRENEURSHIP

This course studies the role played by entrepreneurs and small businesses in the American economy. The course will aid the student in both understanding the entrepreneurial process, as well as learning practical approaches to launching new ventures. Topics include: entrepreneurial traits and characteristics, small business creation methods, the innovation process, small business management techniques, market research and analysis, and financial considerations affecting small businesses. Emphasis will be placed on the value of comprehensive business planning and how a well-crafted business plan contributes to the future success of a new firm. Students work in teams to construct a formal business plan for a new venture of their choosing. Class participation and group interaction are required. No prerequisites. Offered fall semester. Three credits.

BA-231 FRANCHISING

This course is designed to give students (a) the tools to evaluate a franchise, whether for their own purchase of a franchise and/or

to provide advice and assistance to others regarding a proposed franchise purchase or operation; (b) an appreciation for the historical and practical benefits of franchising – uniquely American business and marketing strategy, and a proven alternative to personal or public financing of the expansion of a successful and communicable business operation; and (c) a familiarization with the technical requirements of a franchise lawfully offered for sale to the general public under the Franchise Investment Act and relevant state and local statutes and precedents. Prerequisites: BA 101 or BA 102 or practical experience. Offered spring semester. Three credits.

BA-232 HUMAN RESOURCE MANAGEMENT

In today's dynamic business environment, an organization's human resources may represent its last sustainable competitive advantage. This course will provide an overview of the nature of human resource management as a function within a company and as part of the task of every effective business and professional leader.

We will explore the employment relationship, the complex regulatory environment, methods of creating and sustaining a productive employee population, and the importance of integrating HR management with the business strategy from the HR manager's perspective. Prerequisite: BA 170. Offered spring semester. Three credits.

BA-233 COMPENSATION AND BENEFITS

In this course, students will gain an extensive understanding of the foundation of employee financial rewards. Alignment of individual remuneration to organizational objectives is critical to create cohesion in the success of an enterprise. Income protection and long-term employee financial planning establish the base while market and performance-based pay along with variable incentives assist with retention and motivation. This course addresses each of these two broad themes. Half of the course will address compensation structures, base pay models, variable reward systems, and classification schema. Students will be exposed to job evaluation methodologies and their relationship to recruiting and employee development. The second half of the course will focus on employee benefits including health insurance, income protection insurance, deferred compensation, and retirement plans such as 401(k), 403(b), various types of pension plans, Employee Stock Ownership Plans (ESOP's) and non-cash rewards such as paid time off. A review of the regulatory environment will be included. Three credits.

BA-250 GLOBAL BUSINESS MANAGEMENT

Students will be introduced to international trade theory and practical global business applications throughout the term. They will be provided with an overview of the global economy, the globalization debate, country and cultural differences, regional economic integration, and international management decision-making processes. Topics will include globalization, international trade theory, exporting considerations, market research resources and methodology, identification and evaluation of international business customers and/or partners, foreign direct investment, market entry methods, and basic international terms and documentation. Offered spring semester. Three credits.

BA-251 INTERNATIONAL BUSINESS

This course examines the role of the multinational corporation in the global economy. Special attention is placed on the importance of culture in doing business globally. International legal aspects, human resource management, marketing, ethics, environmental concerns, and finance are targeted. Political, economic, and risk factors are also included. Offered fall semester. Three credits.

BA-265 MANAGEMENT INFORMATION SYSTEM

Students are provided with an introduction to the information technology hardware and software platforms, tools, and methodologies utilized in the corporate systems environment. Topics include: hardware, networks, operating systems, databases (MySQL), Business Intelligence, Desktop Applications, Business Applications, Electronic Commerce, and Systems Design and Development. The course will also include a detailed examination of the SAP Business One application software. Business majors should take this class during their sophomore year. Offered every semester. Three credits.

BA-280 LEADERSHIP

This course presents a theoretical and applied treatment of a pervasive and challenging task of leading in the new global economy – continuously and successfully dealing with the issues of constant improvement within a framework of ethical leadership based on the *Ten Core Benedictine Values*. Students will learn the leadership theories, concepts, and applications that will allow them to successfully initiate, analyze, and implement various types of organizational changes across a range of disciplines. BA 280 is designed as first course in leadership and is available to students without any prerequisites. Students in the *Benedictine Leadership Studies Certificate Program* receive three credits toward their Social Science Core requirements. BA 280 also serves as a capstone class for the Operational Excellence minor. Offered every semester. Three credits.

BA-300 COST ACCOUNTING I

This course provides a thorough study of the three elements of production cost: direct materials, direct labor, and manufacturing expense. The course also provides an application of the aforementioned three elements to job order, cost systems, standard costs, flexible budgets, and break-even analysis. Stress is placed on cost accounting as a "tool of management." Prerequisite: BA 200. Offered fall semester. Three credits.

BA-301 COST ACCOUNTING II

Cost Accounting II is a study of cost allocation, capital budgeting, joint, and by-product costing. The course emphasizes decision making and provides a detailed examination of process costing and transfer pricing. Prerequisite: BA 300. Offered spring semester. Three credits.

BA-304 SAP FINANCIAL AND ACCOUNTING APPLICATIONS

This course provides an overview of SAP Enterprise Resource Planning software system and its role within an organization. Through various exercises and case studies, students will learn to navigate in SAP systems. Offered spring semester. Two credits.

BA-305 BUSINESS ETHICS

This course is designed to focus the business major's critical thinking and ethical reasoning through the lens of contemporary business issues. In addition to completing the theoretical material in the field of business ethics, students complete a series of short written and oral presentations based on contemporary business case studies. Student presentations utilize a range of resources including the internet, campus network, Schoology course software, and Microsoft PowerPoint software. Students complete a seminar paper on a current business issue. Students are required to apply ethical lenses derived from Catholic Social teaching and core Benedictine values. The eight lenses are: Human Dignity, Common Good, Solidarity, Subsidiarity, Hospitality, Stewardship, Stability, and Community. Prerequisite: BA 170 and junior or senior status. Offered every semester. Three credits.

BA-309 INTRODUCTION TO TOURISM

Tourism is a social, cultural, and economic phenomenon that involves travelers leaving their place of residence to discover new places. This course will give an in-depth global perspective into this dynamic industry. Students will be encouraged to combine their knowledge of marketing, management, and finance and learn how each of these concepts plays a vital role into the success of the ever-changing industry that is tourism. Three credits.

BA-310 TAXES I

This course provides students with an introduction to Federal Income Tax Law. The Internal Revenue code is studied and applied to various tax situations of individuals. Topics include gross income, exclusions, business expenses, non-business deductions, and the realization of gain or loss. Prerequisite: BA 100. Offered fall semester. Three credits.

BA-311 TAXES II

The following topics constitute the subject matter of the course: property transactions, capital transactions, section 1231, 1245, and 1250 transactions, installment sales, depreciation, depletion, partnerships, and corporations. Prerequisite: BA 100. This course is offered in the spring term. Three credits.

BA-312 TAX LABORATORY

This one-credit lab will provide students with a working knowledge of web-based tax research tools. Students will use CCH OmniTax, IRS.gov and other online Taxation websites to research primary and secondary resources of tax law used in practice. Students are strongly suggested to take BA 312 with BA 310 Taxes I. Offered fall semester. One credit.

BA-320 CORPORATE FINANCE I

This course presents an analysis of the principal financial problems involved within the life cycle of the corporation. A large amount of time is also devoted to ratio analysis, cash budgets, financing fixed and working capital requirements, capital budgeting, the cost of capital, and dividend policy. The course utilizes Microsoft Excel to set up financial statements, to compute financial ratios, to develop charts, and to analyze financial trends. Prerequisites: BA 100 and must buy TIBA II plus calculator. Take sophomore year. Offered every semester. Three credits.

BA-321 CORPORATE FINANCE II

Topics include dividend policy, capital project financing, business valuations, further ratio analysis, and changing corporate governance issues. Case studies will be used to provide a practical application for financial theory. Prerequisites: BA 320 and must buy TIBA II plus calculator. Offered spring semester. Three credits.

BA-322 ENTREPRENEURIAL FINANCE

This course examines the sources of funding available to entrepreneurs to fund their business and options that they can utilize to harvest their investments. The course will focus on the private debt and equity markets that service start-up and rapidly growing entrepreneurial firms. The course will be divided into four parts. Part I will provide an overview of small business financing and how the entrepreneur should prepare to approach the financial community. In Part II, we will examine the private equity markets that specifically provide financing to new ventures in the form of "seed money." Particular attention will be focused on both angel financing and the venture capital market. Part III examines the private debt markets that provide financing to small firms with a particular emphasis on commercial banks and governmental agencies that are supportive of entrepreneurial ventures. Part IV will cover the options to the entrepreneur to monetize his/her

investment. Prerequisite: BA 320. Offered spring semester. Three credits.

BA-324 ADVANCED PERSONAL FINANCIAL PLANNING

This course is primarily designed for finance majors who desire to take the Certified Financial Planner (CFP) exam after graduation and for other business majors who are interested in taking an advanced-level course in personal financial planning. Topics covered in the course will include retail banking, money management and credit management skills, major personal asset acquisitions, such as, automobiles and houses, the proper use of insurance to protect against potential hazard(s). Major emphasis in the course will be placed on investment and retirement planning, tax planning, and estate planning. Prerequisites: BA 320 and must have TI BAI Plus calculator. Take senior year. Offered fall semester. Three credits.

BA-325 ANALYSIS OF FINANCIAL STATEMENTS

This course emphasizes the use of financial and accounting information. The course is a case study approach to the financial problems of sole proprietorships and corporations. Topics will center around ratio analysis, financial projections, working capital management, capital budgeting, the cost of capital, capital structure and planning, and dividend policy. Prerequisite: BA 320. Offered fall semester. Three credits.

BA-330 ADVERTISING AND PROMOTION

This course provides a basis for understanding the marketing communication process and how it influences consumer decisions. The overriding objective is to provide a sophisticated and thoughtful approach to the management of advertising and promotion activities. The course draws heavily on the extensive research in consumer behavior and social psychology. Special attention is given to ethical considerations in developing the communication process. Students conduct special projects in observational research, critical analysis of advertising, the internet, and media planning. Students complete a comprehensive advertising campaign. Prerequisite: BA 220. Offered every semester. Three credits.

BA-332 CORPORATE COMMUNICATIONS

This course will help students develop and hone their communication skills in the business world. Each chapter covers a facet of the complexity of the corporate communication environment, starting with how to communicate with the public, press, and other stakeholders with due consideration to ethical considerations. Students will explore how etiquette applies in the norms and values of the American business culture when compared to other international cultures. Students will enjoy a business meal with executives from all courses of corporate life, and will have the opportunity of practicing learned skills in a fun and practical manner. The course further prepares students to know how to get hired using networking, resumes, and interview skills taught in a highly interactive class environment and what to expect when they get there. Insight is fostered in students as to how they can appear to others, and the course teaches students to develop their own business communication style. Prerequisite: Junior or senior status. Offered spring semester. Three credits.

BA-333 SPORTS MARKETING

This course addresses the diverse and rich nature of marketing athletes, teams, leagues, and special events. The primary objective is to cover relevant issues in designing and integrating marketing strategy. In addition to planning the sports marketing mix (product, place, promotion, and price), students are exposed to the increasing globalization of sport, current research in the area of sports marketing, and careers in sports marketing. Extensive treatment

is given to understanding consumers as spectators and participants. Prerequisite: BA 220. Offered fall semester. Three credits.

BA-335 DIGITAL ANALYTICS

An exploration of various potential applications of internet marketing in addition to its obvious role of inducing sales or generating sales leads. Topics include search engine optimization, search engine marketing, display advertising, landing page optimization, web analytics, email marketing, social media marketing, and online reputation management. Current publications, online computer exercises, class discussions, and simulations are used to examine marketing via the internet. Prerequisite: BA 220. Offered spring semester. Three credits.

BA-336 ESSENTIALS OF SELLING

An overview of the role of the sales manager, both at headquarters and in the field, in managing people, resources, and functions of marketing. The challenges of forecasting, planning, organizing, communicating, evaluating, and controlling sales are analyzed. In addition, the changing role of the customer is examined and sales techniques to meet such changing market demands are evaluated. Prerequisite: BA 220. Offered spring semester. Three credits.

BA-340 BUSINESS LAW

The course provides the student with an intensive analysis of contract and sales law, as well as the study of bailments and personal property. Legal sources, the court system, torts, and criminal law will be explored. U.C.C. sections on negotiable instruments, banking, and secured transactions are studied. Federal bankruptcy, real property, and estate planning are presented. A focus on business organizations includes agency, partnerships, limited partnerships, and corporations. Offered every semester. Three credits.

BA-345 ENVIRONMENTAL LAW

This course presents the case for government intervention at the



federal, and to a lesser extent, on the state and local levels to protect the environment as an invaluable public or collective good. The materials presume that water, air, and land pollution must be controlled and mitigated, and that the authority of the state must be put behind these efforts through the activity of agencies such as the Environmental Protection Agency and the Pennsylvania Department of Environmental Resources. However, intervention must be fair and the policies and procedures used must incorporate notions of due process. Nor must it stifle the productive capacity of private industry, or private property in general. Speakers from various agencies will be invited to present their perspectives and functions. Cross-listed as PS 390. Offered fall semester. Three credits.

BA-350 STATISTICS I

This course is an introduction to the study of statistics emphasizing descriptive and inferential statistics. Topics include visual presentation of data, summary descriptive measures (e.g. mean, median, mode, variance, and standard deviation), statistical sampling, probability, probability distributions, and hypothesis testing. Offered fall semester. Must also register for BA 350A fall semester. Three credits.

BA-350A STATISTICS I EXCEL LAB

Students learn Excel applications utilized in statistics. Additional advanced Excel techniques will be taught to enhance their business utilization of spreadsheets. One credit.

BA-351 STATISTICS II

This course is a continuation of BA 350 and explores hypothesis tests, correlation, two-sample inferences, analysis of variance, and others. Prerequisite: BA 350. Must also register for BA 351A spring semester. Three credits.

BA-351A STATISTICS II EXCEL LAB

Students learn Excel applications utilized in statistics. Additional advanced Excel techniques will be taught to enhance their business utilization of spreadsheets. One credit.

BA-353 INTERNATIONAL FINANCE

The course covers the following topics: recent developments in international financial markets, the utilization of foreign exchange and derivative security markets, exchange rate determination, international asset portfolio theory, and financial risk management strategies. Cross-listed as EC 353. Prerequisites: EC 102, BA 320 (business majors and non-economics majors), and BA 351 or EC-360. Must purchase TIBA II plus calculator. Offered fall semester. Three credits.

BA-362 INVESTMENTS I: SECURITIES

This course is designed to acquaint the student with the general principles of investment, investment analysis, and portfolio management. Modern portfolio theory, investment timing, and techniques for analyzing investment selections are considered. Prerequisite: BA 320. Offered fall semester. Three credits.

BA-363 INVESTMENTS II: DERIVATIVES

Topics include: the alternative trading strategies; the valuation of options; the efficiency of option markets; commodity futures; spot, forward and future prices; empirical evidence on price relationships; hedging and speculation; the portfolio approach; risk and return on futures contracts; interest rate futures; alternative forward loans; options on futures; and currency futures. Prerequisite: BA 320. Offered spring semester. Three credits.

BA-364 INTRODUCTION TO ERP SYSTEMS

Tens of thousands of companies ranging in size from Fortune 500 to small entrepreneurial startups have incorporated Enterprise Resource

Planning (ERP) Systems as their core business management system. These ERP systems maximize the integration and real-time availability of information, and have proven to be a strategically competitive weapon in allowing firms to optimize operational and financial performance. In this course, students will gain an extensive understanding of what ERP systems are through a hands-on simulation experience with a fully configured and operational ERP system - SAP ECC. Within this integrated, team-based, competitive business simulation, the student will be quantitatively challenged to incorporate and measure the impacts of operational excellence concepts such as consistent forecasting and planning; procurement and product design strategies; manufacturing decisions (e.g. production scheduling, set-up reductions, lot size reductions); and funding decisions on capital investment and advertising. The development of information reporting and its importance to decision-making support will be included. This team-based approach will also challenge the student in understanding the nature of integrated ERP systems and the critical aspects of developing organizational roles, responsibilities, and coordination within an operationally excellent firm. Offered spring semester. Three credits.

BA-368 SAP BUSINESS ONE PROGRAM

This cross-listed hybrid course will prepare students for a career working with SAP Business One, the world's leading Enterprise Resource Planning (ERP) system for the small-to-medium sized business (SMB) segment. The class will meet once per week and will include lectures, on-line videos, exercises, and a workshop. Topics covered in detail include:

- Business Processes – Revenue, Expenditure, and Production processes
- Structured Query Language (SQL), including multiple exercises
- Data Transfer Workbench (DTW), including multiple exercises
- Crystal Reports, including multiple exercises

Instructor permission only. Offered fall semester. Two or three credits.

BA-380 CONSUMER BEHAVIOR

The purpose of this course is to study human responses to products and services by linking the upstream conceptual foundations in consumer psychology with its downstream marketplace applications. Accordingly, the extant research in social psychology will guide the development of marketing strategies. Special attention is given to the scientific method in cognitive psychology. Ethical issues surrounding consumer research are interwoven throughout the course. Students will conduct an experimental research project including hypothesis development, experimental design, data collection and hypothesis testing, and interpretation. This course provides dedicated workshops in SPSS software. Prerequisites: BA 220. Offered every semester. Three credits.

BA-385 FINANCIAL INSTITUTIONS

The nature and role of financial institutions in the economy. Topics include interest rate structure, regulation, financial markets, and asset and liability management of various types of financial institutions. Emphasis is placed on the relationship between theory and practice. Prerequisite: BA 320. Offered fall semester. Three credits.

BA-386 CULTURE IN OPERATIONAL EXCELLENCE

This course will focus on the cultural characteristics that are required for a successful and sustained implementation of Operational Excellence in an organization. During the course, students will explore more deeply what makes up culture, how culture can be modified, and what characteristics are necessary for

a culture to support a continuous learning organization. During the second half of the course, students will review a methodology to implement these cultural concepts within an organization. Students will study how this methodology can lead to an organization that is nimble, efficient, customer-focused, and constantly learning. The students will be able to take with them techniques to begin the introduction of Operational Excellence in their organization. Offered fall semester. Three credits.

BA-394 LEAN ASSESSMENT

This course focuses on the Lean Audit skills and tools that are essential to individuals and teams that are interested in conducting an effective Lean Assessment. The Lean Assessment is a critical component of Operational Excellence. Once this course is completed, the student is eligible to conduct Lean Assessments for KCOE sponsors and other potential employers. Offered fall semester. Three credits.

BA-395 GLOBAL MARKETING

This course is an upper-level, managerially-oriented course that offers a systematic treatment of marketing on a global scale. The purpose of the course is to examine the specific issues involved in entering overseas markets and conducting global marketing operations. Special attention is given to analyzing the global economic environment, targeting global markets, sourcing and producing internationally, formulating global marketing strategies, and implementing global marketing mixes. Students are exposed to current events in the Wall Street Journal and participate in case studies and simulations. Prerequisite: BA 220. Offered fall semester. Three credits.

BA-397 MARKETING RESEARCH

This course introduces students to the descriptive, diagnostic, and predictive roles of marketing research by examining both the substantive and technical domains of the marketing research process. Special attention is given to the survey method. Accordingly, students will receive workshops on Qualtrics, an online survey software. Students will also learn how to conduct focus groups. The foundation of the course is a student-generated marketing research project, where participants clearly define a marketing problem, design a study, collect data, analyze it, and present the findings. This course builds on the material learned in BA 350 and BA 351 and provides dedicated data analytic workshops in EXCEL and SPSS. Prerequisites: BA 220 and BA 351. Offered both fall and spring semesters. Three credits.

BA-398 PROJECT MANAGEMENT I

Project Management is a highly rewarding profession that became widely recognized as a valuable career path in the mid-20th century. As a profession, it focuses on controlling resources to meet the requirements of projects. Individuals with project management skills are highly in demand by employers. Similar to operations managers, project managers must apply specialized knowledge, skills, tools, and techniques often in a team-based environment. The difference is that, while operations are ongoing, projects have definitive beginnings and ends, are non-recurring, and can often be somewhat unique when compared with other projects. These characteristics present distinct challenges and difficulties when compared with operations. This course will cover the Project Management Institute's (PMI) five Project Management Processes (initiating, planning, executing, monitoring and controlling, and closing), discuss certification opportunities with PMI, and will allow students to develop the knowledge and skills necessary to become a successful project manager. Junior or senior status. Offered spring semester. Three credits.

BA-400 ADVANCED ACCOUNTING

Topics include: income presentation and interim reporting, disclosure of segmental data, business combinations and consolidated statements, partnership ownership changes and liquidation governmental accounting, and accounting for non-profit organizations. Prerequisite: BA 201. Offered spring semester. Three credits.

BA-405 AUDITING

This course explores the field of auditing and public accounting as a career. Topics include conducting and concluding an audit, working papers, internal control and evidence, and the audit of selected groups of accounts. Prerequisite: BA 200. Offered fall semester. Three credits.

BA-406 FORENSIC AUDITING

It is estimated that companies lose, on average, 5-7% of their revenues to fraud schemes each and every year. This course will focus on the “Red Flags” of fraud and effective risk management techniques to counter fraud. Students will be introduced to various forensic auditing concepts and provided opportunities in a case study setting to apply these concepts to recognize fraud scenarios within various accounting and financial applications such as financial reporting, accounts payable, payroll, and IT. Significant well-known frauds such as Enron, Worldcom, Tyco, and our own local LeNature will be studied for clues on how to apply forensic applications to early warning signals to detect frauds before they grow larger. As trained forensic accounting professionals, successful students will learn how to apply professional skepticism and a questioning mind to identify signs of fraud. Prerequisite: BA 405. Offered spring semester. Three credits.

BA-420 ACCOUNTING INFORMATION SYSTEM

This course examines accounting systems as an integral component of a management information system. The student will obtain an understanding of accounting systems theory, information theory, relational databases, Enterprise Resource Planning (ERP), and system analysis. The course will also include configuration of the SAP Business One application software. Prerequisite: Junior status or permission of instructor. Offered spring semester. Three credits.

BA-425 STRATEGIC MARKETING

This senior-level course emphasizes the decisions that marketing managers face in their efforts to bring together the objectives and resources of their organizations with the needs and opportunities in the market place. Building on the fundamentals of marketing and economics, special attention is given to the marketing decisions that students are most likely to confront in their careers. The centerpiece of the course is a marketing simulation. Teams of students will be responsible for the analysis, planning, implementation, and control of an on-going firm. Prerequisites: BA 220, BA 350, BA 380. Offered spring semester. Three credits.

BA-440 GOVERNMENT AND NOT-FOR-PROFIT ACCOUNTING

This course focuses on the accounting, financial reporting, and auditing issues relevant to the governmental and not-for-profit entities. Topics include the budgeting process (i.e., the recording of the budget and transactions) and the preparation of various statements for governmental units and not-for-profit entities. Additional topics will include the standards of the Government Accounting Standards Board (GASB) and the standards of the Financial Accounting Standards Board (FASB). Prerequisite: senior status or permission of instructor. Offered fall semester. Three credits.

BA-467 CHANGE MANAGEMENT

This course focuses on change management. According to McKinsey, 70% of transformation type projects fail. Change management is an increasingly important skill for business leaders and professionals because of increasingly dynamic market conditions and capabilities. This results in a more Volatile, Uncertain, Complex, and Ambiguous (VUCA) business world. In this course, the tasks, tools, and structure of change management process will be introduced according to the program phases that start with initiation, planning, design, implementation, and include stabilization. Case studies will be reviewed along with best-in-class examples for creating awareness, increasing participation, providing needed new knowledge, and building new skills and ensuring the structure is in place to promote, support, and sustain the needed change and realize the change benefits and value. Business change readiness, leadership and stakeholder engagement, project planning and resourcing, communication, risk management, process analysis, organizational structure and job aids, team engagement, motivational techniques, and proving sustained benefits realization will be addressed in this course. Offered spring semester. Three credits.

BA-468 PROJECT MANAGEMENT II

This course is a follow-up to Project Management I. The focus of this course will be to apply the learning previously gained to a real-world project. The project management career path is a rapidly growing profession and it is expected that through 2020, 1.57 million new jobs will be created each year putting qualified practitioners in demand. The successful student will work through the five stages of Project Management in conjunction with a Not-for-Profit Organization of the student's choice to implement a fundraising project. The course will make detailed use of the tools and techniques taught in PM I and provide students with valuable, relevant project management experience. As a secondary objective of the course, students will be familiarized with the requirements of the Certified Associate in Project Management (CAPM)[®] of the Project Management Institute, an asset, should they choose to pursue, that will distinguish them in the job market and enhance their credibility and effectiveness working on — or with — project teams. Spring semester. Prerequisite: BA398. Starts spring 2019. Four credits.

BA-470 INTERNATIONAL ACCOUNTING

This course introduces the global nature of accounting in business. The course examines a variety of topics including the comparative study of accounting concepts and reporting in various countries, international accounting standards, accounting problems of multinational corporations, and US GAAP requirements for the translation of foreign financial statements. Prerequisite: Senior status or permission of instructor. Offered spring semester. Three credits.

BA-471 GREEN BELT PREPARATION

Six Sigma and Lean are customer-focused, disciplined problem-solving processes that strive to develop and deliver near-perfect products and services. They rely upon a rational decision-making approach to the improvement process known as DMAIC (Define, Measure, Analyze, Improve, and Control). Hundreds of companies of varying sizes and industries have adopted Six Sigma/Lean as part of their business using the knowledge and skills of practitioners known as Green Belts. In this course, you will learn the foundations of the DMAIC process as it applies to both lean and statistical processes. As a Lean Six Sigma Green Belt candidate, a student will gain a thorough understanding of how to apply the Six Sigma and Lean tools and interpret the results. The principles of organizational change through project management, communication, and

technical process improvement will be covered, as will the skills necessary to quantify deliverables to an organization in terms of cost, quality, cycle-time, and/or safety improvements. At the end of the course, the student will be prepared to sit for the Green Belt Certification Exam, an industry-recognized achievement. Offered fall semester. Three credits.

BA-484 RISK MANAGEMENT

Risk Management presents risk analysis as a major role in financial planning and advising. The course looks at risk on both an individual and business level. Prerequisites: BA-362 and BA-363. Spring semester. Three credits.

BA-485 FINANCIAL PLANNING AND ANALYSIS

This course serves as a preparation for the Chartered Financial Analyst Exam Level I. Course content focuses on the Candidate Body of Knowledge, which encompasses the following ten areas: "ethical and professional standards, quantitative methods, economics, accounting and corporate finance, global markets and instruments, valuation and investment theory, analysis of fixed income securities, analysis of equity investments, analysis of alternative investments, and portfolio management." Prerequisite: second semester senior business majors or continuing education students with B.A./B.S. in hand. In order to take the CFA exam in the summer, you must graduate within six months of the exam; thus, juniors may take the course, but are not eligible to take the exam. Offered spring semester. Three credits.

BA-488 PORTFOLIO THEORY

This course focuses on portfolio management decisions and strategy, the specification and evaluation of asset management, and the evaluation of portfolio performance. This course will include studies of mutual funds and hedge funds and will integrate tools acquired in Investments I and Investments II. Prerequisite: BA 361. Offered fall semester. Three credits.

BA-489 VALUATIONS AND MODELING

This course presents a set of valuation tools (such as DCF) to properly value companies. The course formally introduces financial modeling, a coveted skill in the modern business world. Prerequisite: BA 362. Offered spring semester. Three credits.

BA-491 OPERATIONAL EXCELLENCE IN HEALTH CARE

This course examines the following topics: challenges facing health care, concept of waste and quality in the health care environment, application of the Toyota Way to the health care industry, and building the health care industry of the future. Prerequisite: Junior status. Offered spring semester. Three credits.

BA-492 OPERATIONS MANAGEMENT

This course provides an overview of Lean Manufacturing, the Six Sigma Process, the Toyota Production Process, and the Total Quality Management philosophies of continuous improvement of a process and of process variation. For accounting students, this course will include applications to managerial accounting, auditing, and information systems. Prerequisite: Junior status or BA386. Offered every semester. Three credits.

BA-493 SUPPLY CHAIN MANAGEMENT I

This course is designed to help students acquire an understanding of the most current practices being implemented by businesses as they compete to bring to the market place their products and services in an ever more demanding global economy. Students will be introduced to new, and sometimes unconventional, tools

companies are currently using in an effort to delete inefficiencies from their manufacturing, expenditure, and revenue cycles by improving supply chain relationships. Prerequisite: Junior status. Offered spring semester. Three credits.

BA-494 QUANTITATIVE METHODS, QUALITY

This course focuses on quantitative methods utilized in operational excellence. Students review measures of quality and the implementation of quality improvement techniques. Concepts of process control, variability, and flow are explored within a practical framework of applied problem-solving techniques. Techniques include control charts and capability indices, six sigma and the DMAIC model, and analysis of overall system performance by applying the Theory of Constraints and Little's Law queuing theory. Concepts are applied to examples in both manufacturing as well as service. Process variability and interdependence are also modeled and explored within a discrete event simulation software environment. Prerequisite: Statistics I or permission of instructor. Offered fall semester. Three credits.

BA-495 BUSINESS POLICY AND STRATEGY

This is the capstone course for all business majors and as such covers aspects of the McKenna School curriculum. The class covers the field of strategic management. This course utilizes a multiperformance approach. Each student participates in a simulation where teams operate and control every aspect of a corporation. Each corporation then competes in this virtual reality, utilizing every business course they have taken in various decisions that are required. Students are not only expected to understand the role various levels of management play in strategic planning and control, but are required to demonstrate the abilities throughout the simulation. The course also utilizes case studies to give real-life examples of strategic situations. Students must be able to conduct internal and external analyses (SWOT, 5 Forces, etc.) of the company, which includes an analysis of cultural and political issues. Students must be adept at creating and presenting business applications, cases, etc. on PowerPoint technology. Students must demonstrate a fluid facility with major presentation technology, including overhead CD rom, VCR, DVD, internet, Microsoft PowerPoint and Excel, Schoology, and Smart Board technology. Prerequisite: Senior status. Every semester. Three credits.

BA-498 TOOLS, TECHNOLOGY, AND METHODS FOR OPERATIONAL EXCELLENCE

This course provides the necessary tools, techniques, and methods to begin transforming an organization toward operational excellence. The body of knowledge covered by this course is centered on the application of the 4P model of the Toyota Production System, which includes Philosophy, Process, People and Partners, and Problem-Solving. As students become proficient in tools and gain a deeper understanding of the 4P model, they will be prepared to play a critical role in an organization's journey toward operational excellence. Required text: *The Toyota Way Fieldbook: A Practical Guide for Implementing Toyota's 4Ps*. Prerequisite: BA 386. Offered fall semester (starting fall 2018). Three credits.

BA-499 SUPPLY CHAIN MANAGEMENT

Advanced Supply Chain systems and concepts are further explored. In this course, students will gain an extensive understanding of integrated systems and how they are used in optimizing supply chain performance. The student's learning is focused through a live interactive experience with a fully configured and operational SAP ECC system. Within this integrated, team-based, competitive business simulation, the student will be challenged to optimize

his/her supply chain by realizing the impacts of OE concepts such as consistent forecasting and planning; procurement and product design strategies; manufacturing decisions (production scheduling, set-up reductions, lot size reductions); and funding decisions on capital, advertising, and lean investments. Additional topics will cover the application of linear optimization techniques in supply chain settings such as aggregate planning and logistics; and components of global logistics and e-commerce. This course experience will also challenge the student in understanding the nature of integrated organizations and the critical aspects of developing organizational roles, responsibilities, and coordination within an operationally excellent supply chain. Three credits.

BA-500 INDEPENDENT STUDY BUSINESS ADMINISTRATION

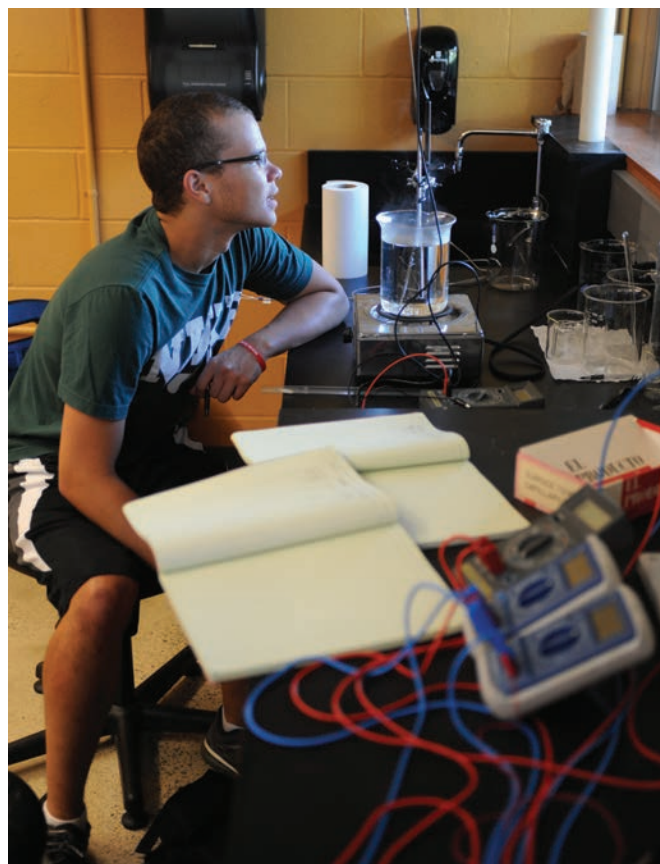
May be repeated. Offered every semester. Variable credit.

BA-525 GLOBAL EXPERIENCE

Spend your spring break in a city abroad. The curriculum varies according to the city visited, but focuses on the various business and cultural themes. Offered spring semester. Two credits.

BA-550 BUSINESS INTERNSHIP

This course pertains to Business Administration Internships where work experience is utilized to extend the student's learning experience. Students are employed in an area related to their academic endeavor. The purpose of the program is to integrate academic studies and employment activities. Offered every semester. McKenna School students have an upward limit of six credits for internships. Pass/fail only. Variable credit up to four credits.



CHEMISTRY

Jason K. Vohs, *Chairperson*

Caryl L. Fish; Daryle H. Fish; Matthew A. Fisher; Steven J. Gravelle;
Michael Sierk; Ian M. Taylor

Adjunct Faculty: Beth Bollinger; Bettie A. Davis; Sarah Pillsbury;
Feng Wang

Professor Emeritus: Andrew B. Turner

Undergraduate study in chemistry provides students with the background to pursue numerous career paths and interests. These possibilities include graduate school, employment in a wide variety of industrial research positions, chemical sales and management, professional programs such as medical school and law school, art conservation, science policy, journalism, and forensics. The overall goal of the chemistry curriculum at Saint Vincent is to provide students with a solid foundation in various areas of modern chemistry so that they can pursue a variety of career possibilities. The chemistry program at Saint Vincent is approved by the American Chemical Society.

The Chemistry Department offers students the possibility to earn a B.S. degree in Chemistry, Biochemistry, or Environmental Chemistry. Students receiving the B.S. degree in Chemistry are certified by the American Chemical Society. Minors in Chemistry and Biochemistry are also offered. Specific requirements for each of these programs can be found below.

Students may also obtain certification in secondary education by receiving a major in Chemistry and a minor in Secondary Education. Interested students may consult the "Teacher Preparation" section and the requirements for Secondary Education under the Education Department.

No matter which degree program a student chooses, he or she will find the following features common to all of the programs offered by the Department.

- The three majors offered by the Chemistry Department build on a common core of chemistry courses (general, organic, physical, analytical, and biochemical).
- These degree programs differ mainly in the courses taken by students in their junior and senior years. Topics found in these major dependent courses include inorganic, polymer and materials chemistry, physical organic, biochemistry, and environmental chemistry.
- There exists a continuous focus on writing as a tool for thinking and a critical skill for chemists to develop. All of the Chemistry faculty have participated in the Interdisciplinary Writing Program at Saint Vincent.
- The Chemistry faculty believe that proficiency in a particular discipline is best accomplished when set in the broad context of liberal arts. Therefore, the degree programs in the Chemistry Department include courses in the humanities, social sciences, and other natural sciences.
- The curriculum strongly emphasizes a laboratory experience that reflects chemistry as it is currently practiced. Several of the upper-level laboratory courses are taught as "integrated labs," providing faculty and students the flexibility to explore the interdisciplinary nature of chemistry.
- The courses in the Chemistry Department build toward the senior research project, which serves as a "capstone experience" for students. In preparation for their senior research project, students prepare a proposal for original research during the spring semester of their junior year. The research project is then conducted by the students in their senior year under the guidance of one of the Chemistry faculty members. The research project provides the student with a first-hand experience of the nature of scientific investigation. Upon completion of their project, the students write

a thesis and present their results to an outside audience, typically at a national meeting of the American Chemical Society.

TEACHER PREPARATION

Requirements for certification in Chemistry (7-12): The Chemistry Department offers a Chemistry Education track for students wishing to pursue Secondary Education Certification in Chemistry. Please declare this track in the Registrar's Office. See the Education Department for teacher certification requirements in secondary education. Interested students must contact the Chairperson of the Education Department and confer with Dr. Steven Gravelle in the Chemistry department. All programs begin in the sophomore year by registering for ED 100: Foundations of Education.

CHEMISTRY STUDENT LEARNING OUTCOMES

- Students graduating with a degree in chemistry will have an understanding of chemical principles in organic, inorganic, physical, and analytical chemistry that allows them to apply those principles to advanced topics.
- Students will be able to perform a variety of modern chemical laboratory techniques and run modern instrumentation.
- Students will be able to communicate in both oral and written forms that are appropriate to the modern practice of chemistry. Students should be able to apply the Six Principles of Good Writing to their chemistry writing.
- Chemistry students in their junior and senior years will be able to design, develop, conduct, and report on an independent research project.
- Students will develop higher order thinking skills of synthesis, analysis, and applications.

REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE IN CHEMISTRY

(See core curriculum requirements.)

Chemistry Major Requirements (66 credits):

CH 101-102	General Chemistry I, II*	6
CH 103-104	General Chemistry Laboratory I, II*	2
CH 216	Quantitative Analysis	3
CH 218	Quantitative Analysis Laboratory	1
CH 221-222	Organic Chemistry I, II	6
CH 223-224	Organic Chemistry Laboratory I, II	2
CH 228	Introduction to Biochemistry	3
CH 231-232	Physical Chemistry I, II	6
CH 233	Physical Chemistry I Laboratory	1
CH 241	Inorganic Chemistry	3
CH 242	Instrumental Analysis	2
CH 282	Advanced Physical Methods	2
CH 283	Advanced Chemical Methods	2
CH 301	Research Laboratory	2
CH 300, 302	Research Seminar I, II	2
CH 321	Special Topics	3
MA 111, 112, 211	Analytical Calculus I, II, III*	12
PH 111-112	General Physics I, II	6
PH 113-114	General Physics Laboratory I, II	2

*General Chemistry I and II with Laboratory fulfill the natural science core requirement.

Calculus I fulfills the Mathematics core requirement.

Electives 9 credits

Chemistry Education Track Requirements (65 credits):

CH 101-102	General Chemistry I and II	6
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CH 103-104	General Chemistry Lab I and II	2
CH 216	Quantitative Analysis	3
CH 217	Quantitative Analysis Lab	1
CH 221-222	Organic Chemistry I and II	6
CH 223-224	Organic Chemistry Laboratory I and II	2
CH 231	Physical Chemistry I and II	6
CH 233	Physical Chemistry Lab	1
CH 242	Instrumental Analysis	2
CH 282	Advanced Physical Methods	2
CH 241	Inorganic Chemistry	3
CH 285	Teaching Chemistry	2
CH 300	Research Seminar I	1
CH 302	Research Seminar II	1
CH 301	Research Laboratory	2
MA 111, 112, 211	Analytical Calculus I, II, III	12
PH 111 and 112	General Physics I and II	6
PH 113 and 114	General Physics Lab I and II	2
ED 304	Teaching of Science	3
ED 400	Field Experience II	2

Students are strongly encouraged to take CH 228 Introduction to Biochemistry. See Education Department for teacher certification requirements.

Typical First-Year Schedule – Chemistry Education Track

Fall		Spring	
CH 101	3	CH 102	3
CH 103	1	CH 104	1
MA 111	4	MA 112	4
TH 119	3	EL 102	3
Modern/Classical Language	3	PY 115	3
FY Seminar	1	Modern/Classical Language	3
Semester Credits	15		17
Cumulative Credits	15		32

Requirements for a Bachelor of Science Degree in Biochemistry

(See core curriculum requirements.)

BIOCHEMISTRY STUDENT LEARNING OUTCOMES

- Students graduating with a degree in biochemistry will have an understanding of chemical principles in organic, inorganic, physical, and analytical chemistry that allows them to apply those principles to advanced topics. Students in biochemistry and environmental chemistry will be able to apply principles specific to their disciplines to advanced topics.
- Students will be able to perform a variety of modern chemical laboratory techniques and run modern instrumentation. Students in biochemistry will be able to perform laboratory techniques specific to their discipline.
- Students will be able to communicate in both oral and written forms that are appropriate to the modern practice of chemistry. Students should be able to apply the Six Principles of Good Writing to their chemistry writing.
- Students in their junior and senior years in chemistry will be able to design, develop, conduct, and report on an independent research project.
- Students will develop higher order thinking skills of synthesis, analysis and applications.

Biochemistry Major Requirements (75 credits):

BL 150, 152	General Biology I and II	6
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BL 151, 153	General Biology I and II Laboratory	2
BL 208	Cell Biology	3
BL 209	Cell Biology Laboratory	1
BL 214	Molecular Genetics	3
BL 215	Molecular Genetics Laboratory	1
CH 101-102	General Chemistry I, II*	6
CH 103-104	General Chemistry Laboratory I, II*	2
CH 221-222	Organic Chemistry I, II	6
CH 223-224	Organic Chemistry Laboratory I, II	2
CH 231-232	Physical Chemistry I, II	6
CH 233	Physical Chemistry I Laboratory	1
CH 242	Instrumental Analysis	2
CH 251	Proteins and Metabolism	3
CH 253	Proteins and Metabolism Laboratory	1
CH 252	Nucleic Acids and Membranes	3
CH 254	Nucleic Acids and Membranes Laboratory	1
CH 282	Advanced Physical Methods	2
CH 301	Research Laboratory	2
CH 300, 302	Research Seminar I, II	2
MA 111, 112, 211	Analytical Calculus I, II, III*	12
PH 111-112	General Physics I, II	6
PH 113-114	General Physics Laboratory I, II	2

*General Chemistry I and II with Laboratory fulfill the natural science core requirement. Calculus I fulfills the Mathematics core requirement.

Requirements for a Bachelor of Science Degree in Environmental Chemistry

(See core curriculum requirements.)

ENVIRONMENTAL CHEMISTRY STUDENT LEARNING OUTCOMES

- Students graduating with a degree in environmental chemistry will have an understanding of chemical principles in organic, inorganic, physical, and analytical chemistry that allows them to apply those principles to advanced topics in environmental chemistry and analysis.
- Students will be able to perform a variety of modern chemical laboratory techniques and run modern instrumentation.
- Students will be able to communicate in both oral and written forms that are appropriate to the modern practice of chemistry. Students should be able to apply the Six Principles of Good Writing to their chemistry writing.
- Students in their junior and senior years in chemistry will be able to design, develop, conduct, and report on an independent research project.
- Students will develop higher order thinking skills of synthesis, analysis and applications.

Environmental Chemistry Major Requirements

(67 credits):

CH 101-102	General Chemistry I, II*	6
CH 103-104	General Chemistry Laboratory I, II*	2
ES 150	Earth Systems Science	3
ES 152	Earth Systems Science Laboratory	1
CH 216	Quantitative Analysis	3
CH 218	Quantitative Analysis Laboratory	1
CH 221-222	Organic Chemistry I, II	6
CH 223-224	Organic Chemistry Laboratory I, II	2
CH 228	Introduction to Biochemistry	3
CH 231-232	Physical Chemistry I, II	6
CH 233	Physical Chemistry I Laboratory	1
CH 242	Instrumental Analysis	2
CH 276	Advanced Environmental Chemistry	3

CH 277	Methods of Environmental Analysis	2
CH 282	Advanced Physical Methods	2
CH 301	Research Laboratory	2
CH 300, 302	Research Seminar I, II	2
MA 111, 112, 211	Analytical Calculus I, II, III*	12
PH 111-112	General Physics I, II	6
PH 113-114	General Physics Laboratory I, II	2

*General Chemistry I and II with Laboratory fulfill the natural science core requirement. Calculus I fulfills the Mathematics core requirement.

Recommended core curriculum courses:

SO 161	Environmental Sociology	3
BA 350	Statistics I	3
PS 390	Environmental Law and Policy	3
EL 111	Green Writing: Literature and the Environment	3

Electives 8 credits

Requirements for Minor in Chemistry (minimum 17 credits):

CH 216	Quantitative Analysis	3
CH 218	Quantitative Analysis Laboratory	1
CH 221-224	Organic Chemistry I, II with Laboratory	8
At least five credits from the following:		
CH 228	Introduction to Biochemistry	3
CH 231	Physical Chemistry I	3
CH 241	Inorganic Chemistry	3
CH 242	Instrumental Analysis	2
CH 276	Advanced Environmental Chemistry	3
CH 321	Special Topics	3

Requirements for Minor in Biochemistry (20 credits):

CH 216	Quantitative Analysis	3
CH 218	Quantitative Analysis Laboratory	1
CH 221-224	Organic Chemistry I, II with Laboratory	8
CH 251, 253	Proteins and Metabolism with Laboratory	4
CH 252, 254	Nucleic Acids and Membranes with Laboratory	4

Typical First-Year Schedule – Chemistry (B.S.) Fall

CH 101	General Chemistry I	3
CH 103	General Chemistry I Laboratory	1
MA 111	Analytical Calculus I	4
EL 102	Language and Rhetoric	3
	Modern and Classical Language	3
Total Fall		14*

Spring

CH 102	General Chemistry II	3
CH 104	General Chemistry II Laboratory	1
MA 112	Analytical Calculus II	4
	Social Sciences	3
TH 119	First Theology	3
	Modern and Classical Language	3
Total Spring		17

Total First-Year 31*

*All students will take one course designated as a First-Year Seminar which will satisfy a curriculum requirement.

Biochemistry (B.S.)

Fall

CH 101	General Chemistry I	3
CH 103	General Chemistry I Laboratory	1
MA 111	Analytical Calculus I	4
BL 150	General Biology I	3
BL 151	General Biology I Laboratory	1
EL 102	Language and Rhetoric	3
Total Fall		15*

Spring

CH 102	General Chemistry II	3
CH 104	General Chemistry II Laboratory	1
MA 112	Analytical Calculus II	4
BL 152	General Biology II	3
BL 153	General Biology II Laboratory	1
TH 119	First Theology	3
	Social Sciences	3
Total Spring		18

Total First Year 33*

**All students will take one course designated as a First-Year Seminar which will satisfy a core curriculum requirement.*

Environmental Chemistry (B.S.)

Fall

CH 101	General Chemistry I	3
CH 103	General Chemistry I Laboratory	1
MA 111	Analytical Calculus I	4
EL 102	Language and Rhetoric	3
	Modern and Classical Language	3
Total Fall		14*

Spring

CH 102	General Chemistry II	3
CH 104	General Chemistry II Laboratory	1
MA 112	Analytical Calculus II	4
ES 150	Earth Systems Science	3
ES 152	Earth Systems Science Laboratory	1
TH 119	First Theology	3
	Modern and Classical Language	3
Total Spring		18*

Total First-Year 32*

**All students will take one course designated as a First-Year Seminar which will satisfy a core curriculum requirement.*

CHEMISTRY COURSE DESCRIPTIONS

CH-00X CHEMISTRY EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. Zero credits. Pass/Fail.

CH-101 GENERAL CHEMISTRY I

A study of chemical principles including atomic structure; chemical bonding; types of chemical reactions; stoichiometry; solution chemistry; and chemistry of the elements. Offered every semester. Periodically offered as a first-year seminar. Three credits.

CH-102 GENERAL CHEMISTRY II

A study of chemical principles related to quantitative chemical analysis. Topics include the nature of liquids and solids; chemical kinetics; equilibrium; thermodynamics; acids and bases; precipitation reactions; electrochemistry; and nuclear reactions. Prerequisite: CH 101. Three credits.

CH-103 GENERAL CHEMISTRY I LABORATORY

Laboratory studies related to the principles in general chemistry with emphasis on quantitative measurements. Must be taken simultaneously with, or after successful completion of CH 101. Offered fall semester. One credit.

CH-104 GENERAL CHEMISTRY II LABORATORY

Laboratory studies related to the principles covered in CH 102. Must be taken simultaneously with, or after successful completion of CH 102. One credit.

CH-114 ESSENTIALS OF CHEMISTRY

This course is designed for students interested in pursuing science majors at Saint Vincent who have very limited prior experience with chemistry concepts and math skills. Topics will include atomic structure, chemical and physical properties of materials, changes in matter, bonding, and intermolecular forces. Particular attention will be given to developing important mathematical skills and student proficiency in practices of science such as using representations/models and working with scientific explanations. No prerequisite. Must be taken simultaneously with CH 116. Offered fall semester.

CH-116 ESSENTIALS OF CHEMISTRY LABORATORY

This laboratory course complements CH 114 by engaging students with experiments that utilize chemical concepts examined in CH 114. In addition to developing foundational laboratory skills important in a variety of science courses, CH 116 also focuses on developing student proficiency in practices of science important to lab work such as planning and implementing data collection strategies as well as performing data analysis and evaluation of evidence. No prerequisite. Must be taken simultaneously with CH 114. Offered fall semester. One credit.

CH-216 QUANTITATIVE ANALYSIS

This course covers topics in analytical chemistry such as statistics, equilibria, electrochemistry, ion specific electrodes, absorption spectroscopy, and chromatography. Prerequisite: CH 102. Offered spring semester. Three credits.

CH-218 QUANTITATIVE ANALYSIS LABORATORY

This course contains laboratory experiments that are related to the principles covered in CH 216. Must be taken simultaneously with, or after successful completion of CH 216. Offered spring semester. One credit.

CH-221 ORGANIC CHEMISTRY I

The basic principles of the chemistry of carbon compounds are developed with emphasis on nomenclature, physical properties, spectroscopy, structure, reactions, mechanisms, and synthesis. Prerequisites: CH 102, 104. Offered every year.

CH-222 ORGANIC CHEMISTRY II

The basic principles of the chemistry of carbon compounds are developed with emphasis on nomenclature, physical properties, spectroscopy, structure, reactions, mechanisms, and synthesis. Prerequisite: CH 221. Offered every year. Three credits each semester.

CH-223 ORGANIC CHEMISTRY I LABORATORY

This laboratory complements CH 221-222 by introducing the basic organic laboratory techniques of synthesis, isolation, and analysis, including chromatography and infrared and nuclear magnetic resonance spectroscopy. Emphasis is placed on developing microscale techniques. Students are encouraged to work more independently as the year progresses. Must be taken

simultaneously with, or after successful completion of CH 221-222, respectively. Offered every year. One credit each semester.

CH-224 ORGANIC CHEMISTRY II LABORATORY

This laboratory complements CH 221-222 by introducing the basic organic laboratory techniques of synthesis, isolation, and analysis, including chromatography and infrared and nuclear magnetic resonance spectroscopy. Emphasis is placed on developing microscale techniques. Students are encouraged to work more independently as the year progresses. Must be taken simultaneously with, or after successful completion of CH 221-222, respectively. Offered every year. One credit each semester.

CH-228 INTRODUCTION TO BIOCHEMISTRY

This course is designed to provide an overview of modern biochemistry for chemistry majors and other students with minimal background in biology. The chemistry of amino acids, basic principles of protein structure, enzyme kinetics, lipids and membranes, intermediary metabolism, and nucleic acid chemistry is covered. No previous background in biology is necessary. This course is not intended for students pursuing a career in the health professions. Prerequisites: CH 221-224. Offered spring semester of odd-numbered years. Three credits.

CH-231 PHYSICAL CHEMISTRY I

A study of the laws and theories used by chemists to describe, interpret, and predict physical properties and chemical changes. Topics discussed include thermodynamics, kinetics, quantum mechanics, and spectroscopy. Prerequisites: CH 222-224 with grade of C- or better; PH 111-114; MA 111- 113. Offered every year. Three credits each semester.

CH-232 PHYSICAL CHEMISTRY II

A study of the laws and theories used by chemists to describe, interpret, and predict physical properties and chemical changes. Topics discussed include thermodynamics, kinetics, quantum mechanics, and spectroscopy. Prerequisites: CH 222-224 with grade of C- or better; PH 111-114; MA 111- 113. Offered every year. Three credits each semester.

CH-233 PHYSICAL CHEMISTRY I LABORATORY

In this laboratory, students conduct experiments that are based on physical chemical phenomena covered in CH 231 such as gas laws and thermodynamics. Thorough data analysis and report writing are also emphasized in this course. Must be taken simultaneously with, or after successful completion of CH 231. Offered fall semester. One credit.

CH-241 INORGANIC CHEMISTRY

An in-depth study of special topics in inorganic chemistry including molecular orbital theory, chemical bonding, point group symmetry, acid-base theories, and coordination and organometallic chemistry. Prerequisite: CH 222. Offered fall semester of odd-numbered years. Three credits.

CH-242 INSTRUMENTAL ANALYSIS

The emphasis in this course is on applications of instrumental analysis to all aspects of chemistry. Students will gain knowledge of the theory and usage of a variety of modern instrumental methods including spectrophotometry, spectroscopy, chromatography, and electroanalytical techniques. They will also gain experience in applying their knowledge in solving analytical problems. Prerequisites: CH 216 or CH 253. Offered spring semester. Two credits.

CH-245 CHEMICAL AND FORENSIC ANALYSIS

The chemistry course is an integrated lecture laboratory with one credit lecture and one credit laboratory. The emphasis will be on instrumental chemical analysis and will focus on developing skills used in forensic analysis such as quality control, gas chromatography-mass spectroscopy, and infrared spectroscopy. Students will have an opportunity to develop both instrument operational and maintenance skills. Prerequisites: CH 222-224. Offered fall odd years. Two credits.

CH-251 PROTEINS AND METABOLISM

This course is concerned with how macromolecular structures self-assemble, chemical mechanisms of reactions that occur in living systems, and the molecular basis of cellular regulation. Protein structure/function and metabolism are the central themes of this course. The specific objectives are to familiarize the student with the structure and function of amino acids/peptides/proteins, enzyme catalysis, and regulation, carbohydrate structure and function, and an overview of metabolism, synthetic/degradative pathways, and their regulation. Prerequisites: CH 221-224; one year of general biology is strongly recommended. Offered fall semester. Three credits.

CH-252 NUCLEIC ACIDS AND MEMBRANES

This course focuses on two major themes, the structure and function of membranes and the biochemistry of nucleic acids. The topics covered will include: structures of lipids and membranes, membrane proteins, signal transduction, structure of DNA and RNA, DNA replication and repair, RNA synthesis, protein synthesis, and the biochemical basis for control of gene expression. Emphasis throughout the course will be on the molecular mechanisms and protein components involved in various structures and processes. Prerequisites: CH 221-224; one year of general biology strongly recommended. Offered spring semester. Three credits.

CH-253 PROTEINS AND METABOLISM LABORATORY

This laboratory course is intended to expose the student to laboratory aspects of modern protein chemistry and expand on some material covered in CH 251. Students will carry out experiments illustrating physical properties of proteins, protein purification (including various forms of chromatography and electrophoresis), and enzyme kinetics/inhibition. Must be taken simultaneously with, or after successful completion of CH 251. Offered fall semester. One credit.

CH-254 NUCLEIC ACIDS AND MEMBRANES LABORATORY

This laboratory course introduces students to experimental techniques used in the study of membranes and nucleic acids. Methods will include membrane structure and dynamics, ligand binding to DNA, DNA electrophoresis, and characterization of nucleic acid/protein complexes. Must be taken simultaneously with, or after completion of CH 252. Offered spring semester. One credit.

CH-276 ADVANCED ENVIRONMENTAL CHEMISTRY

This course will incorporate the study of the chemistry of air, water, and soil in terms of both the natural and polluted environments. The topics covered will include: stratospheric ozone, chemistry of the troposphere, toxic organic chemicals, natural water chemistry, water treatment processes, and heavy metal contamination in soils. Prerequisite: CH 216. Offered fall semester of even-numbered years. Three credits.

CH-277 METHODS OF ENVIRONMENTAL ANALYSIS

A laboratory course emphasizing the sampling, preparation, and analysis of water and air samples. The course is primarily laboratory-based in which teams of students work on a set of environmental projects. Students are responsible for the planning, preparation, sampling, analysis, and reporting for each project. Each project will emphasize a different type of environmental matrix and different types of chemical analysis. Sample analysis will include use of atomic absorption spectrophotometry, chromatography, inductively coupled plasma spectrophotometry, turbidity, and conductivity. Prerequisite: CH 216. Offered fall semester of even-numbered years. Two credits.

CH-278 ADVANCED ENVIRONMENTAL CHEMISTRY

In this laboratory course students will explore the concepts introduced in CH 276 such as air and water chemistry, sustainability, and alternative energy. Thorough data analysis and report writing are also emphasized. This course should be taken with or after successful completion of CH 276. Offered fall semester of even-numbered years. One credit.

CH-282 ADVANCED PHYSICAL METHODS

This course is an integrated laboratory that introduces advanced students to the physical and instrumental methods used by chemists. Students in this course will learn about (1) the integrated nature of chemical research, (2) a variety of advanced laboratory techniques, and (3) the methods of experimental design and report presentation. The laboratory experiments focus on atomic behavior, molecular structure, and kinetics. Taken simultaneously with, or after CH 232 and CH 242. Offered every spring semester. Two credits.

CH-283 ADVANCED CHEMICAL METHODS

This course is an integrated laboratory that introduces advanced students to a variety of contemporary topics in experimental chemistry. Students in this course will learn about (1) the integrated nature of chemical research, (2) a variety of advanced laboratory techniques, and (3) the methods of experimental design and report presentation. The laboratory experiments focus on advanced organic chemistry, inorganic chemistry, polymers, and materials science. Offered every fall semester. Two credits.

CH-285 TEACHING CHEMISTRY

This course is designed to meet several requirements for chemistry certification. It is also designed to give students practical experience in preparing and teaching chemistry laboratories. In this course students will work with a chemistry laboratory instructor as a lab assistant. They will develop skills in laboratory preparation, management, and developing experiments. In addition, students will develop projects on the history of chemistry, household chemical safety, and laboratory safety. Offered fall semester. Prerequisite or co-requisite: ED 304. Two credits.

CH-300 RESEARCH SEMINAR I

This course will introduce the student to the research experience and will include an orientation to the library and use of reference materials. Students will be assigned articles to read and discuss. An introduction to writing and presenting a research proposal will be included. Students will be introduced to the procedure for maintaining a laboratory research notebook. Students must be available to attend CH 302 when outside speakers present seminars on selected topics in that course. Prerequisite: CH 231/233 or CH 251/253 with a grade of C- or better. Offered spring semester. One credit.

CH-301 RESEARCH LABORATORY

Independent study or investigation involving intensive work with faculty guidance in the laboratory and library. This course includes an assessment of cumulative laboratory skills. Prerequisite: CH 300. Offered fall semester. Two credits.

CH-302 RESEARCH SEMINAR II

Presentation of research work completed during the previous semester; the oral presentation is made after the thesis report has been written. Outside speakers may present seminars on selected topics. Prerequisite: CH 301. Offered spring semester. One credit.

CH-321 SPECIAL TOPICS

The purpose of this course is to introduce students to topics of contemporary interest in chemistry. Topics discussed are drawn from the following areas: organic and inorganic kinetics, stereochemistry, molecular orbital theory, spectroscopy, electrochemistry, solid state chemistry, polymer science, surface chemistry, and photochemistry. Prerequisites: CH 221-224. Offered spring semester of even-numbered years. Three credits.

CH-323 COMPUTATIONAL CHEMISTRY

This course focuses on computational and simulation methods used in chemistry and materials science applications. Topics include ab initio calculations, density functional theory, molecular dynamics simulation, Monte Carlo methods, and multi-scale methods. Students will perform computational assignments and conduct a computational project. Pass/fail only. Prerequisites: CH 231 Physical Chemistry I. Two credits.

CH-325 METHODS IN CRIMINALISTICS

Criminalistics is the collection and examination of evidence of crime and is an application of many scientific disciplines. This laboratory provides an introduction to the methodologies and applications used in a forensic laboratory. Topics discussed include organic and inorganic chemical analyses of physical evidence, principles of serology and DNA analysis, identification of fresh and decomposed human remains, ballistics, fingerprint analysis, facial reconstruction, drug analysis, and forensic entomology. Two credits.

CH-350 INDEPENDENT STUDY--CHEMISTRY

Studies to be chosen and developed by the student with the guidance of the professor directing the study. May be repeated. Variable credit.

CH-550 CHEMISTRY INTERNSHIP

Work experience program extending the learning experience beyond the college into the world of work, through internships, field work, and cooperative programs. Students may or may not be paid depending on the site. May be repeated. Variable credit.

CHILDREN'S STUDIES MINOR

Dana Winters, *Director*

Kathy Beining; Jessica Harvey; Timothy Kelly; Jason King;
Sara Lindey; Mary Niemiec; Paul Niemiec; Phyllis Riddle;
Mary Beth Spore; Dana Winters

The minor in Children's Studies is an interdisciplinary program of study inspired by the work of the Fred Rogers Center for Early Learning and Children's Media. Grounded in the Liberal Arts, the goals of the Children's Studies Minor are:

- To enhance students' understanding of children from a variety of disciplinary perspectives,
- To provide students with a broad-based examination of childhood and adolescence, and
- To develop students' understanding and practical application of how to serve and work with children and families.

The Children's Studies minor is suitable for students from a variety of majors who have an interest in childhood, whether it is part of their professional plans, an academic interest, and/or a personal interest. Psychology majors who are interested in working with children, adolescents, and families may benefit from the minor as would Communication majors who have a particular interest in children's media. Students majoring in the humanities, who have an interest in childhood, may also find the minor useful in nurturing their academic interests. In addition, students who have career aspirations in the areas of family law, pediatric medicine, or other specialty areas may find the minor attractive. Finally, students from any major, even if they do not have a particular career goal involving children, may be interested in the minor based on their own enjoyment of children and their plans to be a future parent.

Requirements for Minor in Children's Studies (18 credits)

Required courses:

PY 212	Child Development	3
CA 281	Children and the Media	3
FRC 376	Creating Change for Children	2
FRC 499	Project in Children's Studies	1

At least 9 credits from the following:

CA 381	Research on Children and the Media	3
CL 129	Young Adult Literature	3
CL 130	Children's Literature	3
ED 122	Curriculum Projects and Play for the Developing Child	3
EL 273	Representations of Childhood in Literature	3
FRC 301	Applied Research at FRC	1
FRC 370	Relationships for Children	3
FRC 373	What Would Fred Rogers Do?	3
PY 214	Adolescent Development	3
PY 251	Family Systems	3
HI 282	American Childhood History	3
SO 202	Sociology of Childhood	3
TH 272	Theology of Children	3

CHILDREN'S STUDIES COURSE DESCRIPTIONS

FRC-301 APPLIED RESEARCH AT FRC

Students assist faculty, staff, and student researchers at the Fred Rogers Center with various research and development projects in the area of children's development. Project focus areas include

fostering children's social emotional development, improving quality of child development settings, and promoting meaningful use of technology in children's lives. Students may engage in video analysis, archival research, literature review, data collection and analysis, professional writing, and communication. Prerequisites: Permission of instructor; recommended completing PY 212 Child Development. Offered every semester. May be repeated. One credit.

FRC-370 RELATIONSHIPS FOR CHILDREN

How do we encourage, enhance, and empower the human relationships around children and youth? This is the focal theoretical and practical question of this course. Serving children, youth, and families requires us to understand and address complex systems of challenges and opportunities as well as the simple needs of those we serve. We will examine the quality of human interactions across a wide range of contexts both culturally and institutionally, including orphanages, classrooms, early learning environments, youth-serving programs, children's hospitals, and more. By learning from what ordinary people do extraordinarily well in simple, everyday interactions with children and youth, we can help to grow these practices across any child-serving setting. Three credits.

FRC-373 WHAT WOULD FRED ROGERS DO?

What Would Fred Rogers Do? - A Study of the Fred Rogers Archive and Its Implications for Working with Children and Families. What did Fred Rogers do in service of children and families? What can we learn from that legacy to apply in our work with children and families today? These are the central questions for study of the work and legacy of Fred Rogers, one of the most influential advocates for children in our time. His work spans child development, family engagement, communication, public advocacy, and theology. This course is intended for students in the Children's Studies Minor as well as students in other academic majors with a strong interest to serve children. The class activities include studying and discussing exclusive archival materials, and applying ideas to present contexts. Offered spring semester. The class will be hosted at the Fred Rogers Center. Three credits.

FRC-376 CREATING CHANGE FOR CHILDREN

How do we change the world and make it a better place for children? This is the central question for this interdisciplinary seminar. We will examine the science and practice of creating and sustaining social change from across the disciplines of psychology, education, public health, media, and communication. This course is intended for students in the Children's Studies Minor as well as students in other academic majors with a strong interest to serve children. The class activities include learning and discussing ideas from different fields, examining case studies, and working in teams to create and critique social change concepts. The class will be hosted at the Fred Rogers Center. Two credits.

FRC-499 PROJECT IN CHILDREN'S STUDIES

This one-credit course will serve as a capstone experience for students completing the minor in Children's Studies. Students will work with the director to develop their own individualized project corresponding with their own interests. For instance, students may choose to complete a comprehensive research paper related to childhood. Another option may be completion of an internship experience working with children or with issues pertaining to children. Students may also propose their own idea for a capstone project to the program director. One credit.

COMMUNICATION

Jessica Harvey, *Chairperson*

Melinda Farrington; Annie Laurie Nichols; David Safin

Adjunct Faculty: Jennifer Antkowiak; Jared Bundy;

George Fetkovich; John Rolin; Nathaniel Stoltz;

Stacia Weatherington

Demand for communication professionals continues to increase with the need to produce entertainment, corporate and public service creative campaigns across a variety of media platforms. The field is projected to grow by 4% between now and 2024*.

A Bachelor of Arts in Communication from Saint Vincent College prepares graduates for creative communication and media production in a variety of professions. Our graduates have gone on to work in the fields of print and television journalism, video and television production, marketing, public relations, advertising, documentary film making, non-profit, special events, sports information, web content management, government affairs, social media, sales, fundraising, education, digital marketing, corporate communication, and many other fields.

Communication majors learn and practice the foundations of communicating ethically and effectively through written, oral, and visual communication. Majors learn to monitor, assess, navigate, and create communication in interpersonal settings, within organizations, in public situations, and for mass audiences.

Majors are required to take 27 credits in the communication core and then may choose from a variety of elective courses to further focus on tracks such as children and media, media production, visual communication, or public relations. All majors take a capstone class focused either on media production or creative campaign production.

Faculty partners closely with students to help them discover both professional aptitudes and personal aspirations from selection of minor to internship and job opportunities.

* <https://www.bls.gov/ooh/media-and-communication/home.htm>

COMMUNICATION STUDENT LEARNING OUTCOMES

- Develop competencies in communication technologies.
- Perform theoretically grounded critiques of mass media artifacts that address diversity and incorporate global perspectives.
- Demonstrate effective public speaking skills.
- Analyze issues related to creating ethical messages for diverse audiences.
- Conduct and evaluate communication research.

DIGITAL ART AND MEDIA MAJOR AND MINOR

The Digital Art and Media major is an interdisciplinary program developed by the Fine Arts and Communication faculty. The program grew out of the success of the graphic design major. Courses build practical skills balanced with the history and theory of digital art and media viewed from the liberal arts tradition. All students take a set of shared courses and then choose between two specialized concentrations - graphic design or video and animation. The Digital Art and Media minor serves students from other majors who have an interest in the material. *Program requirements and Fine Arts course descriptions are listed under the Fine Arts Department.* Communication course descriptions are listed under the Department of Communication.

Requirements for a Bachelor of Arts Degree in Communication

(See core curriculum requirements.)

Major Requirements (42 credits):

Communication Core (27 credits):

CA 100	Introduction to Mass Media	3
CA 110	Introduction to Organizational Communication	3
CA 120	Public Presentation	3
CA 130	Introduction to Digital Media	3
CA 140	Introduction to Interpersonal Communication	3
CA 201	Communication Research Methods	3
CA 230	Writing for Media	3
CA 285	Digital Layout and Design	3
CA 440	Criticism of Media and Society	3
<i>Choose four elective courses within the major (12 credits)</i>		
CA 200	Film Studies	3
CA 214	Oral Interpretation	3
CA 218	Intercultural Communication	3
CA 222	Reporting/Broadcasting	3
CA 224	Communication Ethics	3
CA 235	Web Design	3
CA 240	Public Relations Strategies	3
CA 255	Documentary Studies	3
CA 271	Special Topics in Media Studies	3
CA 274	Children's Literature and Film	3
CA 281	Children and the Media	3
CA 301	Sports and Retail Branding	3
CA 309	Digital Culture	3
CA 325	Digital Deliberation and Remix	3
CA 340	Nonprofit Communication	3
CA 345	Television Criticism	3
CA 351	Media Effects	3
CA 355	Advanced Public Relations	3
CA 365	Communication Projects	3
CA 381	Research on Children and the Media	3
CA 550	Communication Internship	1-6

Capstone requirement. Choose 1 course (3 credits)

CA 415	Creative Campaigns	3
CA 435	The Digital Media Professional	3

Minor Requirements (18 credits):

CA 100	Introduction to Mass Media	3
CA 110	Introduction to Organizational Communication	3
CA 120	Public Presentation	3
CA 130	Introduction to Digital Media and two 200-level courses or higher	3

Typical First-Year Schedule

Fall

CA 100-F	Introduction to Mass Media (First-Year Seminar)	4
CA 110	Introduction to Organizational Communication	3
or		
CA 130	Introduction to Digital Media	3
EL 102	Language and Rhetoric	3
PL 101	First Philosophy Elementary (or Intermediate)	3
	Foreign Language	3
Total		16

All students will take one course designated as a First-Year Seminar which will satisfy a core curriculum requirement.

Spring

CA 120	Public Presentation	3
CA 110	Introduction to Organizational Communication	3
or		
CA 130	Introduction to Digital Media	3
TH 119	First Theology	3
MA 104	Elementary Functions Elementary (or Intermediate) Foreign Language	3
Total		15

COMMUNICATION COURSE DESCRIPTIONS

CA-00X COMMUNICATION EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. This course will be automatically added to the student's registration upon submission of the graduation application. Zero credits. Pass/Fail.

CA-100 INTRODUCTION TO MASS MEDIA

This course introduces students to theory, practice, analysis, and ethics of mass communication. Students learn about and discuss the influence and effects of mass media within American culture and the global marketplace. A combination of readings, written assignments, tests, and/or presentations provides students the opportunity to develop foundational knowledge and skills in the area of mass communication. Offered every semester. Periodically offered as a first-year seminar. Three credits.

CA-110 INTRODUCTION TO ORGANIZATIONAL COMMUNICATION

This course introduces students to theoretical approaches that help us understand the ways we communicate within our organizations whether in the workplace, communities of worship, school clubs, or athletic teams. Topics examined include how we communicate through leadership, conflict, decision making, ethnic and cultural diversity, and gender. Students examine historic styles and approaches to institutional organization and management from the industrial revolution through post-modernity. Offered every semester. Periodically offered as a first-year seminar. Three credits.

CA-120 PUBLIC PRESENTATION

Students learn to research, organize, and deliver public presentations with extemporaneous speaking technique. Students present informative, persuasive, group-persuasive, and impromptu speeches within a classroom setting. Students receive written and oral constructive critiques of their speeches based on clear evaluation criteria from their teacher and actively analyze and critique the speeches of their peers. Students learn how to amplify their speech with effective use of a variety of presentational aids. Offered every semester. Three credits.

CA-130 INTRODUCTION TO DIGITAL MEDIA

This course provides students a broad introduction, both theoretical and practical, to the instruments and techniques used in modern visual communication, most notably digital video. Camera work, lighting, sound manipulation, and non-linear editing will be studied and utilized to create multiple short-form video projects

for their portfolio. The skills learned in this introductory course provide a foundation for use in advanced courses and internships. Offered every semester. Three credits.

CA-140 INTRODUCTION TO INTERPERSONAL COMMUNICATION

This course introduces students to interpersonal communication theory and practice in a variety of relationships and settings. Topics include perception, identity, non-verbal communication, conflict, the "darker side" of interpersonal relationships, and family communication. The course will provide students with a more critical understanding of interpersonal communication within their lives, as well as the lives of others. Offered every semester. Three credits.

CA-200 FILM STUDIES

In this course, students will broaden their knowledge of the film industry and its language via a variety of selected readings and screenings. They will explore the history of film as an art form and media industry, and analyze and critique film artifacts using a variety of film theories. Offered every fall semester. Three credits.

CA-201 COMMUNICATION RESEARCH METHODS

This course is designed to introduce students to the investigative tools used by communication scholars and practitioners outside of academia. The class will focus on the concepts and methods by which communication research is designed, conducted, interpreted, and critically evaluated. Along with course readings and tests, students will work on several small-scale research projects and assignments. Offered every spring semester. Three credits.

CA-214 ORAL INTERPRETATION

This course introduces the skills of critical analysis for the purpose of oral interpretive performance. Of equal importance, the course will endeavor to balance written analytic skills with vocal development and practical performance techniques, including nonverbal techniques. Students will explore analysis and performance aspects of speeches, nonfiction, prose, poetry, and dramatic literature to cultivate an appreciation of diverse forms and styles, to develop an ability to analyze written selections for the purpose of oral interpretive performance, and to develop personal vocal and physical techniques to communicate successfully with an audience. The course is designed to be useful for anyone interested in broadcasting, teaching, acting, script reading, or speaking effectively in large or small groups. Three credits.

CA-218 INTERCULTURAL COMMUNICATION

An exploration of the theories and practices of communicating across difference, this course engages issues of what comprises culture, how to identify and navigate cultural norms, verbal and nonverbal variations in communication, and strategies for clear communication across language and cultural differences. Students will learn to identify their own cultural assumptions and will examine the role such assumptions play in communication. Special attention will be given to how to build connections across cultures through effective communication. Three credits.

CA-222 REPORTING/BROADCASTING

The class will focus on writing and reporting well-balanced, comprehensive, and visually compelling stories. Students will research, write, and report stories. Course objectives also include learning how to meet deadlines, learning to be a critical observer and listener, and learning how to consolidate and prioritize large volumes of information into meaningful, relevant, time-sensitive presentations. Three credits.

CA-224 COMMUNICATION ETHICS

In these postmodern times we have an opportunity to take a look at how we communicate and the decisions we make in regard to what we say, how we say it, and the logic used to persuade others. Therefore, we need to identify and understand communication ethics as an entity unto itself. By examining philosophical and fictional readings from modern/postmodern times, as theoretical and narrative examples, we will explore the ethical choices made in regard to the messages conveyed and the media used in both public and private contexts. Three credits.

CA-230 WRITING FOR MEDIA

This course introduces students to various writing styles appropriate for a number of multimedia outlets. Students are trained in basic news and feature writing, as well as blogging and social media messaging. Students read and discuss examples of journalism and literature that exemplify superb storytelling in order to enhance their own writing. The course also develops skills in writing advertising copy, press releases, and broadcast scripts. In addition to practicing several multimedia writing styles, students will learn Associated Press style and related media conventions. Prerequisites: CA 100 and 110. Offered every semester. Three credits.

CA-235 WEB DESIGN

This course will enable the student to utilize current industry software to develop and design websites that thoughtfully engage the web user. Students will learn the basic principles of design and will apply this knowledge when building their own websites. With their web project, students should be able to combine communicative, rhetorical, and visual knowledge with an understanding of navigation, content organization, and the common conventions of the web. Offered every semester. Three credits.

CA-240 PUBLIC RELATIONS STRATEGIES

Students build on the intellectual awareness, professional attitudes, and personal aspirations developed in 100-level communication courses and during internships. Case studies from business, non-profit, and governmental PR campaigns are reviewed for an understanding of the decision-making process within these entities. Research, writing, and presentation of a PR campaign in community, media, and government settings will be discussed. A final PR media kit is prepared by students to add to their portfolio documentation. The course provides a conceptual foundation for CA 415. Prerequisites: CA 100 and 110. Offered fall semester. Three credits.

CA-255 DOCUMENTARY STUDIES

Students will examine camera, lighting, and interviewing techniques used by documentary filmmakers such as Ken Burns, Albert Maysles, D.A. Pennebaker, Errol Morris and Michael Moore in their acclaimed productions. Through readings and screenings, students will gain a greater understanding of how one can use a video camera to communicate a message, and that quality is not based solely on technology but on the informed application of technology. Prerequisite: CA 130. Offered spring semester. Three credits.

CA-271 SPECIAL TOPICS/MEDIA STUDIES

This course offers students the unique opportunity for more advanced study of different topics related to the field of media studies. Topics may include, but are not limited to, television criticism, film studies, media ecology, video gaming, and media literacy. Topics and prerequisites will vary by semester. Three credits.

CA-274 CHILDREN'S LITERATURE AND FILM

This topical literature course explores American representations of childhood first produced in significant novels and later translated to film. Primary texts will include both novels and films (to be read/viewed outside of class) and may include Stevenson's "Treasure Island," Spyri's "Heidi," Burnett's "A Little Princess," Travers' "Mary Poppins," Baum's "Wonderful Wizard of Oz," and Paterson's "Bridge to Terabithia." Exploration of filmmakers' interpretations of these novels will illustrate adults' perceptions of qualities children find valuable in the works. This discussion-oriented class includes readings of primary texts and critical essays as well as film viewing. Assignments include papers, exams, occasional quizzes, and researched term paper. Three credits.

CA-281 CHILDREN AND THE MEDIA

At a very early age, children are inundated with mediated messages that shape their developmental trajectory, relationships with others, and perceptions of the world. As media usage among this age group steadily increases, it is essential that students understand the role of media in the lives of children. This course is designed to introduce students to a variety of issues that relate to children and the media, including the history of children's media, developmental and individual differences of users, cognitive and behavioral media effects (e.g., fear responses, educational learning, body image, aggression), media content developed for children, public policy, and social concerns (e.g., media education). Students will also utilize the archives within the Fred Rogers Center for Early Learning and Children's Media to learn about the valuable work of Fred Rogers, a pioneer in children's educational media. Offered every fall semester. Three credits.

CA-285 DIGITAL LAYOUT AND DESIGN

Students will learn the fundamentals of computer graphics, image correction and enhancement, and electronic print publication. In addition to understanding current software programs within the field, students will be taught the basics of layout and design. This course will also include elements of marketing and advertising. Offered every semester. Three credits.

CA-301 SPORTS AND RETAIL BRANDING AND DESIGN

Design and execute a comprehensive branding and identity system for a sports team, retail or corporate enterprise that includes logo, print collateral, environmental graphics, packaging, and wearables using advanced methods and tools in the Adobe Creative Suite software package (InDesign, Illustrator, Photoshop). Three credits.

CA-309 DIGITAL CULTURE

This course will examine how digital media has affected the way we communicate by studying topics such as 'catfishing,' digital cinema, file sharing, mash-ups, participatory culture, and viral videos. Students will also examine what effects this new type of communication has had on our culture. Working as part of a group, they will develop strategies for creating their own social media campaign. Prerequisites: CA 100 and CA 130. Offered fall semester. Three credits.

CA-325 DIGITAL DELIBERATION AND REMIX

As the public sphere increasingly shifts to the digital, public deliberation has taken up networked spaces. One of the key forms of digital deliberation is the creative remix of ideas, images, and perspectives to foster insight, challenge assumptions, build connections, and present a new point of view. This course engages digital deliberation and through topics such as fake news and citizen journalism; copyright, appropriation, remix, and parody; the economics of attention; collaborative creation and community decision-making; and how to productively argue about things on

the internet. Students in this course will create communication for a variety of social media platforms, engage in digital discussions and collaborative problem-solving, and create visual remixes to creatively weigh in on a social issue. Three credits.

CA-340 NON-PROFIT COMMUNICATION

This course gives students the opportunity to explore public relations and communication in the non-profit arena. Reading materials cover the history of philanthropy in the United States, non-profit marketing, fundraising, understanding the nature of a 501(c)(3), and grant writing. Projects typically include working with a non-profit client to provide them with plans for a special event, a social media campaign, web content or media release, and a grant proposal. When possible, guest speakers from non-profit, foundation, and creative agencies are scheduled so that students can network and learn about careers in the non-profit realm. Prerequisites: CA110 and CA240. Three credits.

CA-345 TELEVISION CRITICISM

This course will provide students with a foundational approach to a variety of forms of television criticism. Through a combination of screenings and readings, numerous video texts spanning the history of television as a medium will be deconstructed and analyzed from multiple perspectives. As a result, students will gain a greater understanding of what distinguishes television from other mass media. Three credits.

CA-350 INDEPENDENT STUDY - COMMUNICATION

Students engage in a research project of particular interest to the student. Advisor and faculty approval is necessary. Juniors and seniors only. Variable credit.

CA-351 MEDIA EFFECTS

This course is designed to introduce students to media effects theories and research. Throughout the semester we will engage in readings, activities, and assignments that focus on the application of media effect theories and concepts. The goals of this course are for students to better understand the role of media in society, as well as the relationship between various media and their audience. Prerequisite: CA 100. Three credits.

CA-355 ADVANCED PUBLIC RELATIONS

Students reinforce concepts and skills from CA 240 by planning and executing a special event as well as the public relations campaign to promote it. Students will also be introduced to crisis communication, spokesperson training, campaign evaluation, and other advanced public relations concepts. Students will create and distribute promotional materials, media releases, social media posts, and possibly earn real media coverage for the event. Prerequisite: CA 240 or permission of the instructor. Three credits.

CA-365 COMMUNICATION PROJECTS

This course is designed for students who are interested in working on research projects that investigate some type of communication phenomena. Working in small groups under the guidance of the course instructor, students will choose a topic of choice, design a research project, and collect and analyze their data. Students might choose to use surveys, interviews, ethnography, focus groups, or content analysis to explore their topic. At the end of the semester, students will be encouraged to submit their project to the Undergraduate division of the Eastern Communication Association national conference and the SVC Undergraduate Research Conference. Prerequisite: CA 201. Three credits.

CA-381 RESEARCH ON CHILDREN AND THE MEDIA

This seminar focuses on research in the area of children and the media and is designed to provide students with an in-depth understanding of children's media use, media content directed toward children, and ways that the media affect youth. Students will also learn different methods for conducting research and program assessment in this area. Course readings include foundational studies and texts that have influenced the field of children and media, as well as readings related to research methodology. Students will be investigating topics of interest through independent research projects throughout the semester. Students will also utilize the archives within the Fred Rogers Center for Early Learning and Children's Media as content for a group research project. Prerequisite: CA 281. Three credits.

CA-415 CREATIVE CAMPAIGNS

In this capstone course students have the opportunity to utilize theory and concepts learned in previous courses to produce a complete Integrated Marketing Communication campaign. Students develop tools for performing primary and secondary research, as well as market, product, and company analyses. Individual and teamwork are explored in this course to prepare students for industry. Prerequisites: CA 120, CA 230, CA 240 or CA 250 and CA 285 is suggested (not required). Seniors only or juniors with permission of instructor. Offered spring semester. Three credits.

CA-435 THE DIGITAL MEDIA PROFESSIONAL

This seminar-style course will allow students to prepare for a future in media. They will create a portfolio or demo reel using personal projects created for previous classes, strengthen their prospects for careers and graduate school, and work as a team to create a final project for a group or organization on campus. Prerequisites: CA 130 and CA 285. Offered spring semester. Seniors only or juniors with permission of instructor. Three credits.

CA-440 CRITICISM OF MEDIA AND SOCIETY

This upper-level seminar for all communication majors serves to enhance students' critical, ethical, and communicative response to the maelstrom of media images and content that continuously confronts us throughout our daily lives. Students employ prominent contemporary rhetorical perspectives to evaluate a variety of mass media (including television, film, novels, advertising, internet, etc.) through in-class presentations, discussions, written assignments, final examination, and a series of critical essays. These activities enrich students' abilities to understand the form, content, and context(s) of any communication, and subsequently, to become more effective and ethical communication professionals. CA juniors and seniors only. Three credits.

CA-550 COMMUNICATION INTERNSHIP

Students work in a supervised and evaluated internship enabling communication majors to enrich their academic experience with involvement in an appropriate career organization or facility. Variable credit.

COMPUTING AND INFORMATION SYSTEMS

William P. Birmingham, *Chairperson*

David E. Carlson, O.S.B.; Stephen Jodis (Dean, Boyer School);

Cynthia J. Martincic ; Anthony G. Serapiglia

Professor Emeritus: Harry L. Morrison

Computing and Information Systems (CIS) is concerned with all aspects of computers and information systems. A successful CIS graduate will earn a bachelor of science degree in one of the following majors: Computer Science, Information Systems, or Cybersecurity. The curriculum is based on the guidelines of prominent professional organizations and combines theory with current in-demand technical skills to prepare graduates for continual learning throughout their careers in this fast-paced field.

The three CIS majors are designed to prepare the student for employment in a number of positions such as software developer, systems analyst, IT professional, or security analyst or to prepare the student for further studies in graduate school.

Internships, real-world projects and working in teams are strongly emphasized. In class, students have the opportunity to do “real world” projects in collaboration with various college divisions, and outside businesses and organizations. By the end of the sophomore year, CIS majors typically have successfully completed several CIS courses, are proficient in at least one object-oriented programming language, and are ready for internship positions. By the end of the senior year, CIS majors have completed a broad range of CIS course work that may include database management, data structures, operating systems, networking, cybersecurity, systems analysis, artificial intelligence, game design, and software engineering. The senior capstone project demonstrates the students’ ability to solve problems in teams and to learn new technologies and skills on their own.

Because technology contributes meaningfully to almost all aspects of science and society, non-majors may be interested in a CIS minor. The three CIS minors are 18 credits each and reflect the three CIS majors of Computer Science, Information Systems, and Cybersecurity.

COMPUTING AND INFORMATION SYSTEMS PROGRAM OBJECTIVES

Within two to five years of graduation, graduates of the Computing and Information Systems Programs will:

- (1) Practice the disciplines of Computer Science, Information Systems, or Cybersecurity in industry or graduate school by employing aspects of their broad knowledge of the field in problem-solving and use of technical skills.
- (2) Conduct themselves in a professional, ethical, and responsible manner with respect and awareness for security, social issues, and responsibilities inherent in the field.

COMPUTING AND INFORMATION SYSTEMS STUDENT LEARNING OUTCOMES FOR ALL MAJORS

1. Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program’s discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program’s discipline.

Additional student outcomes for the Computer Science Major:

6. Apply computer science theory and software development fundamentals to produce computing-based solutions.

Additional student outcomes for the Information Systems Major:

7. Support the delivery, use, and management of information systems within an information systems environment.

Additional student outcomes for the Cybersecurity Systems Major:

8. Apply security principles to maintain operations in the presence of risks and threats.

COMPUTING AND INFORMATION SYSTEMS REQUIREMENTS FOR ALL MAJORS

All Computing and Information Systems majors must fulfill the core curriculum requirements as well as the requirements for one of three majors: Computer Science, Information Systems or Cybersecurity. A minor in another discipline such as Mathematics, Business, Communication, Graphic Design or Criminology, Law and Society is a useful complement to the majors. PL 120 Logic is recommended as one of the courses chosen for the philosophy core curriculum requirement.

Requirements for a Bachelor of Science Degree in Computer Science

Major Requirements (78-79 credits):

The student must complete the requirements listed in the following categories:

1) CIS Core Courses (47-48 credits):

CS 102	Fundamentals of IT and Computing*	3-4
CS 110	C++ Programming I	3
CS 111	C++ Programming II	3
CS 170	Discrete Structures	3
CS 171	Introduction to Computability	3
CS 221	Data Structures	3
CS 225	Cybersecurity	3
CS 292	Engineering and Computing Ethics	2
CS 310	Programming Languages	3
CS 312	Introduction to Algorithms	3
CS 321	Data Communication and Computer Networks	3
CS 330	Operating Systems	3
CS 335	Computer Organization	3
CS 350	Database Concepts and Information Structures	3
CS 355	Software Engineering	3
CS 357	Computing Science Project I	1
CS 358	Computing Science Project II	2

2) CIS Electives (9 credits):

Choose from the following: CS 214, CS 250, CS 255, CS 270, CS 305, CS 315, CS 225, CS 221, CS 322, CS 365, CS 366, CS 367, CS 375

3) CIS Mathematics Requirement (14 credits):

MA 111, 112 Analytical Calculus I and II 8
or
MA 109, 110 Calculus with Applications I and II 8
Either choice gives an 8-credit sequence, but 4 credits can be used to fulfill the core curriculum mathematics requirement.

MA 251 Linear Algebra 3
MA 311 Probability and Structures 3

**All students will take one course designated as a First-Year Seminar which will satisfy a core curriculum requirement.*

4) Science Requirements (8 credits):

Any of the following lecture and lab totaling 8 credits: CH 101, CH 103, CH 102, CH 104, PH 111, PH 113, PH 112, PH 114, BL 150, BL 151, BL 152, BL 153

Requirements for a Bachelor of Science Degree in Information Systems

Major Requirements (63-64 credits):

The student must complete the requirements listed in the following categories:

1) CIS Core Courses (41-42 credits):

CS 102	Fundamentals of IT and Computing*	3-4
CS 110	C++ Programming I	3
CS 111	C++ Programming II	3
CS 170	Discrete Structures	3
CS 221	Data Structures	3
CS 225	Cybersecurity	3
CS 265	Information Systems Management	3
CS 292	Engineering Computer Ethics	2
CS 321	Data Communications and Computer Networks	3
CS 322	Advanced Networking	3
CS 350	Database Concepts and Information Structures	3
CS 351	Information Systems Analysis and Design	3
or		
CS 355	Software Engineering	3
CS 357	Computing Science Project I	1
CS 358	Computing Science Project II	2

2) CIS Electives (9 credits):

Choose from the following: CS 205, CS 214, CS 250, CS 255, CS 221, CS 270, CS 305, CS 315, CS 225, CS 322, CS 365, CS 366, CS 367, CS 375

3) CIS Mathematics Requirement (7 credits):

MA 111	Analytical Calculus I	4
or		
MA 109	Calculus with Applications I	4
<i>These four credits can be used to fulfill the core curriculum mathematics requirement.</i>		
MA 311	Probability and Statistics	3
<i>*All students will take one course designated as a First-Year Seminar which will satisfy a core curriculum requirement.</i>		

4) Required Social Science Courses (6 credits):

This major also requires 6 credits chosen from business and/or economics. These credits can be included under the core curriculum social science requirement.

Requirements for a Bachelor of Science Degree in Cybersecurity

Major Requirements (72-73 credits):

The student must complete the requirements listed in the following categories:

1) CIS Core Courses (53-54 credits):

CS 102	Fundamentals of IT and Computing*	3-4
CS 110	C++ Programming I	3
CS 111	C++ Programming II	3
CS 170	Discrete Structures	3
CS 221	Data Structures	3
CS 225	Cybersecurity	3
CS 265	Information Systems Management	3
CS 292	Engineering Computer Ethics	2
CS 310	Programming Languages	3
CS 321	Data Communications and Computer Networks	3

CS 322	Advanced Networking	3
CS 325	Advanced Topics in Cybersecurity	3
CS 330	Computer Architecture and Operating Systems	3
CS 335	Computer Organization	3
CS 350	Database Concepts and Information Structures	3
CS 351	Information Systems Analysis and Design	3
or		
CS 355	Software Engineering	3
CS 357	Computing Science Project I	1
CS 358	Computing Science Project II	2
CS 375	Applied Cryptography	3

2) CIS Electives (6 credits):

Choose from the following: CS 205, CS 214, CS 250, CS 255, CS 221, CS 270, CS 305, CS 315, CS 225, CS 365, CS 366, CS 367, CS 375

3) CIS Mathematics Requirement (7 credits):

MA 111	Analytical Calculus I	4
or		
MA 109	Calculus with Applications I	4
<i>These four credits can be used to fulfill the core curriculum mathematics requirement.</i>		
MA 311	Probability and Statistics	3
<i>*All students will take one course designated as a First-Year Seminar which will satisfy a core curriculum requirement.</i>		

Typical First-Year Schedule

(Actual schedule may vary based on a student's major, needs and interests.)

Fall Semester

CS 102	Fundamentals of IT and Computing (First-Year Seminar*)	4
CS 110	C++ Programming	3
EL 102	Language and Rhetoric	3
MA 109	Calculus with Applications I	4
or		
MA 111	Analytical Calculus I	4
	Core Curriculum Course	3

**All students will take one course designated as a First-Year Seminar which will satisfy a core curriculum requirement.*

Spring Semester

CS 111	C++ Programming II	3
MA 110	Calculus with Applications II or MA 112 Analytical Calculus II or CS course	3-4
TH 119	First Theology	3
	Core Curriculum	3
PL 101	First Philosophy	3

Computer Science Minor (18 credits):

CS 102	Fundamentals of IT and Computing	3
CS 110	C++ Programming I	3
CS 111	C++ Programming II	3
CS 221	Data Structures	3

Six additional credits in CIS courses from the following list are required (CS 170, CS 171, any 200 or higher. At least one must be 300 or higher). Students should consult with the CIS faculty for assistance in planning the courses for the Computer Science minor.

Information Systems Minor (18 credits):

CS 102	Fundamentals of IT and Computing	3
CS 110	C++ Programming I	3

CS 225	Cybersecurity	3
CS 265	Information Systems Management	3
CS 321	Data Communications and Network Security	3

Three additional credits in CIS courses at the 200 level or above are required. Students should consult with the CIS faculty for assistance in planning the courses for the Information Systems minor.

Cybersecurity Minor (18 credits):

CS 102	Fundamentals of IT and Computing	3
CS 110	C++ Programming I	3
CS 321	Data Communications and Network Security	3
CS 225	Cybersecurity	3
CS 325	Advanced Cybersecurity	3

Three additional credits in CIS courses at the 200 level or above are required. Students should consult with the CIS faculty for assistance in planning the courses for the Cybersecurity minor.

COMPUTING AND INFORMATION SYSTEMS COURSE DESCRIPTIONS

CS-00X COMPUTING EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. Zero credits. Pass/Fail.

CS-102 FUNDAMENTALS OF IT AND COMPUTING

This course is for the student who wishes to be fluent in information technology (IT) and computer concepts. It is an introduction to the wide range of concepts, techniques, and applications of computer and network technologies. Emphasis is on the possibilities and limitations of Computer Science/Information Systems/Information Technology in personal, commercial, and organizational activities. Topics include history of computing, computer types, computer structure and operation, computer languages, human/computer interaction, program development, computer applications, basic networking, security, and computers in society. Offered every semester. Periodically offered as a first-year seminar. Three credits.

CS-110 C++ PROGRAMMING I

An introduction to problem-solving and computer programming. Topics include algorithms, program structure, input/output, modularity and parameters, control structures, data abstraction, arrays, text files, and structured techniques. Offered fall and spring semesters. Three credits.

CS-111 C++ PROGRAMMING II

A study of advanced programming techniques and applications continuing from the point where CS 110 ended. Elementary data structures and associated algorithms are examined. Topics covered include arrays, strings, file processing, classes, stacks, queues, linked lists, and recursion. Prerequisite: CS 110. Offered fall and spring semester. Three credits.

CS-170 DISCRETE STRUCTURES

This course is an introduction to the topics in discrete mathematics that are of particular use in computing. Discrete mathematics is especially concerned with counting techniques and finite or infinite sets of integers (discrete numbers), instead of a continuous range of numbers (such as the real numbers used in calculus). Topics to be covered include logic, sets, functions, simple proof techniques, algorithms, running time analysis, basics of number theory, RSA encryption, graphs and trees, finite state machines, parsing, and grammars. Prerequisite: CS 110. Three credits.

CS-171 INTRODUCTION TO COMPUTABILITY

This course emphasizes the mathematical and theoretical foundations of computer science. The primary topics are computability theory and Turing machines, complexity theory (including the classes P, NP, NP-complete, and NP hard), grammars and parsing, push-down automata, and running time analysis (especially using recurrence relations and generating functions). Important fundamental questions will be answered, such as whether all functions are computable and the existence of unsolvable problems. Also included is an introduction to proofs of program correctness and some running time analysis for algorithms to solve the traveling salesperson problem. Prerequisite: CS 170. Three credits.

CS-205 WEBSITE DESIGN AND PROGRAMMING

This introduction to web development and web programming is intended for both CIS majors and non-majors. Topics include basic aspects of good web design and introductions to technologies that add functionality such as HTML 5, cascading style sheets, JavaScript, the document object model, XML, PHP, Ajax, and the MySQL database. Prerequisite: CS 111. Three credits.

CS-214 INTRODUCTION TO MOBILE APPLICATION DEVELOPMENT

This course will cover the basics of developing applications for mobile platforms such as the Apple iOS and Android devices. Differences between mobile and desktop computing will be discussed. Programming languages for the development of mobile software will be introduced along with integrated development environments such as Xcode for iOS and Eclipse for Android. Students will complete projects in small groups and must pass exams individually. Offered irregular basis. Prerequisite: CS 221. Three credits.

CS-221 DATA STRUCTURES

The study of data structures and associated algorithms is developed in an object-oriented fashion. This course attempts to show the value of object-oriented design. Various implementations of data structures and the efficiency of the associated algorithms are discussed. Topics to be covered include stacks, queues, keyed tables, recursion, linked lists, binary search trees, sorting, searching, and hash functions. Prerequisite: CS 111. Offered fall semester. Three credits.

CS-225 CYBERSECURITY

This course examines both the theory and practices that serve as the foundations of cybersecurity. Utilizing the CISSP Common Body of Knowledge as a foundation, fundamentals of access control, network security, risk management, cryptography, business continuity/disaster planning, environmental security, software development security, and security architecture and design are introduced. Offered fall semester alternate years. Prerequisite: CS 102. Three credits.

CS-226 MOBILE FORENSICS

This course covers areas of mobile forensics, including topics from the legal and technical aspects of the discipline. Software-based forensics tools will be utilized to examine mobile communication and computing devices. Removable storage mediums will also be addressed. A focus will be placed on recovering data that could be used to identify users and their actions. Supporting topics will also cover the basics of the investigative process, issues regarding privacy, incident response policies and procedures, evidence gathering, exhibit handling, and differences between private and criminal investigations. The course will also cover the essentials of mobile phone networks and differences with traditional data/

communication networks. Offered irregular basis. Prerequisite: CS 225. Three credits.

CS-250 USER INTERFACE DESIGN

Good decisions involving the design of a user interface can lead to programs that are easier for end users to execute. Code that is written by programmers who are sensitive to ergonomic issues will execute faster, have fewer errors, require less training time, and ultimately give its end user a greater sense of satisfaction. This course will discuss the many issues involving such human-computer interaction. A group project involving the design or re-design of a site or application will be completed. Prerequisite: CS 111. Offered irregular basis. Three credits.

CS-255 INTRODUCTION TO ARTIFICIAL INTELLIGENCE

This course will present overviews of the roots of artificial intelligence, predicate calculus, search techniques, knowledge representation, knowledge-based problem-solving, the complexity of natural language, and machine learning. In addition to other assignments, students will be required to complete projects using languages and techniques which will be introduced during the course. Offered irregular basis. Prerequisites: CS 170 and CS 221. Three credits.

CS-265 INFORMATION SYSTEMS MANAGEMENT

This course provides an introduction to management information systems, e-commerce, planning, and decision support systems explaining how information is used in organizations, the role of information technology professionals, and how information systems are used to an advantage in business settings. Social and ethical issues related to the design, implementation, and use of information systems will be addressed. Basic information technology project management skills will be covered as well as the issues and challenges involved in managing an information services department and navigating organizational structures in the corporate world. Offered fall semester alternate years. Prerequisite: CS 102. Three credits.

CS-270 INTRODUCTION TO NUMERICAL COMPUTATION

An introduction to the algorithms of scientific computation, and their application to problems in engineering, algebra, and calculus. Topics covered include number representation, error analysis, programming techniques, function evaluation, solutions of nonlinear equations, solutions of linear systems, numerical integration, eigenvalues/eigenvectors, and solutions of differential equations. Prior programming experience is not required. Prerequisite: MA 109 or MA 111. Offered irregular basis. Three credits.

CS-292 ENGINEERING AND COMPUTER ETHICS

Study of ethical issues in the fields of engineering and computing: Topics include safety and liability, professional responsibility to clients and employers, whistle-blowing, codes of ethics, legal issues that relate to privacy, intellectual property rights, and cybercrime. The course also examines issues concerning the use and development of developing and emerging technologies that may involve computers or be used by computing or engineering professionals. Prerequisite: PL 101 or higher. Offered fall semester. Two credits.

CS-305 WEB TECHNOLOGIES

This course focuses on more complex web technologies than are covered in CS 205, especially ASP.NET. The majority of the course involves building an e-commerce site and using webpages as front-ends to server-based databases. Offered irregular basis. Prerequisite: CS 221. Three credits.

CS-310 PROGRAMMING LANGUAGES

This course examines the features, implementation, and design of programming languages. Various high-level programming languages

representing different programming paradigms will be covered. Java will be used as the primary example of an object-oriented programming language. Programming language translation and runtime features, such as storage allocation, will be among the topics that are considered. Prerequisites: CS 170 and CS 335. Offered spring semester. Three credits.

CS-312 INTRODUCTION TO ALGORITHMS

This course covers the design, operation, and running time analysis of a wide array of algorithms. This includes the study of algorithms that follow these paradigms: divide-and-conquer, dynamic programming, randomized algorithms, and greedy algorithms. Algorithms examined include many for searching and sorting; insertions, lookups, and deletions in various data structures and common graph algorithms. Prerequisite: CS 221 and CS 171. Offered fall semester alternate years. Three credits.

CS-315 SERVER-SIDE PROGRAMMING

This course concentrates on designing, writing, installing, and configuring software for Linux and Windows servers. Possible languages to be used include C++, PowerShell, Node.js, and bash. Server-based software projects often provide a service that many users can access simultaneously, often over the network. Also covered is the use of git and GitHub in managing projects and installing software. Prerequisite: CS 221. Offered irregular basis. Three credits.

CS-321 DATA COMMUNICATIONS AND COMPUTER NETWORKS

This course covers the major areas of data communications and networking. It uses the OSI layered approach and focuses especially on the TCP/IP protocols and the internet. LAN technologies and the configuration of routers and switches are also included. Offered fall semester alternate years. Prerequisite: CS 225. Three credits.

CS-322 ADVANCED NETWORKING

This course will address computer networking beyond the OSI model framework. Current industry techniques and technologies are explored in areas of voice, mobile, wireless, and remote technologies. Issues in system security, performance, and maintenance will also be examined. Current research and evolving trends will be discussed to highlight the ever-changing nature of the field and to identify the skills necessary in evaluating new technologies. Students will be expected to build functioning networks during hands-on activities beginning with basic wiring through router and VPN configurations. Offered spring semesters alternate years. Prerequisite: CS 321. Three credits.

CS-325 ADVANCED TOPICS IN CYBERSECURITY

This course explores advanced topics in cybersecurity such as computer forensics, malware analysis, secure coding, and penetration testing of web applications and networks. Building upon the theoretical foundations of CS225, students will participate in multiple lab and practical exercises to gain experience with current field techniques. The course requires a basic knowledge of cybersecurity issues, networking, and programming background. Offered spring semester alternate years. Prerequisite: CS 225. Three credits.

CS-330 OPERATING SYSTEMS

This course covers basic computer hardware, processes, CPU scheduling, virtual memory and main memory management, caching, interrupts, processes and threads, system calls, synchronization, I/O, deadlock, disk scheduling, real time scheduling, operating systems security, file systems, interprocess communications, multiprocessor systems, storage management, virtualization, the user interface, and performance. In addition, it uses Linux as a case study, emphasizing

system administration tasks, Linux utilities, pipes, and bash scripts. Prerequisite: CS 335. Offered spring semester. Three credits.

CS-335 COMPUTER ORGANIZATION

This course introduces fundamental concepts of how computers process instructions and data. Hardware organization, instruction and addressing mode processing, basic digital circuits and computer arithmetic, and translation of high-level language constructs to assembly code are discussed. Offered fall semester. Prerequisite: CS 221. Three credits.

CS-350 DATABASE CONCEPTS AND INFORMATION STRUCTURES

This is a first course in modeling complex organizations of data. It includes a review of logical file structures and access methods. Information structures and databases are studied, with detailed work in personal and enterprise database systems. Prerequisite: CS 221. Offered fall semester. Three credits.

CS-351 INFORMATION SYSTEMS ANALYSIS AND DESIGN

An investigation of the discipline of systems analysis in relation to the information system life cycle. Structured and object-oriented techniques of analysis and design applicable to current system documentation and the development of general systems solutions are presented. Topics include process and data flows, I/O designs, and systems modeling. Problem-solving and communication skills employed in the transition from analysis to design are stressed. Students who take this course are not eligible to take CS-355. Cannot substitute CS 355 Software Engineering. Prerequisite: CS 221. Offered spring semester alternate years (spring 2019). Three credits.

CS-355 SOFTWARE ENGINEERING

This course will cover methodologies for program construction which will allow software of high quality to be constructed, where high quality software is defined as software which is reliable and reasonably easy to understand, modify, and maintain. The course covers the software development life cycle, from requirements (elicitation, modeling, analysis, and specification), to design specifications, to implementation, testing, and delivery. Also included are project management, project documentation, and the development of communications skills through written documentation. Cannot substitute for CS 351 Information Systems Analysis and Design. Prerequisite: CS 221. Offered spring semester alternate years. Three credits.

CS-357 COMPUTING SCIENCE PROJECT I

Using principles and techniques developed in CS 351 Systems Analysis and Design or CS 355 Software Engineering, a capstone senior project is researched, designed, documented, implemented, and tested over two semesters. Projects are done in teams. Projects may be done for actual clients. Prerequisite: CS 351 or CS 355. Offered fall semester. One credits.

CS-358 COMPUTING SCIENCE PROJECT II

Using a design developed in CS 357 Computing Science Project I, a software system is implemented and tested. Projects are done in teams. Projects may be done for actual clients. Prerequisite: CS 357. Offered spring semester. Two credits.

CS-365 COMPUTER GAME DESIGN AND DEVELOPMENT

This course covers concepts and methods for the design and development of computer games. Topics include: graphics and animation, sprites, software design, game design, user interfaces, and game development environments. Prerequisite: CS 221. Three credits.

CS-366 ADVANCED COMPUTER GAME DESIGN AND DEVELOPMENT

This course is a continuation of CS 365 and is focused on the development of 3D games and other advanced game programming techniques. Prerequisite: CS 365. Three credits.

CS-367 MULTIPLAYER-NETWORKED GAMES

This course is a continuation of CS 366 and is focused on the development of multiplayer, networked games, with emphasis on both hardware and software design issues. The course will explore sophisticated programming techniques and advanced algorithms. Prerequisite: CS 365. Three credits.

CS-375 APPLIED CRYPTOGRAPHY

This course presents sufficient number theory and algebra to describe common cryptographic systems. Course topics include the German Enigma machine, DES, the RSA cryptosystem, discrete logarithms, and the ElGamal cryptosystem. Students will use computer software to solve cryptography problems and will write their own software to handle some types of cryptography, cryptanalysis, etc. Mathematica may be used to solve some of the problems. Students will be asked to implement several cryptographic algorithms using C++ in Linux with the aid of the BigInt package. Some of these algorithm implementations might be done as group projects. Common applications of cryptography such as key distribution, digital signatures, and cryptocurrencies will also be studied, as well as some of the methods of attacking cryptosystems. Prerequisites: CS 170 and CS 221. Offered fall semester alternate years. Three credits.

CS-450 INDEPENDENT STUDY—COMPUTING

An independent study may be possible by arrangement with an individual faculty member. Course may be repeated with a different topic. Variable credit.

CS-550 COMPUTING INTERNSHIP

An internship involves practical work experience, typically with a local business. Course may be repeated. Variable credit. Credit cannot be applied to CIS electives. May be done for no credit.

CRIMINOLOGY, LAW AND SOCIETY

Bruce A. Antkowiak, *Chairperson*
Sarah Daly, Kayla Jachimowski; Eric Kocian

Adjunct Faculty: Paul Burkey; Adam Cogan; Michael Kuhar;
Anthony Mucha; Wayne McGrew; Michael Taylor;
Elizabeth Ventura; James Wilson

The Criminology Department at Saint Vincent College is dedicated to providing students with a rigorous liberal arts curriculum that will prepare them for a wide variety of educational and career options upon their graduation.

The curriculum of the department insists that the students become familiar with both the theory and the practice of the criminal law and the larger social, economic, and psychological forces that affect decision-making in the criminal justice system at the state and federal level. Since 2011 when the department was formed, its graduates have succeeded in law schools and graduate schools in Criminology and national security studies. Other graduates have gone directly into positions in the criminal justice system in organizations such as the Pennsylvania State Police, various probation and parole positions, juvenile counseling careers and related law enforcement posts.

The Department recognizes that every person working within the criminal justice system in the coming decades must appreciate the broader dimension of issues impacting the system and, by that appreciation, to utilize his or her depth of knowledge to effect the changes needed in order to produce for society a just and effective process within the framework of the Constitution.

Students in this major are expected to work at a master's level of proficiency by the time of their senior year. A master's program is an option for qualified students.

Students in the major have enjoyed a wide variety of internships with legal, judicial and law enforcement organizations. The department encourages students to undertake these internships at a point at which they may relate the practicalities of those internships to the academic foundation their course work has afforded them.

The department also oversees four minors, one under the general umbrella of forensics and another in global security, and allows for a concentration in legal studies.

The Forensics minor allows a student to concentrate in natural sciences, computer security or financial investigations. The minor allows students to appreciate the contributions that experts in these fields can make to the efforts of law enforcement to solve crimes by properly identifying the perpetrators regardless of how sophisticated the offenses may be.

The Global Security minor seeks to give students a true liberal arts perspective on the critical decision-making done by the intelligence community in matters that often define our national character and values.

Finally, the major gives students the option to concentrate on Legal Studies, taking advantage of many outstanding courses on various aspects of the law taught by the department and related departments in the school. Those who undertake this concentration will be significantly advanced in their efforts to obtain a law degree and become participating members of the justice system at that critical level.

Throughout all aspects of the Criminology curriculum, the ethical dimensions of the issues professionals face are emphasized. A concentrated effort is also made to improve the communication skills of each student so that he or she may write and advocate effectively in positions she or he will undertake in a system which is based on an adversarial model. The department welcomes any student willing to accept the challenge of this study with the hope of someday becoming a champion of justice.

CRIMINOLOGY STUDENT LEARNING OUTCOMES

The Student Learning Objectives of the major are:

1. Administration of Justice - Differentiate among the components of the criminal justice system, contrasting the role of legislatures, courts, police, and system administrators, explaining the different processes used for the adjudication of juveniles as compared with adult offenders.

2. Corrections - Explain current correction practices in terms of their historical antecedents and the legal and political influences which affect them; relate incarceration to alternative means of treatment of offenders in community-based mental health and other venues.

3. Criminological Theories - Identify the major criminological theories, apply them to specific types of crimes and illustrate how those theories explain the interaction between offender and victim behavior in each model.

4. Law Adjudication - Analyze the structure of criminal law, its Constitutional basis, the relative burdens of proof, the importance of elemental analysis of criminal statutes, and demonstrate the intertwining of Constitutional criminal procedure in the decision-making process of the courts at the focal point of the system.

5. Research and Analytical Methods - Contrast quantitative and qualitative methodology and synthesize current research to inform decision-making with respect to best practices in criminology and the criminal justice system.

6. Development of Skills - Generate the capacity to critically analyze different points of view, create effective arguments that are empirically supported, express those arguments in clear and concise terms, apply modern technological skills in aid of such reasoning and analysis, and demonstrate a sensitivity to the ethical issues that underlie each phase of the criminal process.

Requirements for Bachelor of Arts degree in Criminology, Law, and Society

B.A. Criminology, Law, and Society Requirements: (48 credits)

CLS 101	Introduction to Criminology	3
CLS 160	Research Writing and Advocacy ¹	3
CLS 215	Juvenile Justice	3
CLS 227	Criminal Law and Process	3
CLS 230	Constitutional Criminal Procedure	3
CLS 245	Corrections, Probation, and Parole	3
CLS 315	Criminological Statistics ²	3
CLS 504	Ethical Decisions and Dilemmas in Criminal Justice	3
CLS 510	Criminological Theories	3
CLS 590	Capstone Project	3
PS 100	Principles of American Politics ³	3

¹ This is a required course for all freshman students beginning 2018 and must be completed by the end of their sophomore year.

² PY 203 or BA 350 may be substituted but majors are strongly encouraged to take Criminological Statistics.

³ This is a required course for all freshman students as of the fall of 2018.

Five of the following (15 credits)

CLS 155	American Judicial System	3
CLS 205	Criminal Trial Evidence	3
CLS 210	Civil Rights Law	3
CLS 220	Criminology of Race	3
CLS 235	Etiology of Mass Violence	3
CLS 250	The Police: A History	3

CLS 266	The Death Penalty	3
CLS 269	Agency Management	3
CLS 270	21st-Century Issues in Criminology	3
CLS 275	Patterns of Criminal Behavior	3
CLS 290	Mental Illness and the Criminal Process	3
CLS 305	Violence and Victimology	3
CLS 310	School Violence/Origins and Strategies	3
CLS 316	Strategic/Tactical Leadership	3
CLS 320	White Collar Crime	3
CLS 340	Principles of Homeland Security	3
CLS 344	Financing Criminal Organizations	3
CLS 350	Criminology Independent Study	3
CLS 355	Sentencing	3
CLS 356	Quantitative Research Methods ⁴	3
CLS 360	Prediction and Prevention of Criminal Conduct	3
CLS 361	Urban Street Gang Prosecution	3
CLS 367	Gender and Crime	3
CLS 375	International Criminal Law	3
CLS 376	Federal Criminal Law	3
CLS 377	Addiction and Crime	3
CLS 380	Criminology of Firearms	3
CLS 385	Organized Crime in America	3
CLS 399	Criminal Analytics	3
CLS 400	Race and Justice	3
CLS 415	International Criminal Systems	3
CLS 420	Criminology of Hate	3
CLS 425	Survey of Cybercrime	3
CLS 430	Public Sector Management	3
CLS 440	Constitutional Litigation and Analysis	3
CLS 485	Crime Mapping - GIS	3
CLS 550	Internship	3
PS 341	Global Terrorism	3
SO 200	Race and Ethnicity	3
SO 204	Deviance	3
SO 235	Inequality and Social Problems	3

Internships with various social service/criminal justice agencies are available for qualified students.

⁴This course is highly recommended for those interested in graduate school.

Concentration: Legal Studies

Many students adopting the CLS major are interested in pursuing a career in law school. If this is the case, a student may, at the end of his or her freshman year, declare a concentration in legal studies within the CLS major. To satisfy the requirements of the concentration, the student must take four of the following CLS courses in addition to the core requirements of the CLS major. These courses may be used to satisfy the 12 credits of CLS electives required of each major. While students may take this concentration, they are strongly encouraged to take the Legal Studies minor otherwise set forth in this Bulletin.

CLS 150	Criminal Trial Evidence
CLS 320	White Collar Crime
CLS 344	Financing Criminal Organizations
CLS 355	Sentencing
CLS 375	International Criminal Law
CLS 376	Federal Criminal Law
CLS 440	Advanced Constitutional Law

Additional recommended courses:

PS 339,369	Constitutional Law I and II
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PS 375	International Law
GCLS 660	Professional Seminar
PS 390	Environmental Law
BA 340	Business Law
EL 108	Technical Writing
EL 109	Business Communications

Requirements for a Minor in Criminology, Law, and Society (18 credits):

Required courses:

CLS 101	Introduction to Criminology	3
CLS 215	Juvenile Justice	3
CLS 227	Criminal Law and Process	3
CLS 504	Ethical Decisions and Dilemmas in Criminal Justice	3

One of the following courses:

CLS 275	Patterns of Criminal Behavior	3
CLS 360	Prediction and Prevention of Criminal Conduct	3
SO 240	Deviance	3

One of the following electives:

CLS 230	Constitutional Criminal Procedure	3
	Any 300 or 400 level CLS course	3

Requirements for a Minor in Forensic Studies - Natural Science (18 credits):

The following courses are required:

CLS 205	Criminal Trial Evidence	3
CLS 227	Criminal Law and Process	3
NSCI 300*	Criminalistics	3

Choose 3 credits (selected course may not count for major or core):

CLS 230	Constitutional Criminal Procedure	3
CLS 305	Violence and Victimology	3
CLS 340	Principles of Homeland Security	3
CLS 377	Addiction and Crime	3

Choose 6 or 7 credits from the following (selected courses may not count for major or core; one lecture/lab combination required; NSCI courses are not recommended for physics, chemistry, biology, or biochemistry majors):

NSCI 130/131	Introduction to Physics and Lab	4
NSCI 210/211	Chemistry of Crime and Lab	4
NSCI 200	All About Drugs	4
NSCI 260	Biotechnology: How Do They Do It?	4
NSCI 235	Human Biology and Laboratory	4
NSCI 230/231	Genes, Cells and Computers and Lab	4
BL 214/215**	Molecular Genetics and Lab	4
CH 252/253	Nucleic Acids and Membranes and Lab	4
CH 216/218**	Quantitative Analysis and Lab	4
BL 216/217**	Biotechnology and Lab	4
BL 150/151	General Biology I and Lab	4
ES 220	Introduction to GIS	3
CH 245**	Chemical and Forensic Analysis	2

* Does not count toward core.

** These courses have prerequisites that are not part of the minor.

Requirements for a Minor in Forensic Studies - Computer Security (18 credits):

Choose two of the following CLS courses:**

CLS 205	Criminal Trial Evidence	3
CLS 227	Criminal Law and Process	3

CLS 230	Constitutional Criminal Procedure	3
CLS 320	White Collar Crime	3
The following four CS courses:		
CS 102	Fundamentals of IT and Computing	3
CS 225	Computer Security	3
CS 321	Data Communication and Computer Networks	3
CS 325	Advanced Topics in Security	3

***CS Majors must take three of these four CLS courses. CLS Majors must take CLS 205 and CLS 320 for the minor, and cannot use these courses to count toward the major (CLS students must choose two other courses for their CLS major electives).*

Requirements for a Minor in Forensic Studies - Financial Investigations (18 credits):

Choose two of the following CLS courses:

CLS 227	Criminal Law and Process	3
CLS 320	White Collar Crime	3
CLS 376	Federal Criminal Law	3

The following four Business Administration courses:**

BA 200***	Intermediate Accounting I	3
BA 201	Intermediate Accounting II	3
BA 405	Auditing	3
BA 406	Forensic Auditing	3

** Accounting majors must take all three CLS courses listed. CLS majors must take 320 and 376 and choose one other course from CLS electives to count toward the CLS major.*

*** Students must choose between an accounting minor or a Forensic Studies – Financial Investigations minor. They cannot have both appear on their transcript.*

**** Prerequisites: BA 100, BA 101*

Requirements for a Minor in Global Security

The course of study leading to the award of a minor will require the student to successfully complete a series of upper level courses totaling 18 credits.

The student will select three courses from each of the two groups of courses below. The courses in Group A provide an important philosophical, theological, and historical context for issues involving global security. The courses in Group B address contemporary, policy-based considerations affecting the formulation of strategies for global security in the current context.

A student required to take any of these courses to fulfill a requirement for their major may not also count the course toward completion of the minor. No more than two courses may be taken from any one major field.

Group A:

HI 209	Issues in Contemporary East Asia	3
HI 228	20th-Century America	3
HI 233	History of Latin America	3
HI 280	Islamic Civilization I	3
HI 281	Islamic Civilization II	3
PL 215	Ethics	3
PL 271	Catholic Political Thought	3
PL 303	Eastern Thought	3
TH 255	Religion and Politics	3
TH 380	World Religions	3

Group B:

PS 242	International Politics	3
PS 343	Comparative Politics	3
PS 375	International Law	3
PS 341	Global Terrorism	3
CLS 320	White Collar Crime	3

CLS 340	Homeland Security	3
CLS 375		
/GCLS 660	International Criminal Law	3
CLS 376	Federal Criminal Law	3
CLS 344		
/GCLS 675	Financing of Criminal Organizations	3
One of the following:		
CS 225	Cybersecurity	3
CS 321	Data Communications and Networking Security	3
CS 325	Advanced Topics in Cybersecurity	3

Teacher Preparation

Criminology, Law, and Society majors interested in obtaining a teaching certificate should consult the requirements of the Education Department of Saint Vincent College in the *Bulletin*.

Typical First-Year Schedule Criminology, Law, and Society*

Fall Semester*

CLS 101	Introduction to Criminology	3
EL 102	Language and Rhetoric	
or		
TH 119	First Theology Modern or Classical Language	3 3 or 4
SO 101	Introduction to Sociology	
or		
PY 100	Introduction to Psychological Science History or Natural Science Core	3 3 or 4

Spring Semester

CLS	Elective	3
EL 102	Language and Rhetoric	
or		
TH 119	First Theology Modern or Classical Language	3 3 or 4
SO 101	Introduction to Sociology or	
PY 100	Introduction to Psychological Science	3

** One course must be a First-Year Seminar (4 cr.).*

** Actual schedule will depend on student's prior preparation and course availability. All students will take one course designated as a First-Year Seminar which will satisfy a core curriculum requirement.*

CRIMINOLOGY, LAW, AND SOCIETY COURSE DESCRIPTIONS

CLS-00X CRIMINOLOGY EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. Zero credits. Pass/Fail.

CLS-101 INTRODUCTION TO CRIMINOLOGY

Study of the contemporary criminal justice system, major systems of social control, and their policies and practices; victimology; juvenile justice; comparative criminal justice of the field. Offered every semester. Periodically offered as a first-year seminar. Three credits.

CLS-155 AMERICAN JUDICIAL SYSTEM

This course examines the historical background, the traditions, and the legal principles that underlie the Courts as an integral component of the American System of Criminal Justice. Both differences and similarities inherent within the State and Federal Court processes will be analyzed, and the procedures through which the Criminal Courts uphold the basic rights and liberties of

all U.S. citizens, both victims and the accused, will be explored. The dynamics of the judiciary will be considered through the examination of the critical foundations of the judicial process. A primary focus will be placed upon understanding the respective roles played by the Judges, Prosecuting Attorneys, Defense Counsel, Police and Probation Officers, and other Court-related personnel in the criminal court process. Three credits.

CLS-160 RESEARCH WRITING AND ADVOCACY

This course introduces students to the skills necessary in any field of Criminology. Effective research is a necessary skill of anyone who seeks to improve any aspect of the Criminal System and make it a more effective instrument of justice. Writing skills in this area are critical since decision makers most often rely upon well-constructed, authoritative, and concise reports to guide policy decisions in these critical areas. And in virtually every area of Criminology, individuals ultimately become advocates either for individuals or for important policy initiatives. Thus, understanding the art of advocacy is critical. This course will assist you in developing skills in all of these areas. Beginning Fall 2018, this course must be completed by the end of sophomore year. Three credits.

CLS-205 CRIMINAL TRIAL EVIDENCE

Evidence uncovered by the finest detective or the most sophisticated CSI will be of little use to a prosecutor if it is not admissible in the trial of a criminal case or does not satisfy the burden of proof the law imposes. This course explores the basics of the language of a criminal trial: the rules and principles of evidence. What is "relevant?" When will "relevant" evidence be excluded by the rules of hearsay or the defendant's right to confront witnesses? The nature and permissible scope of expert testimony will be an important aspect of the course. How does forensic science translate into court testimony? What other subjects of expert testimony do/should courts recognize? Finally, what is the meaning of "proof beyond a reasonable doubt?" Why are jury verdicts in some celebrated cases only understandable by reference to this basic principle of the criminal process? Students will engage in trial simulations to illustrate various points of the course material. Three credits.

CLS-210 CIVIL RIGHTS LAW

The criminal courts are not the exclusive place in which issues regarding search and seizure, the use of excessive force, or the criminal responsibility of individuals are litigated. Under the Civil Rights Laws of the United States, private individuals are given the opportunity to bring civil actions in an effort to protect the exercise of their constitutional rights. These suits can affect the criminal justice system both directly and indirectly and are an integral part of the landscape for law enforcement activities on both the state and federal level. This course will examine the civil rights laws of the United States, how they intertwine with the criminal justice system, and provide the students with an expanded understanding of the different ways in which the legal system of the United States treats these critical constitutional issues. Three credits.

CLS-215 JUVENILE JUSTICE

Study of causative factors of juvenile delinquency and the treatment of juvenile offenders. Specific topics include gang subcultures, peer pressure, juvenile offenses, and the juvenile justice system. Three credits.

CLS-220 THE CRIMINOLOGY OF RACE

This course utilizes theoretical and empirical readings to examine race, crime, and criminal justice. While it examines racial and ethnic relations in society, it focuses on ways in which race may affect decisions to commit crime, policing and minority communities, and

the disparities in the justice system. Further, the course will address issues in court proceedings, sentencing, and corrections. By evaluating research and discussing modern controversial issues, students will have the opportunity to create informed decisions, identify areas most profoundly affected by racial inequities, and outline solutions and practices designed to emphasize equality and justice. Offered every semester. Periodically offered as an honors course. Three credits.

CLS-227 CRIMINAL LAW AND PROCESS

The primary objective of this course is to present to the student basic principles and methods of the American Criminal Justice System. It will discuss aspects of crime, means of social control, law enforcement, and the operation of criminal courts. (Formerly PS 227) Three credits.

CLS-230 CONSTITUTIONAL CRIMINAL PROCEDURE

This course will engage the student in a critical analysis of the limitations imposed on the gathering and presentation of evidence in criminal cases that are imposed by 4th, 5th, and 6th Amendments to the United States Constitution and parallel provisions of the State Constitution. It will involve an exploration of the origins and evolution of the exclusionary rule and the particular grounds for exclusion mandated by application of those Constitutional principles. The course will also seek to give the student a practical perspective on the overall process of a criminal case from pre-trial litigation through final appeal, including the process under which the law permits the government to seek the imposition of the death penalty and the limitations imposed upon that by the 8th Amendment. Three credits.

CLS-235 ETIOLOGY OF MASS VIOLENCE

This course is designed to examine a variety of forms of mass violence, including serial, rampage, and spree murders. The course material will also discuss familicide, genocide, terrorist attacks, and systemic victimization. Rooted in theory, this class aims to understand personal, societal, and cultural factors that contribute to mass violence. In addition, the social and policy responses to mass violence and public response to such events will be covered. In order to understand mass violence in a criminal justice context, it also becomes necessary to study rates of occurrence, historical events, and prior research (including methodology and limitations). While the course focuses on mass violence in the United States, other international mass violence cases will be discussed briefly. Three credits.

CLS-245 CORRECTIONS, PROBATION, AND PAROLE

Study of the history, theory, practice and legal environment of incarceration, diversion, community-based correction, and treatment of offenders. Three credits.

CLS-250 THE POLICE: A HISTORY

This course describes historical events that shaped practices in policing that exist in American jurisdictions today. It is designed to show how police interaction and public opinion changed policing strategies. This course will also show how changes in Supreme Court rulings on criminal procedure changed the type of investigative work performed by police agencies. Three credits.

CLS-266 THE DEATH PENALTY

This course is meant to give the students an in-depth insight into the phenomenon of capital punishment throughout history and as it is specifically applied today in the United States. The material will be presented from three distinct approaches: the sociological/criminological background and theory of the death penalty, the penological dimension of the carrying out of executions by prison officials and the differing challenges that present from administering life sentences without parole, and the legal framework in which the death penalty may be applied as determined by the courts and

legislature. The course will be team taught by the faculty of the CLS Program whose specialized interests correspond to the perspectives the course will present. Course materials will be distributed online. Extensive class discussion is anticipated. Three credits.

CLS-269 AGENCY MANAGEMENT

An analysis of the administration and management of criminal justice organizations to include their structure and environment, problems of communication, motivation of personnel, job design, leadership, personnel supervision and evaluation, occupational socialization, organizational conflict, decision-making, organizational effectiveness, and changes and innovation in administration and management. Three credits.

CLS-270 21st-CENTURY ISSUES IN CRIMINOLOGY

Criminology is a discipline that covers a wide variety of societal areas intertwined with the criminal justice system. Those areas include the kinds of human conduct that should be criminalized, the policy considerations in the enforcement of criminal laws, limits on how the investigation of those crimes should take place, terrorism, violence, and victimization, police accountability, race relations, mental health, homeland security, narcotics trafficking and addiction, the impact of new technologies, gangs and organized criminal activity, mass violence, and a multitude of other issues. This course will explore a range of these topics, giving the student the opportunity to perceive the vastness and intricacy of the problems facing those who try to achieve a just system consistent with the protection of the innocent and the fair treatment of all who are affected when criminal activity occurs. The course is of particular value to students in the early stages of their work in criminology so as to give them a perspective on these larger topics enabling them to focus their research efforts as they progress through the curriculum. Three credits.

CLS-275 PATTERNS OF CRIMINAL BEHAVIOR

The course is meant to correlate the basic principles of psychology with conduct manifesting itself in criminal violations. A full understanding of the various pathologies contributing to the diagnosis of behavior commonly reflected in criminal conduct will be developed. Techniques for assessing such behavior and the standards for characterizing it are to be studied as a preliminary to the sort of psychological profiling to be discussed in more advanced courses. Three credits.

CLS-290 MENTAL ILLNESS AND THE CRIMINAL PROCESS

This course provides an overview of mentally disordered individuals' involvement in the criminal justice system and a historical perspective on how we have arrived at this point. Topics include the development of mental health practice and policies within the scope of the three main components of the criminal justice system, policing interventions, the insanity defense, violence and mental illness, and diversion strategies. Three credits.

CLS-305 VIOLENCE AND VICTIMOLOGY

The course introduces the leading theories and research in the area of violent criminal behavior and victimization. A special emphasis is on violent patterns and victimization over time, victim-offender relationships, and the experience of victims in the criminal justice system. Addresses major violent crimes such as murder, rape, robbery, assault, and serial killing. Three credits.

CLS-310 SCHOOL VIOLENCE/ORIGINS AND STRATEGIES

This course is designed to provide students with an overview of the theory, practices, problems, and evaluations of issues surrounding youth and school violence. With a foundation in psychological and developmental theory moving to practical application and analysis,

the course aims to outline the major causes of and responses to violence in schools. More importantly, the course examines both small- and large-scale school violence and their effects on students, teachers, and the school community. Students will engage in active discussions and create evidence-based practice and strategies that can be applied to real-world scenarios. Three credits.

CLS-315 CRIMINOLOGICAL STATISTICS

This course is designed to introduce students to principles of quantitative strategies in criminology. Using statistical software, students will engage in basic data analysis, including univariate and bivariate measures, correlation, t-tests, analysis of variance, regression, and related measures. Emphasis will be placed on how to use, interpret, and understand some of the techniques used by social science researchers and practitioners within the criminal justice system. Three credits.

CLS-316 STRATEGIC/TACTICAL LEADERSHIP

This course will focus on developing leadership and supervision skills utilizing the military leadership theories of Sun Tzu, Antoine Jomini, and the U.S. Army Field Manual 3-0, C1 (USAFM). Students are exposed to 25 centuries of military thought. While military leadership is highlighted, the principles developed in this course are directly applicable to the practice of law, implementation of government policy, and business organizations. This course will focus on planning, strategy, tactics, and operational aspects of leadership in government, law, and business. Eight military leadership principles are common among Sun Tzu, Antoine Jomini, and the USAFM, and these shared constructs form the basis for which leadership theory will be explored. Ethical dilemmas, current events, battles, and business/higher education scenarios will be used to help students understand and improve their leadership skills. Three credits.

CLS-320 WHITE COLLAR CRIME

This course considers crimes committed by corporations as well as white-collar criminals: how such crimes are defined; who commits or is victimized by them; which moral, ethical, legal, and social



contexts promote them; and how society responds. Procedural and policy considerations in the investigation and enforcement of relevant statutes will also be covered, including the concept of legal privilege, the role of the grand jury and other pretrial processes, evidentiary questions, litigation strategies, and potential sanctions and other punishments. Prerequisite: CLS 101. Three credits.

CLS-340 PRINCIPLES OF HOMELAND SECURITY

Students will gain an understanding of homeland security by analyzing the various security principles and policies that establish a foundation upon which to organize U.S. security efforts as a nation. Students will study how the national strategy aligns and focuses homeland security functions within critical areas such as: (1) intelligence and warning, border and transportation security, domestic terrorism; (2) protecting critical infrastructure and defending against catastrophic terrorism; and (3) emergency preparedness and consequence management. The first area focuses primarily on preventing terrorist attacks, the second area on reducing the nation's vulnerabilities, and the third on minimizing the damage and recovery from the aftermath of terrorist attacks. Prerequisite: CLS 101. Three credits.

CLS-344 FINANCING CRIMINAL ORGANIZATIONS

Large scale international criminal organizations require financing in the same way as any substantial legitimate business activity. This course is designed to analyze the ways in which large scale criminal organizations finance themselves, try to hide their sources of income and assets, and convert those assets into the means through which they continue to carry out their criminal activities. Consideration of law enforcement strategies to interdict and disrupt those financing channels will be considered. Three credits.

CLS-350 CRIMINOLOGY INDEPENDENT STUDY

Independent investigation and research into a special topic for selected students. Topics are determined by both student and professor. Prerequisite: permission of faculty member and departmental chair. May be repeated. Variable credit.

CLS-355 SENTENCING

A true understanding of the criminal justice system requires the recognition that the vast majority of cases that enter the system are resolved without a trial. A huge percentage of the cases are either diverted into alternative, rehabilitative programs or are the subject of guilty pleas and the imposition of a sentence. The matter of sentencing is thus a focal point for much of the theory and practice of the criminal law. This course will discuss the process of sentencing, the various goals that sentencing is supposed to achieve, the interplay between courts and legislatures in the sentencing process, and the various schemes that federal and state systems use to achieve some predictability and consistency in the sentencing process. Consideration will be given to the phenomenon of mandatory minimum sentencing as well as the guideline schemes that are used in various jurisdictions to direct (and sometimes constrain) the traditional discretion of the trial judge in fixing a just sentence. Three credits.

CLS-356 QUANTITATIVE RESEARCH METHODS

This course is an overview of research methodology in the social sciences. The general subject areas include research design, sampling, quantitative and qualitative methods, ethical issues, and computer-assisted analysis of results using SPSS. The emphasis will be on quantitative methods. Occasional offering. Three credits.

CLS-360 PREDICTION AND PREVENTION OF CRIMINAL CONDUCT

This course presents an analysis of high-profile criminals and showcases the empirical and theoretical data to support theories of

criminality. Criminal behavior will be viewed through biological, psychological, social, and environmental perspectives. Violence and criminal behavior will be viewed on a developmental continuum. Contemporary issues will be discussed highlighting recent current criminal events that include competence, eyewitness testimony, criminal profiling, jury selection, false memory, and interrogation strategies. Students will be provided with the tools necessary to understand assessment procedures, determine preventative factors, and current treatment models that may help mitigate the causes and outcomes of crime and violence. Three credits.

CLS-361 URBAN STREET GANG PROSECUTION

An examination of the complex sociological, psychological, and criminological dimensions of criminal street gangs, gang membership, and the problems of law enforcement in prosecuting these entities. This course will cover a wide spectrum of topics that interrelate to this complex issue in law enforcement. Three credits.

CLS-367 GENDER AND CRIME

This course will examine the notions of gender identity and development, social constructs of gender, and the ways in which femininities and masculinities may influence victimization and offending. Rooted in criminological theory, including modern feminist theories, the course will evaluate empirical research to examine the function of gender in the criminal justice system, media representation of male and female offenders, and gendered experiences as criminal justice professionals. Three credits.

CLS-375 INTERNATIONAL CRIMINAL LAW

This course will focus on the structures used for the prosecution of international criminals in multinational venues. Examination of international law as it impacts the substantive definition of crimes as well as the political and social dynamics of this expanding area of law will be developed. Occasional offering. Three credits.

CLS-376 FEDERAL CRIMINAL LAW

An examination of the principle statutes utilized by the federal government to prosecute individuals for a wide variety of criminal activities focusing on organized crime prosecutions. Discussion of the Hobbs Act, the RICO Act and money laundering statutes and mail fraud and wire fraud will all be considered. Three credits.

CLS-377 ADDICTION AND CRIME

Examines the social issues and problems of alcohol and drug misuse in American society. Legal and illegal substances are considered, as are the causes of substance abuse and alternatives. The factors and theoretical perspectives of alcohol and drug abuse in America are discussed as well as the legal systems present in society and the impact these systems have on alcohol and drug use/abuse. Three credits.

CLS-380 CRIMINOLOGY OF FIREARMS

Examines the historical, societal, and legal aspects of firearms in American society. The Constitution and legal precedents are considered, as are changes in regulation over time. Questions concerning private ownership and crime rate trends will be discussed along with the factors and theoretical perspectives of gun violence in America. Three credits.

CLS-385 ORGANIZED CRIME IN AMERICA

This course will examine the origins and growth of organized crime in America. The major focus of the course will be on the traditional five (5) organized crime families of New York. However, we will also examine other types of organized crime including the so-called "Irish Mob" and organized crime groups associated with the former Soviet Union. Students will develop a comprehensive understanding of the

structure, culture, and street rules of these criminal enterprises. Additional topics will also include the tools and methods used by the Federal Bureau of Investigation to investigate and prosecute organized crime members. Three credits.

CLS-399 CRIMINAL ANALYTICS

The difference between an average criminal investigator and a great one is profound. The great ones must see a field wider than just the horizon of an arrest and perceive issues far more numerous and complex than simply where fingerprints might be found. They must appreciate what insight the hard sciences may afford them, what the cyber-world may yield as fruitful evidence, and what the forensic accountant might help them uncover. They must also know the limits of such specialties. Even more so, they must glean the culture and social mores of the environment in which the investigation is to take place and appreciate the nature of the people who may come to fill the roles of victim, witness, and suspect. They are like great field generals, understanding their own resources and of those who oppose them, the need for direction without the burden of rigidity when the original direction is shown to be ineffective and, ultimately, never losing sight of their central mission. That mission is to find the truth but, even more critically, to achieve justice in a way which serves the noblest principles of their profession. Three credits.

CLS-415 INTERNATIONAL CRIMINAL SYSTEM

This course will be conducted largely as a seminar in which the students will focus on the criminal system of a given country, explore it thoroughly, and present it in the contrast to the comparable systems in the United States. All phases of the criminal system in these countries will be explored including the determination of what is made criminal, the kinds of investigation use, the forms of adjudication, and the forms of sanction and punishment. General course work will discuss the different systems of law used in various countries to contrast them with the system developed in the United States. Three credits.

CLS-420 CRIMINOLOGY OF HATE

This course will explore the phenomenon of hate crimes and the law's response to them. Consideration will be given of the legislative changes made to deal with hate crime scenarios and how the courts and law enforcement seek to respond to them. A discussion of the psychological basis for hate crimes will also be entertained. Three credits.

CLS-425 SURVEY OF CYBERCRIME

The phenomenon of cybercrime has created serious challenges both for those in the cybersecurity field and the criminal justice system. This course will analyze how crimes of various types and potential national security threats are or may be committed by use of the internet and/or other cybertechnologies. Ethical considerations in the use of such technology as a weapon to combat crime and terrorism will also be discussed, along with the statutory framework under which prosecutions of such crimes may take place. Three credits.

CLS-430 PUBLIC SECTOR MANAGEMENT

This course will provide an extended discussion of management techniques for government agencies and programs. It will concentrate on formulation of a mission for the agency, organize strategies to accomplish that mission and budgetary and political dimensions that would affect the capacity of the managers to carry out the mission. Three credits.

CLS-440 CONSTITUTIONAL LITIGATION AND ANALYSIS

The course will focus on the art of litigating Constitutional issues. Selected topics in Constitutional Law (such as Equal Protection, Substantive Due Process, Free Speech, Establishment Clause, Commerce Clause) will be discussed from the perspective of forming effective arguments on both sides of a given problem. The topics will be developed in depth with a view to giving the student an appreciation of the nuances in each area. There will be a heavy emphasis on legal reasoning, analysis, and argumentation. The course will conclude with the preparation of a brief and the presentation of oral argument to a panel of judges. A semester of Constitutional Law or some equivalent prior course work is necessary. Formerly titled Advanced Constitutional Law. Three credits.

CLS-485 CRIME MAPPING – GIS

This course will introduce students to the uses of geographic information systems (GIS) in the criminal justice field. Students will learn how to create crime maps and analyze spatial aspects of criminal activities. Students will learn to evaluate police beats and complete predictive analysis based off of criminal hot spots. Students will learn the processes of taking police reports from officers in the field and integrating them into an information system that allows officers, supervisors, and the public to access the data and perform their own analysis. Three credits.

CLS-504 ETHICAL DECISIONS AND DILEMMAS IN CRIMINAL JUSTICE

This course examines the major ethical dilemmas that confront criminal justice professionals throughout their careers. Students are exposed to the philosophical principles of ethical decision making. Students also examine issues-based, practical approaches to ethical issues found in all three branches of the criminal justice system - police, courts, and corrections. Policy issues are reviewed and students are encouraged to engage in discussions of key topics in professional ethics and the delicate balance between law and justice. Students enrolled in this course will begin to think about the impact and importance of ethical decision-making by criminal justice professionals. Three credits.

CLS-510 CRIMINOLOGICAL THEORIES

This course focuses on the study of crimes, criminals, causes of criminal behavior, and victimization issues. Students explore how the classical, psychological, sociological, economic, biological, and political theories of crime explain criminal behavior, and the impact of these theories on the work of the criminal justice system. Prerequisite: CLS 101. Three credits.

CLS-550 CRIMINOLOGY INTERNSHIP

Students may arrange to receive credit for employment experience in various non-college settings. It is also possible to have paid or unpaid professional work entered into the transcript as "no credit." Prerequisite: permission of the departmental coordinator. May be repeated. Variable credit.

CLS-590 CLS CAPSTONE

This is the capstone course for justice studies students. It will focus on the integration of information learned from different courses with special focus on criminal law and legal issues, theories of crime, juvenile delinquency, law enforcement, corrections, ethics, forensic science, and research methods. This course will be offered to justice studies students in their final semester in which they receive their degrees. Prerequisite: Student must be in the last semester of their Criminology, Law, and Society course work, or receive permission of instructor. Three credits.

ECONOMICS

Gary Quinlivan, *Dean, Alex G. McKenna School of Business, Economics, and Government and Program Chairperson*

Zachary Davis; Andrew R. Herr; Justin Petrovich

Adjunct Faculty: Mark D'Amico; Joseph Polka

Given a close collaboration with an excellent mathematics department at Saint Vincent College, the McKenna School's Economics Department is nationally ranked and is known for offering one of the best Ph.D. undergraduate preparations in the United States. The curriculum of the Economics Department is designed to provide a comprehensive education in both theoretical and applied economics. The economics program seeks to provide a strong academic foundation for understanding the complexities of economic activity and decision-making within both the private and public sectors and for understanding the relationship between the economy and society as a whole. It seeks to enable students to apply rigorous analysis to economic issues and problems through the use of market-oriented theoretical models, quantitative techniques, and economic reasoning.

The study of economics, as part of the liberal arts and sciences approach to learning, helps students understand one of the most fundamental facets of human life in civil society — economic activity — and helps prepare them to effectively address the socioeconomic challenges and opportunities of contemporary public life. In addition to general economic theory and analysis, the special strengths of the Department include international finance, international trade, game theory, econometrics, labor theory, and experimental economics. In conjunction with the Center for Political and Economic Thought, the Department also seeks to provide exceptional educational experiences in the study of contemporary public policy and major issues in public life. Through these approaches and by working closely with its students, the goal of the Department's economics major is to help students achieve a strong academic background for successful graduate studies or professional employment. The Department of Economics awards the following degrees: Bachelor of Arts in Economics, Bachelor of Science in Economics and Bachelor of Science in Business Economics (See Business Majors section of this Bulletin) degrees. The B.S. in Economics degree is designed for students intending to pursue graduate studies in economics, finance, or M.B.A. programs with more demanding quantitative requirements. A major in Economics and Mathematics is also offered for these students.

The B.A. in Economics degree is designed for preparation for law school or other professional-oriented graduate studies. The B.S. in Business Economics is designed for students planning for immediate employment in business, government, or the nonprofit sector. (For more information on the Business Economics major, please see the Business Administration section.) For students interested in gaining a disciplined understanding of economics, courses in the Department may be taken to satisfy the social science requirement of the College core.

The major's capstone requirement is a senior thesis that incorporates original research efforts. The thesis is written in conjunction with EC 480 and is taken during the senior or junior year.

Students are encouraged to join the staff of the Center for Political and Economic Thought, which sponsors various lecture series, conferences, and publications; the Economics Club; and Mock Trial Team. The Economics Department is the Delta Sigma branch of Omicron Delta Epsilon, which is the national honor society for outstanding economics students.

ECONOMICS STUDENT LEARNING OUTCOMES

- Demonstrate a comprehensive understanding of applied and theoretical economics and apply rigorous analysis to economic issues and problems through the use of market-oriented theoretical models, quantitative techniques, and economic reasoning;
- Deliver a presentation with an in-depth analysis on an economic topic;
- Utilize statistical and econometric techniques to test theoretic models;
- Complete an original economics research project.

For more information on the Business Economics major, please see the Business Administration Section.

Requirements for B.A. degree in Economics (44 credits):

(See core curriculum requirements.)

BA 350	Statistics I	3
BA 350A	Statistics I Excel Lab	1
EC 101	Principles of Microeconomics	3
EC 102	Principles of Macroeconomics	3
EC 201	Microeconomic Theory	3
EC 202	Macroeconomic Theory	3
EC 310	Labor Economics	3
EC 351	International Trade and Development	3
EC/BA 353	International Finance	3
EC 360	Econometrics	3
EC 380	Game Theory	3
EC 390	Experimental Economics	3
EC 480	Senior Thesis	3
MA 109/111	Calculus I	4
PS 100	Principles of American Politics	3

This program satisfies the mathematics and the social science core. After completing this major and the core curriculum, a student will have 32 credits for electives.

Requirements for B.S. degree in Economics (54 credits):

(See core curriculum requirements.)

BA 350	Statistics I	3
BA 350A	Statistics I Excel Lab	1
or		
MA 311	Probability and Statistics I	3
EC 101	Principles of Microeconomics	3
EC 102	Principles of Macroeconomics	3
EC 201	Microeconomic Theory	3
EC 202	Macroeconomic Theory	3
EC 310	Labor Economics	3
EC 351	International Trade and Development	3
EC/BA 353	International Finance	3
EC 360	Econometrics	3
EC 380	Game Theory	3
EC 390	Experimental Economics	3
EC 401	Advanced Microeconomic Theory	3
EC 402	Advanced Macroeconomic Theory	3
EC 480	Senior Thesis	3
MA 109/111	Calculus I	4
MA 110/112	Calculus II	4
PS 100	Principles of American Politics	3

Candidates for the B.S. degree who plan to pursue graduate work in economics, finance, or related disciplines are strongly encouraged to complete, at minimum, MA 211 Analytical Calculus III, MA 212 Ordinary and Partial Differential Equations, and MA 251 Linear Algebra. Consult with a member of the departmental faculty for

further assistance in planning course work. After completing this major and the core curriculum, a student will have 22 credits for electives.

Typical First-Year Schedule

		Fall	Spring
EC 101	Principles of Microeconomics	3	
and			
EC 102	Principles of Macroeconomics		3
PS 100	Principles of American Politics		3
	Foreign Language	3	3
EL 102	Language and Rhetoric	3	or 3
TH 119	First Theology	3	or 3
MA 109/111	Calculus I	4	
MA 110/112	Calculus II (B.S. degree)		4
	College core	0-6	0-6

All students will take one course designated as a First-Year Seminar which will satisfy a core curriculum requirement.

Requirements for the Minor in Economics (19 credits):

EC 101	Principles of Microeconomics	3
EC 102	Principles of Macroeconomics	3
EC 201	Microeconomic Theory	3
EC 202	Macroeconomic Theory	3
BA 350	Statistics I	3
BA 350A	Statistic I Excel Lab	1
Plus one elective (3 credits) from the following offerings:		
EC 310	Labor Economics	3
EC 351	International Trade and Development	3
EC/BA 353	International Finance*	3
EC 360	Econometrics	3
EC 380	Game Theory	3
EC 390	Experimental Economics	3
EC 401	Advanced Microeconomic Theory	3
EC 402	Advanced Macroeconomic Theory	3

* Finance and International Business majors cannot count this class toward the minor.

Major in Economics and Mathematics

For those students who will pursue upon graduation an advanced degree (Master's or Ph.D. level) in finance or economics.

Requirements for B.S. degree in Economics and Mathematics (80-81 credits in majors):

(See core curriculum requirements.)

BA 350	Statistics I	3
and		
BA 350A	Statistic I Excel Lab	1
or		
MA 311	Probability and Statistics I	3
PS 100	Principles of American Politics	3
EC 101	Principles of Microeconomics	3
EC 102	Principles of Macroeconomics	3
EC 201	Microeconomic Theory	3
EC 202	Macroeconomic Theory	3
EC 310	Labor Economics	3
EC 351	International Trade and Development	3
EC 360	Econometrics	3
EC 380	Game Theory	3
EC 390	Experimental Economics	3
EC 401	Advanced Microeconomic Theory	3
EC 402	Advanced Macroeconomic Theory	3
EC 480	Senior Thesis	3
MA 111	Analytical Calculus I	4
MA 112	Analytical Calculus II	4
MA 211	Analytical Calculus III	4

MA 212	Ordinary and Partial Differential Equations	4
MA 251	Linear Algebra	3
MA 321	Complex Variables	3
MA 421	Real Analysis I	4
MA 422	Real Analysis II	4
PH 111	General Physics I	3
PH 113	General Physics I Lab	1
PH 112	General Physics II	3
PH 114	General Physics II Lab	1

This program satisfies the mathematics, natural science, and the social science requirements of the core curriculum for the B.S.

After completing this major and the core curriculum, a student will have four (4) credits for electives.

ECONOMICS COURSE DESCRIPTIONS

EC-00X ECONOMICS EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. Zero credits. Pass/Fail.

EC-101 PRINCIPLES OF MICROECONOMICS

The course introduces the student to economic reasoning, terminology and fundamental concepts. Emphasis is placed on individual economic units such as the household and the firm and how they affect and are affected by the various market structures existing in American capitalism. Offered every semester. Periodically offered as a first-year seminar. Three credits.

EC-102 PRINCIPLES OF MACROECONOMICS

An analysis of the functioning of the entire economy, in particular the forces that influence the level of production, unemployment, and prices. Also included are the nature and role of governmental intervention in changing these variables. Offered every semester. Periodically offered as a first-year seminar. Three credits.

EC-201 MICROECONOMIC THEORY

The course provides rigorous analysis of consumer and producer behavior, market structure in both the product and resource markets, and general equilibrium theory. The course emphasizes the theoretical foundations and techniques of Neoclassical microeconomics. Prerequisite: EC 101 and MA 109 or MA 111. Offered fall semester. Three credits.

EC-202 MACROECONOMIC THEORY

An examination and analysis of aggregate economic relationships in the context of competing Keynesian and Classical paradigms. The course emphasizes differences in the choice of appropriate stabilization policy on the part of government, as well as the theoretical structures of macroeconomic models. A brief introduction to economic growth theory is included. Prerequisite: EC 102. Offered spring semester. Three credits.

EC-225 MONEY AND BANKING

A study of the nature and value of money, with emphasis upon its relationship to economic activity. Special attention is given to monetary theory, especially stationary, steady state, and RE modeling. The course uses Frederic Mishkin's *The Economics of Money, Banking, and Financial Markets* and selected chapters from Bennett McCallum's *Monetary Economics: Theory and Policy*. The course also examines the socio-macroeconomic and financial consequences of monetary policies pursued by central banks. Time is devoted to financial institutions, the history of central banking, the risk and term structure of interest rates,

monetary tools, aggregate demand and supply analysis, and global markets. Prerequisites: EC 101, EC 102, and BA 351 or EC 360. Cross-listed as BA 225. Offered as needed. Three credits.

EC-310 LABOR ECONOMICS

This course studies the labor market. Labor economics describes the interaction between workers and firms in the labor market, with workers supplying labor and firms demanding labor. Labor supply topics include unemployment insurance, retirement, pension plans, unions, and human capital development. Labor demand topics include compensation structure, wage versus fringe benefits, non-discrimination rules, and discrimination in the job market. Unemployment and employment measurement, trends, and interpretations will also be covered. Offered spring of odd-numbered years. Prerequisite: EC 201 and BA 351. Three credits.

EC-351 INTERNATIONAL TRADE/DEVELOPMENT

The course emphasizes the theory behind the international exchange of goods and services among nations of the world. Topics include the Heckscher-Ohlin Theorem, Factor Price Equalization Theorem, growth theory applications, homogenous function assumptions, contract curves, offer curves, the influence of market impediments theory in large and small country cases, the pros and cons of free trade, etc. Prerequisites: EC 201 and MA 109 or MA 111. Offered spring semester of even-numbered years. Three credits.

EC-353 INTERNATIONAL FINANCE

The course covers the following topics: recent developments in international financial markets, the utilization of foreign exchange and derivative security markets, exchange rate determination, international asset portfolio theory, and financial risk management strategies. Cross-listed as BA 353. Prerequisites: EC 102, BA 351, or EC 360. Student must purchase TIBA II plus calculator. Offered fall semester. Three credits.

EC-360 ECONOMETRICS

This course is designed as a continuation of BA 350. It is an introduction to regression and correlation analysis, multiple regression, their uses and related problems such as multicollinearity, serial correlation, and heteroskedasticity. The course is balanced between theoretical development and applications. Prerequisites: EC 101, EC 102, MA 109 or MA 111, BA 350 and BA 350A. Offered spring semester. Three credits.

EC-380 GAME THEORY

The primary goal of this course is to study the scope and methods of game theory, focusing on applications arising within the discipline of economics. Game theory attempts to describe the strategic interaction of agents (e.g., consumers, firms, or the government) in situations where there are competing interests and/or the outcomes depend on the actions chosen by the various agents. The course is designed to expose students to the concepts studied by game theorists as well as the set of analytical skills used in game theory. Prerequisites: EC 201, MA 110 or MA 112. Offered fall semester of even-numbered years. Three credits.

EC-390 EXPERIMENTAL ECONOMICS

This course focuses on laboratory experimentation as a research tool in applied economics, particularly in the areas of industrial organization, political economy, and game theory. The course offers both an overview of general principles used in designing, conducting, and evaluating behavior in economic experiments and a review of current research in the field of experimental economics. The areas of study include market behavior in alternative institutional settings, allocation decisions in settings

with externalities, and individual choice with uncertainty. Prerequisites: EC 201 and MA 109 or MA 111. Offered fall semester of odd-numbered years. Three credits.

EC-401 ADVANCED MICROECONOMIC THEORY

This course offers the student an in-depth, mathematical analysis and extension of subject matter covered in EC 201 (Microeconomic Theory). Topics covered include: multivariate economic applications of optimization theory with and without constraints utilizing linear algebra; FOC and SOC; Kuhn-Tucker Conditions; and consumer behavior under conditions of uncertainty. Prerequisites: EC 201 and MA 110 or MA 112. Offered spring semester of even-numbered years. Three credits.

EC-402 ADVANCED MACROECONOMIC THEORY

This course examines growth theory models, open economy macroeconomic models, macroeconomic models with rational expectations, dynamic modeling, and stochastic macroeconomic models. Prerequisites: EC 202, MA 110 or MA 112. Offered spring semester of odd-numbered years. Three credits.

EC-480 SENIOR THESIS

The purpose of this seminar is to produce a scholarly piece of research and writing. Prerequisites: EC 201, EC 202, EC 390, and MA 109 or MA 111. Offered spring semester of even-numbered years. Three credits.

EC-500 INDEPENDENT STUDY - ECONOMICS

May be repeated. Variable credit.

EC-550 ECONOMICS INTERNSHIP

Pass/Fail option only. Students are subject to the McKenna School's Student Guide to Internship Procedures and Requirements. See Business Administration section of this Bulletin for a detailed description. Variable credit up to three credits.

EDUCATION

Veronica I. Ent, *Chairperson*

Kathleen Beining, Janet Franicola, Philip Kanfush, O.S.B., Katie Leckenby, Tracy McNelly, Stacie Nowikowski, Aaron Sams, Dawn Turkovich

Adjunct Faculty: Eric Bartels, Carol Borland, LeAnn Downs, Deborah Fischer, Teri Haight, Amy Hildebrand, Wendy Jorgensen, Tammy Lyons, Sean Myers, Philip Pisone, Gerry Police, Wanda Reynolds, Charles Riley, Jennifer Rinkevich

THE EDUCATION DEPARTMENT AT SAINT VINCENT COLLEGE OFFERS THE FOLLOWING DEGREE PROGRAMS:

Bachelor of Science in Early Childhood Education, grades PreK-4
Bachelor of Science in Middle Grade Education, grades 4-8
Bachelor of Arts in Psychology/Education

THE EDUCATION DEPARTMENT ADDITIONALLY OFFERS THE FOLLOWING PUBLIC SCHOOL CERTIFICATION PROGRAMS:

Art, grades K-12
Biology, grades 7-12
Business, Computer and Information Technology, grades K-12
Chemistry, grades 7-12
Chinese, grades K-12
English, grades 7-12
French, grades K-12
Mathematics, grades 7-12
Physics, grades 7-12
Social Studies, grades 7-12
Spanish, grades K-12
Special Education, grades PreK-12

The philosophy of the Department is to provide education students with experiences that develop both depth and breadth in professional skills and knowledge. This is accomplished by combining instruction in basic pedagogy with pertinent field experiences and courses in psychological foundations in education.

The goals of these endeavors include grounding students in the scientific and artistic bases of the teaching profession; preparing them for the roles of the instructor, mentor, caregiver, advocate, and change agent; and refining their skills in the areas of organization, critical thinking, self-reflection, academic and personal integrity, responsible decision-making, and creativity.

To prepare for the PreK-12 classroom, students engage in a variety of field-based activities throughout their study in the Education Department. These activities include observations, tutoring, classroom demonstrations, and teaching lessons in their fields. The culminating activity is a 14-week student teaching assignment in a school and classroom appropriate to the certification area.

After completing the teacher certification program at Saint Vincent College, 98% receive Pennsylvania Teacher Certification and 94.5% secure teaching positions or education-related positions within one year of completion.

EDUCATION STUDENT LEARNING OUTCOMES:

- Graduate/student-teacher candidates will achieve passing scores and successfully complete the teacher certification exams for each teaching area.
- Graduate/student-teacher candidates will demonstrate thorough knowledge of content and pedagogical skills in planning and preparation for teaching.
- Graduate/student-teacher candidates will establish and maintain a purposeful and equitable classroom environment for learning, in which pupils feel safe, valued, and respected, by instituting routines and setting clear expectations for pupil behavior.

- Graduate/student-teacher candidates, through knowledge of content, pedagogy, and skill in delivering and evaluating instruction, will effectively engage students in learning by using a variety of instructional strategies.
- Graduate/student-teacher candidates will demonstrate the desired qualities that characterize a professional person in aspects that occur in and beyond the classroom.

EDUCATION MINOR AND K-12 OR 7-12 SECONDARY EDUCATION CERTIFICATION

All students desiring to minor in Education for the K-12 and 7-12 certification areas listed above should declare their minor upon acceptance to Saint Vincent College or as early in their college career as possible.

All undergraduate education minors are required to have a major in an academic discipline. In addition to the major, other course requirements include: 1. General studies requirements (usually fulfilled through the Core Curriculum), 2. Required courses in psychology, 3. Studies in education and 4. Student teaching fieldwork. Students should consult other departmental listings and/or their major advisors to learn about requirements in their fields of study.

Requirements for Education Minor/Teacher Certification in K-12 Areas or 7-12 Secondary Education

In addition to the courses listed below, candidates for certification in secondary education must satisfy the requirements for a major in an academic degree program related to their area of certification. Pennsylvania Department of Education also requires all education certification students to have a minimum of six (6) credits in English [one (1) composition, one (1) literature] and six (6) credits in college mathematics (100-level or above). ED 142 Mathematics for Teachers can meet the additional 3-credits of college mathematics beyond the MA 104 core requirement. This course is only recommended for majors not requiring a second mathematics course.

Courses in Psychology (3 credits)

PY 214 Adolescent Development* 3

Courses in basic pedagogy (24 credits)

ED 100 Foundations of Education* 3

ED 115 Educational Psychology* 3

ED 205 Strategies and Techniques of Instruction 3

ED 208 Classroom Partnerships and Inclusion 3

ED 220 Reading, Writing, and
Differentiation in the Content Areas 3

ED 290 Psychology/Education of the
Exceptional Student 3

ED 300
-306 Teaching in the Content Area 3

ED 390 Teaching Nonnative and
Culturally Diverse Students 3

Field experiences (16-17 credits)

ED 103 Field Experience I: 7-12/K-12** 1

ED 206 Field Experience II: Strategies and
Techniques of Instruction 1

ED 322 Field Experience III: K-12 and Secondary
Instruction and Theory 1

ED 400 Field Experience IV:
Pre-Student Teaching Practicum 2

ED 410 Field Experience V: Student Teaching Internship 8-9

ED 411 Professional Seminar 3

* Also fulfills Core Curriculum requirements.

** ED 207 (Practicum in Education I) may be substituted for ED 103

Additional education courses required for secondary

Social Studies 7-12 Certification

ED 109 Physical and Cultural Geography* 3

* Also fulfills Core Curriculum

Education Minor without Certification

Students may choose an Education minor without pursuing teacher certification. To earn the non-certification Education minor, students will select from the basic pedagogy courses required in the minor for secondary or K-12 certification, totaling 18 education credits. ED 400 and 410 Student Teaching Field Experiences are not required.

Minor In Disability Studies: Special Education with or without Certification

The Minor in Disability Studies: Special Education is designed for undergraduate students who plan to pursue a teaching career in general or special education, who want to work in non-school settings with individuals who have disabilities, or to investigate issues concerning disabilities. At this time, the requests for courses are coming primarily from the Early Childhood and Middle Grade Education majors as well as certification students in 7-12 and K-12 areas. However, the minor is developed to be attainable by both education and non-education majors.

Requirements for disability studies minor/special education certification in PreK-8 and 7-12 areas

Students planning a career in teaching will benefit from the minor in Disability Studies with certification in Special Education. As the federal and state governments are requiring students with disabilities to be included, to the greatest extent appropriate, into regular education classes, teachers in general education will work, on a daily basis, with students with disabilities. Having certification in Special Education will provide teacher candidates with additional skills to address the diversity of needs within their classrooms. Candidates will earn certification in their major field, as well as a certification in Special Education K- 8 or Special Education 7 – 12. For these education majors, the 12 credits of Special Education courses (below) would be offered one at a time during the junior and senior semesters. This would increase their credits to 18 or 19 credits, but it is feasible to accomplish this minor along with their majors. During the student teaching semester, education majors would student teach in a Special Education setting for seven weeks, and in a general education setting, according to their area of certification, for seven weeks.

Prerequisite Courses for Education Majors (already present):

ED 115	Educational Psychology	3
ED 100	Foundations of Education	3
ED 290	Psychology and Education of Exceptional Students	3
ED 205	Strategies and Techniques of Instruction	3
ED 206	Field Experience II: Strategies and Techniques of Instruction	1

Requirements for disability studies minor

Students from disciplines such as psychology, criminology, theology, occupational therapy, physical therapy, and sociology can supplement these studies with a focus on related issues concerning people with disabilities relative to their chosen majors. In this manner, the minor in Disability Studies enhances learning experiences by providing instruction, which addresses the needs of people with disabilities. Students from these disciplines would take the four Special Education courses, plus ED 290 and one of 15 other psychology courses (see advisor for selections).

Prerequisite Courses for Non- Education Majors:

ED 290 Psychology and Education of Exceptional Student 3

Any one of the following Psychology/Education courses:
PY 100, ED 115, 212, 214, 216, 219, 243, 244, 251, 252, 260, 308, 309, 322, 331

Special Education Courses (all candidates must take)

ED 355	Instructional Interventions for Students with High Incidence Disabilities	3
ED 360	Strategies and Assessment for Students with Significant and Multiple Disabilities	3
ED 362	Classroom Approaches for Students with Behavioral and Autism Spectrum Disorders	3
ED 412	Special Education Consultation, Transition, Law	3

MINOR IN STEM (SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS) EDUCATION

This minor study in STEM Education is designed to assist interested candidates in implementing effective approaches for improving STEM teaching; facilitating the dissemination and adoption of effective STEM learning practices; and promoting education experiences that prioritize collaborative, hands-on, and active learning to help others succeed in STEM fields. The minor is open to both education majors and non-education majors. The Education Department recognizes that students in other majors may be interested in this minor as part of their credentials when working with adults or youth in informal educational settings related to STEM.

Requirements for STEM Education Minor

The minor is designed to focus on teaching education and/or related-area candidates interested in STEM how to transfer skills that grow with scientific and technological advancements in professions unforeseen at the current moment to educational settings. The 18-20 credit course of study combines content-specific classes in STEM fields with teaching and learning course work specific to STEM education. Candidates seeking teacher education certification will be eligible for the PA Integrative STEM Education endorsement upon completion of their initial certification.

Prerequisites for Education Majors (already present)

ED 100	Foundations of Education	3
ED 115	Educational Psychology	3
ED 205	Strategies and Techniques of Instruction	3
ED 206	Field Experience II: Strategies and Techniques of Instruction	1

Prerequisites for Non-education Majors

ED 205	Strategies and Techniques of Instruction	3
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Required STEM Introduction Courses (3 credits)

INTS 101	Introduction to Integrated Science	1
ENGR 100	Introduction to Engineering Science	2

Required STEM Education Courses (9 credits)

ED 214	Interdisciplinary STEM Approaches and Connections	3
ED 319	Inquiry Investigation, Design, and Assessment in STEM Education	3
ED 385	Applied Practicum in STEM Learning	3

STEM Content Electives (6 credits) – See STEM minor advisor for options

MINOR IN CHILDREN'S LITERATURE

The Children's Literature Minor focuses on the scholarly study of children's and adolescent literature that may enhance the professional work of teachers, librarians, publishers, booksellers, and creative writers as well as the personal lives of many others. The minor includes instruction in period and genre studies, author studies, literary criticism, studies of various types of literary text, book artists, and children's films.

Requirements for the Children's Literature Minor

Children's Literature minors must choose four of the following courses:

CL 129	Young Adult Literature	3
CL 130	Children's Literature	3
CL 221	Historical Literature for Children	3
CL 259	Critical Approaches to Children's Literature	3
CL 272	Special Topics in Children's Literature	3
CL 295	Writing for Children and Young Adults	3
CA 274	Children's Literature and Film	3

In addition, students must complete six elective credits either from the courses above or relevant courses in related disciplines with approval of the director, Dr. Mary Beth Spore (marybeth.spore@stvincent.edu).

Specialization: Pennsylvania Early Childhood Director

Saint Vincent College and the Education Department are committed to providing early childhood professionals with the necessary tools and credentials for providing the best service to our community. As a result, Saint Vincent College offers undergraduate and graduate courses to fully meet the Pennsylvania Early Childhood Director Credential standards set forth by the Pennsylvania Office of Child Development and Early Learning. In addition, the Education Department has collaborated with the Fred Rogers Center for Early Learning and Children's Media to fully integrate our early childhood course work with fundamentals and resources that Fred Rogers used in preparation and production of his television outreach for young children. By choosing to obtain an early childhood certification and/or a Pennsylvania Early Childhood Director credential from Saint Vincent College, candidates will benefit from the unique resources provided by the Fred Rogers Center. Candidates selecting Saint Vincent College for this credential should contact the Director for Early and Middle Grade Education for more information.

CLEARANCES

All students taking Education courses are required to have obtained current Criminal History Record (Act 34), Child Abuse (Act 151) clearances, and a tuberculosis test prior to the start of class. These clearances must be renewed in accordance with department regulations. Students will also have to obtain a one-time FBI clearance. (See www.pa.cogentid.com for more information). The FBI fingerprint clearance will be good for your entire four or more years of study. Last, all candidates must adhere to the state laws regarding participating in the Mandated Reporter Training and Act 124.

Formal Admission to the Undergraduate Teacher Certification Program

To gain formal admission to the teacher certification program, students must be enrolled in the B.S. in Early Childhood Education, B.S. in Middle Grade Education, or K-12 or 7-12

Education Minor with earned 48 credits with a minimum cumulative grade point average of 3.0, and have passed the pre-professional assessment as required by Pennsylvania. In addition, students must have successfully completed ED 205 Strategies and Techniques of Instruction with a grade of B- or higher. Students must have a P grade in **ED 00A Formal Education Admission**. Formal admission is followed by pre-student teaching and an application packet which will include a completed form, official transcripts of all college course work, and three completed recommendation forms (at least two must be from college faculty members).

Formal Admission to the Post-Baccalaureate Teacher Certification Program

Saint Vincent College offers graduated students from any accredited institution to earn certification through continuing education. All post-baccalaureate students applying for teacher certification must show evidence of an undergraduate degree, no criminal record, and a minimum cumulative GPA of 3.0. Students must have successfully completed ED 205 Strategies and Techniques of Instruction with a grade of B- or higher. Students must have a P grade in **ED 00A Formal Education Admission**. Formal admission is followed by pre-student teaching and an application packet which will include a completed form, official transcripts of all college course work, and three completed recommendation forms (at least two must be from college faculty members).

Application for Pre-Student Teaching and Advanced Standing

All students who have successfully completed the requirements necessary for pre-student teaching, obtained the 3.0 GPA, passed exams, and maintain a good standing in the department will be permitted into pre-student teaching upon their application and advisor recommendation. This application must be submitted one week after the Town Hall meeting of the semester prior to desired pre-student teaching term. Failure to meet this deadline could postpone your placement and progress. See the Director of Field Experience for more information.

Students denied acceptance into the pre-student teaching program may appeal the decision to a review board composed of members of the Education Department and the College Teacher Education Committee. An alternative admissions procedure is available for students who do not meet the required grade point average but who have demonstrated potential to become successful K-12 teachers and have worked with children. See the Education Department for more information on the alternative admissions procedure.

Since the Pennsylvania Department of Education requires a 3.0 GPA, the following courses may be repeated one (1) time if a student has earned a grade lower than a B-. This option is not required. All 200-level methods for early childhood education, middle grade education, and K-12/secondary education are eligible.

ED 230	Social Studies for Early and Special Learners
ED 242	Numerical/Manipulative Math for Early/Special Learners
ED 244	Science and the Environment for Early/Special Learners
ED 250	Reading and Writing for Early/Special Learners
ED 235	Teaching of Science and Math Early/Special Learners
ED 237	Teaching of Humanities for Middle/Special Learners
ED 220	Reading, Writing, and Differentiation in the Content Areas

Saint Vincent College also offers alternative certification for people who have been in the work force and are considering teaching as a new career. Those interested in more information

about this program should contact the Graduate and Continuing Education Coordinator.

BACHELOR OF SCIENCE IN EARLY CHILDHOOD EDUCATION, PREK-4

Saint Vincent College offers a four-year Bachelor of Science in Early Childhood Education degree. With this degree, students will fully meet all current Pennsylvania Department of Education early childhood guidelines. The curriculum is designed to offer candidates a full preparation from infants through fourth grade. Students enrolled in this degree program will greatly benefit from the Fred Rogers Center for Early Learning and Children's Media that provides unique opportunities for research, resources, and outreach. In addition, early childhood students are given ample opportunities for fieldwork in a variety of settings. Saint Vincent College partners with preschools in the area that are accredited and recognized statewide as a premiere model for early learning. The purpose of this major is to prepare each student for a variety of settings to maximize his/her employment opportunities.

Requirements for Bachelor of Science in Early Childhood Education (PreK-4) 132-133 credits: general studies requirements for early childhood certification

All candidates for a B.S. in Early Childhood must meet the following general studies requirements:

HI 106 & 107	Topics in U.S. History*	6
ED 130	Children's Literature	3
EL 102	Language and Rhetoric	3
EL	English Writing Course*	3
MA 104	Elementary Functions	3
NSCI	Life Science with Lab*	4
NSCI	Physical Science with Lab	4

(Environmental Science, Field Biology, Chemistry)*

* Also fulfills Core Curriculum requirements.

Required Studies in Psychology (6 credits)

All candidates for early childhood teacher certification must take the following courses in Psychology:

PY 212	Child Development	3
PY 251	Family Systems	3

Required Studies in Mathematics

(3 additional credits than general studies)

ED 142	Mathematics for Teachers	3
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Required Studies in Education

(68 credits Early Childhood Education PreK-4)

ED 100	Educational Foundations	3*
ED 115	Educational Psychology	3*
ED 290	Psychology and Education for Exceptional Students	3
ED 101 or 207	Field Experience: PreK-4	1
ED 109	Physical and Cultural Geography	3*
ED 122	Curriculum, Projects, and Play for the Developing Child	3
ED 205	Strategies and Techniques of Instruction	3
ED 206	Field Experience II: Strategies and Techniques of Instruction	1
ED 208	Classroom Partnerships and Inclusion	3
ED 230	Social Studies for Early/Special Learners	3
ED 242	Numerical and Manipulative Math for Early/Special Learners	3
ED 244	Science and the Environment for Early/Special Learners	3
ED 250	Reading and Writing for Early/Special Learners	3

ED 308	Performance and Visual Arts for Early/Special Learners	3*
ED 317	Program Development for Infants and Toddlers	3
ED 318	Field Experience III: Early Childhood Instruction and Theory	1
ED 320	Composition and Language Arts for Upper Elementary	3
ED 325	Physical Health/Wellness for Early Education	3
ED 330	Early Childhood Leadership and Community Advocacy	3
ED 390	Teaching of Nonnative Speaking and Culturally Diverse Students	3
ED 400	Field Experience IV: Pre-Student Teaching	2
ED 410	Field Experience V: Student Teaching	9
ED 411	Professional Seminar	3

* Also fulfills Core Curriculum requirements.

Typical First-Year Schedule – Bachelor of Science in Early Childhood Education Fall semester (16 credits)

EL 102	Language and Rhetoric	3
or		
TH 119	First Theology	3
ED 122	Curriculum Projects and Play	3
	Intermediate Modern and Classical Language	3
	<i>All students will take one course designated as First-Year Seminar which will satisfy a core curriculum requirement.</i>	1
HI 106	Topics in U.S. History 1	3
ED 100	Foundations of Education	3

Spring semester (19 credits)

ED 115	Educational Psychology	3
TH 119	First Theology	3
or		
EL 102	Language and Rhetoric	3
ED 109	Physical and Cultural Geography	3
MA 104	Elementary Functions	4
HI 107	Topics in U.S. History	3
PL 101	First Philosophy	3

BACHELOR OF SCIENCE IN MIDDLE GRADE EDUCATION 4-8

Saint Vincent College also offers a four-year Bachelor of Science in Middle Grade Education degree. This program meets and exceeds all Pennsylvania Department of Education guidelines for Option 1: Middle-Level Certification. The program provides a wide perspective of teaching young adolescent children in grades four through eight. Candidates are required to select an area of expertise in which they can take coursework to teach as a single-subject on middle school. Candidates may select from four options: Mathematics, Language Arts, Social Studies, or Science. The Education Department has partnered with many local school districts in addition to the Dr. Robert Ketterer Charter School for unique experiences working with alternative education. The Department also offers the Challenge Enrichment Program each summer. Through it, middle school candidates have an opportunity to explore advanced content by leading and teaching the program to children attending from grades four through eight. All students are encouraged to participate in fieldwork that offers opportunities to practice teaching.

Requirements for Bachelor of Science in Middle Grade Education (4-8) 137 credits: General studies requirements for middle grade certification

All candidates for a B.S. in Middle Grade Education must meet the following general studies requirements:

HI 106 or 107	Topics in U.S. History*	3
HI 258	Pennsylvania History*	3
EL 129	Young Adult Fiction*	3
CA 235	Introduction to Web Design*	3
EL 102	Language and Rhetoric*	3
EL	English Writing Course*	3
MA 104	Elementary Functions*	4
NSCI	Earth Science with Lab*	4
NSCI	Life Science with Lab*	4
PS 100	Principles of American Politics*	3

Required Studies in Psychology (3 credits)

All candidates for middle grade teacher certification must take the following foundation courses in Psychology:

PY 214	Adolescent Development	3
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Required Studies in Mathematics (6 additional credits than general studies)

ED 142	Mathematics for Teachers	3
ED 155	Geometric and Measurement Theory	3

Required Studies in Science (4 additional credits than general studies)

NSCI	Physical Science and Lab	4
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Required Studies in Education (50 credits Middle Grade Education 4-8)

ED 100	Educational Foundations	3*
ED 102, 103, or 207	Field Experience: 4-8/K-12	1
ED 109	Physical and Cultural Geography	3*
PY 115	Educational Psychology*	3
ED 205	Strategies and Techniques of Instruction	3
ED 206	Field Experience II: Strategies and Techniques of Instruction	1
ED 208	Classroom Partnerships and Inclusion	3
PY 290	Psychology and Education for Exceptional Students	3
ED 235	Teaching of Science and Mathematics for Middle and Special Learners	3
ED 237	Teaching of Humanities for Middle/Special Learners	3
ED 381	Educational Testing	3
ED 311	Field Experience III: Middle Grade Instruction and Theory	1
ED 320	Composition and Language Arts for Upper Elementary	3
ED 390	Teaching of Nonnative Speaking and Culturally Diverse Students	3
ED 400	Field Experience IV: Pre-Student Teaching	2
ED 410	Field Experience V: Student Teaching Internship	9
ED 411	Professional Seminar	3

* Also fulfills Core Curriculum requirements.

Required Additional Studies in one (1) content area:

Language Arts, Social Studies, Science, Mathematics (18 credits)

Students enrolled in the B.S. in Middle Grade Education (4-8) are required to take 18 credits in one (1) concentration area in addition to the above requirements. Below are the courses that

students should take in one of the areas selected. Please be advised that none of the above courses can count.

Language Arts [six (6) courses must include at least one (1) communication course, one (1) writing course, and one (1) literature course]:

EL 110	Introduction to Creative Writing
EL 131	American Literature
EL 137	American Short Story
EL 146	Critical Thinking and Creative Thinking
CA 100	Introduction to Mass Media
CA 120	Public Presentation

Social Studies [six (6) courses must include at least one (1) Economics course, one (1) Political Science course, one (1) Sociology course, and (1) History course]:

HI 123	Global History I
HI 228	Twentieth Century America 1941-1980
EC 101/102	Micro or Macro Economics
PS 121	National Government
PS 222	State and Local Government (or PS 336 or CLS 227)
SO 106	Sociology and Global Issues

Science [five (5) courses not more than two (2) Biology, Chemistry, Environmental Science courses]:

CH 101/103	General Chemistry I and Lab
BL 150/151	General Biology and Lab
NSCI 260	Understanding Biotechnology
NSCI 130/131	Introduction to Physics and Lab
NSCI 150/152	Earth Systems Science and Lab

Mathematics [five (5) courses] Recommended courses:

MA 109	Calculus with Applications I
MA 110	Calculus with Applications II
MA 301	History of Mathematics
MA 231	Methods of Proof
MA 106	Fundamentals of Problem Solving

* Also fulfills Core Curriculum requirements.

Typical First-Year Schedule – Bachelor of Science in Middle Grade Education

Fall Semester (16 credits)

EL 102	Language and Rhetoric	3
or		
TH 119	Exploring Religious Meaning	3
Intermediate Modern or Classical Language		3
ED 109	Physical and Cultural Geography	3

All students will take one course designated as a First-Year Seminar that will satisfy a Core Curriculum requirement.

HI 106	Topics in U.S. History I	3
PS 100	American Politics	3

Spring Semester (18 credits)

PY 115	Educational Psychology	3
TH 119	Exploring Religious Meaning	3
or		
EL 102	Language and Rhetoric	3
ED 100	Foundations of Education	3
MA 104	Elementary Functions	3
HI 107	Topics in U.S. History II	3
PL 101	First Philosophy	3

BACHELOR OF ARTS IN PSYCHOLOGY EDUCATION

The Bachelor of Arts degree in Psychology Education is designed for students who begin their undergraduate careers as Education majors and decide that they do not want to teach or are unable to complete the requirements of the Education program, but still wish to pursue a career in a related education field.

Students who major in Psychology Education are not allowed to major in Psychology and are not allowed to double major in any other program offered by the Education Department. Students are not allowed to declare a major in Psychology Education until their junior year with education advisor approval.

This major is designed to allow candidates to complete course work in four years without certification.

Requirements (Psychology Education Major) (44 credits)

Core courses (12 credits):

CA 235	Introduction to Web Design*	3
ED 100	Foundations of Education**	3
ED 115	Educational Psychology**	3
ED 290	Psychology of Exceptional Students**	3

*counts for AR core

**counts for social science core

Major courses (32 credits)

ED 205	Strategies and Techniques of Instruction	3
ED 206	Field Experience II: Strategies and Techniques of Instruction	1
ED 207	Practicum in Education	1
CA 120	Public Presentation	3
PY 251	Family Systems	3
ED 390	Teaching Nonnative and Culturally Diverse Students	3
18	elective credits	18

EDUCATION COURSE DESCRIPTIONS

ED-00X EDUCATION EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. This course will be automatically added to the student's registration upon submission of the graduation application. Zero credits. Pass/Fail.

ED-100 FOUNDATIONS OF EDUCATION

This course is designed to introduce students to the legal principles that establish teaching as a profession and that govern the behavior of teachers. The school as a governmental agency and a state and local institution is examined within a multi-disciplinary context (History, Law, Philosophy, Politics, Psychology, and Sociology). The Code A Professional Practice and Conduct for Educators is studied. Special emphasis is given to the significance of The Individuals with Disabilities Education Act (IDEA) within the context of compensatory education. Students will also examine racial and cultural diversity, rural and urban educational issues, and the roles of the school and the educator as agents of cultural and educational change. Educational research tools and appropriate instructional technology applications are included. Major emphasis is placed on the development of an educational philosophy. Tubercular check, Act 126, Act 151, and Act 34 clearances must be obtained before the beginning of class. Three credits.

ED-101 FIELD EXPERIENCE I: PREK-4

This field-based course combines thematic lectures and case study analyses with systematic observation in a variety of PreK-4 schools and classroom settings. The goal of this course is to provide an overview of the various dimensions of modern teaching. In addition to field site experiences, students will be introduced to online teaching practices and techniques using web conferencing and other tools. Tubercular check, FBI, Act 151, and Act 34 clearances

must be obtained before beginning the class. This course meets three hours per week. Approximately 20 hours of fieldwork are involved. Fee. One credit.

ED-102 FIELD EXPERIENCE: 4-8/K-12

This field-based course combines thematic lectures and case study analyses with systematic observation in a variety of middle schools and classroom settings. The goal of this course is to provide an overview of the various dimensions of modern teaching. In addition to field site experiences, students will be introduced to online teaching practices and techniques using web conferencing and other tools. Tubercular check, FBI, Act 151, and Act 34 clearances must be obtained before beginning the class. This course meets three hours per week. Approximately 20 hours of fieldwork are involved. Fee. One credit.

ED-103 FIELD EXPERIENCE: 7-12/K-12

This field-based course combines thematic lectures and case study analyses with systematic observation in a variety of secondary schools and classroom settings. The goal of this course is to provide an overview of the various dimensions of modern teaching. In addition to field site experiences, students will be introduced to online teaching practices and techniques using web conferencing and other tools. Tubercular check, FBI, Act 151, and Act 34 clearances must be obtained before beginning the class. This course meets three hours per week. Approximately 20 hours of fieldwork are involved. Fee. One credit.

ED-109 PHYSICAL/CULTURAL GEOGRAPHY

Major areas of study include maps and globes, the earth in space, eco-regions, climate patterns, human habitation, land and water formations, origins of ecological degradation, natural and cultural relationships, and regional studies. The five geographic themes are investigated within the framework of the National Geographic Standards. The course emphasizes cross-cultural and global perspectives of historical events and movements and the socio-economic activities of people in their regional environs. A major requirement is the development of a regional profile using geographic relationships. Appropriate research and instructional technology applications are included in the course. This course includes both lecture and laboratory components and meets three hours per week. Tubercular check, FBI, Act 151, and Act 34 clearances must be obtained before beginning the class. Three credits.

ED-114 REGISTERED BEHAVIOR TECHNICIAN (RBT) TRAINING

This course provides instruction in the core tasks that are performed by behavior technicians. Topic areas include measurement, assessment, skill acquisition, behavior reduction, documentation and reporting, and professional conduct and scope of practice of Registered Behavior Technicians as stipulated by the Behavior Analyst Certification Board. This course fulfills the 40-hour training required to sit for the BACB's RBT competency assessment exam for those seeking the BACB's Registered Behavior Technician credential. One credit.

ED-122 CURRICULUM, PROJECTS, AND PLAY FOR THE DEVELOPING CHILD

This Fred Rogers-inspired course explores the importance of understanding the nature of preschool children (3- through 5-years-old), how they learn and techniques for program planning. Understanding the preschooler's nature will lead the coordination of standards. State and national accreditations and rating scales for preschoolers and preschool spaces will be examined and adapted into program plans. Exploring opportunities to involve parents

and community to enhance program quality will be explored. Fred Rogers inspired methods will be explored to incorporate meaningful play and authentic experiences into the classroom. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Three credits.

ED-142 MATHEMATICS FOR TEACHERS

A course designed specifically for prospective teachers in K-12 schools. The goal is to help students better comprehend and apply mathematical concepts and principles in the content strands of geometry, number systems, data analysis and statistics, and problem-solving. Students will be introduced to a variety of materials, activities with physical manipulatives and computer models, and various types of software as tools for teaching and learning. The course focus will include emphasis for the national standards and Pennsylvania standards for mathematics as well as state standards for other certification areas that include application of mathematics in another subject area. Offered spring semester. Three credits.

ED-155 GEOMETRIC AND MEASUREMENT THEORY

This course will provide pre-service teachers current trends, techniques, technologies, and research about teaching geometry. The course is designed to increase content knowledge and the knowledge of instructional strategies for teaching geometry. The van Hiele model for the development of geometric thought will be studied. Topics will include measurement, two- and three-dimensional figures, spatial relationships, constructions, tessellations, similarity and congruence, proportion, properties of figures. Students will participate in a variety of problem-solving activities including paper folding and the use of a variety of interactive web tools.

ED-201 HISTORICAL LITERATURE FOR CHILDREN

The course will focus on three interrelated themes through the study of more than twelve pieces of historical literature for children and young adults, including the historical context in which childhood takes place and is defined; the diversity of childhood with respect to economic class, gender, race, ethnicity, geographical residence, and religious belief; and the shifting power relationships between parents and children. At the completion of the class, students should be able to explain and exemplify the inherent complexities of presenting historical fiction and non-fiction to children and adolescents, discuss thoughtfully and intelligently issues raised with reading historical fiction and nonfiction for children and adolescents, write with authority and thoughtful depth concerning works of historical fiction and nonfiction for children and adolescents, and evaluate works of historical fiction and nonfiction for children and adolescents. Three credits.

ED-205 STRATEGIES AND TECHNIQUES OF INSTRUCTION

This course focuses on basic teaching strategies for prospective educators including instructional planning, classroom management, models of instruction, instructional technologies, effective presentation skills, and appropriate assessment practices. The selection and organization of content includes such factors as the availability and appropriateness of resources; curriculum standards, including use of the PDE Standards Aligned System; research trends; preferred teaching styles; desired learning outcomes, thinking and study skills, and students' learning and cultural needs. Extensive use is made of taxonomies of learning for defining objectives and analyzing questioning, instructional design, information presentation, and assessment strategies. Instructional needs of ESL students and special needs students are addressed

within the regular classroom setting. This course includes both lecture and hands-on activities. Tubercular check, FBI, Act 151, and Act 34 clearances must be obtained before beginning the class. Three credits.

ED-206 FIELD EXPERIENCE II: STRATEGIES AND TECHNIQUES OF INSTRUCTION

This course is designed to be taken concurrently or after ED 205 Strategies and Techniques of Instruction. Students will participate in an authentic on-campus teaching experience with school-age students and practice techniques and strategies that are taught in ED 205. Students will be instructed, observed, and mentored by a master teacher and administrator. The course is scheduled on Friday afternoons. Tubercular FBI, check, Act 151, and Act 34 clearances must be obtained before beginning the class. One credit.

ED-207 PRACTICUM IN EDUCATION

The requirements and content of this field-based course vary by arrangement with the instructor. It is designed to offer students opportunities for systematic observation and/or instructional interaction with children in a variety of learning environments. It can be taken in lieu of ED 101, 102, or 103 or as an elective for those who wish to earn credit for working in educational settings. In addition to field site experiences, students will be introduced to online teaching practices and techniques using web conferencing and other tools. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Fee. One credit.

ED-208 CLASSROOM PARTNERSHIPS, AND INCLUSION

This course is designed to provide the full scope of current trends, adaptive technologies, instructional techniques, and innovative strategies needed to effectively teach K-12 special learners and gain an understanding of the need for effective communication. Through the review of learning theory, students will be given methods of teaching in traditional and non-traditional classrooms along with tools for adapting instruction for all learners. Students will also be given the opportunity to practice the dynamics of effective communication that will assist in the development of meaningful partnerships with families and the educational communities. Dynamic inclusionary techniques will be practiced. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Three credits.

ED-214 INTERDISCIPLINARY STEM APPROACHES AND CONNECTIONS

This course investigates the elements of an integrative approach to STEM education with a focus on the approaches that bring together Science, Technology, Engineering, and Mathematics. Students will have both in- and out-of-class experiences to help define the STEM domain and how it can be used and facilitated with all levels of learners. This course will examine the components of the Next Generation Science Standards, Common Core Math Standards, inquiry investigation, project-based learning, and will allow opportunities for hands-on participation in STEM education. Successful candidates will propose, plan, and present ideas for successful STEM-related project-based learning integration at an age/content appropriate level for his or her area of interest. Three credits.

ED-220 READING, WRITING, AND DIFFERENTIATION IN THE CONTENT AREA

Teacher candidates will learn methods and strategies for teaching reading, writing, and differentiation to meet the needs of all

learners in secondary disciplinary areas. The course focuses on methods and strategies for strengthening the academic literacy skills of secondary learners across disciplinary areas to support the CCSS goal of College and Career Readiness for all learners. Theoretical perspectives around adolescent literacy are linked to research-based practices for embedding literacy instruction in all disciplinary areas to fulfill the expectations of the content area classroom with attention to differentiating instruction to meet the needs of diverse learners. Including 21st-century literacies (e.g., visual, technological, digital) in instructional design to further support diverse learners will also be addressed. This is a writing intensive course, which will require multiple lengthy writing assignments. As well, in-class “Write to Learn” activities will be used in most class sessions. Three credits.

ED-230 SOCIAL STUDIES FOR EARLY AND SPECIAL LEARNERS

This course investigates the growth and development of young children within the realm of the expanding environmental social studies curriculum. The six disciplines of social studies instruction at the primary grade levels provides the framework for the course structure. The focus of learning will be on the pre-service student’s ability to design appropriate and engaging lessons for early learners in a preschool and elementary school setting. This will include the incorporation of the Pennsylvania Standards for Social Studies Instruction and the National Council of Social Studies (NCSS) Standards. An emphasis will be placed on appropriate differentiation to address the variety of learning needs that a typical classroom presents. Adaptations to lesson design in the general education environment using co-teaching and inclusionary practices will be a strategic component of the course. Practice demonstrations, simulations and assessment strategies will be utilized. A required on-site experience will provide authentic classroom interaction with students in the school setting. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Three credits.

ED-235 TEACHING OF MATH AND SCIENCE FOR MIDDLE AND SPECIAL LEARNERS

This course utilizes a blended-learning model in exploring current scientifically-based methodologies for effective teaching in middle grade math and science classroom environments. The course investigates successful strategies and academic standards/anchors necessary for successful teaching in the thematic middle grades. Course content will include working with special needs and culturally diverse middle graders. The course will require students to equally prepare math and science lessons, microteaching, and field experiences within an integrated middle-grade experience. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Prerequisites: ED 100, ED 205/206, and PY 115 or consent of the instructor. Three credits.

ED-237 TEACHING OF HUMANITIES FOR MIDDLE AND SPECIAL LEARNERS

This course utilizes a blended-learning model in exploring current literature and composition-based methodologies for effective teaching in middle-grade English and social studies classroom environments. The course investigates successful strategies and academic standards/anchors necessary for successful teaching in the thematic middle grades. Course content will also include working with special needs and culturally diverse middle graders. The course requires students to equally prepare English and social studies lessons, microteaching, and field experiences within an integrated middle-grade experience. Tubercular check, FBI, Act

151, and Act 34 clearances must be obtained before beginning the class. Prerequisites: ED 100, ED 205/206, and PY 115 or consent of the instructor. Three credits.

ED-242 NUMERICAL AND MANIPULATIVE MATH FOR EARLY AND SPECIAL LEARNERS

This course will provide pre-service teachers with current trends, techniques, technologies, and research about mathematical teaching in the special, early elementary, and inclusive settings. Classroom strategies, hands-on numerical techniques and communication, and the use of manipulative tools will be discussed and presented. Through a combination of readings, student research, in-class activities, microteaching, and practical experience along with presented curricula, students will gain the skills necessary to create classroom enthusiasm toward mathematics. During much of the in-class time, students will participate in or present elementary mathematics lessons which parallel the types of lessons and strategies currently being promoted by the National Council of Teachers of Mathematics (NCTM) and other organizations that are interested in quality mathematics instruction at the early elementary level. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Three credits.

ED-244 SCIENCE AND THE ENVIRONMENT FOR EARLY AND SPECIAL LEARNERS

This class emphasizes the study of young children’s thinking in relation to the content and conceptual basis of science, technology, engineering, and mathematics, and the environment in which they live. Differentiated instruction, inquiry, adapted discovery for special learners, STEM-oriented hands-on learning, making, design thinking, and cooperative learning models form the pedagogical base for the study of physical, life, environmental, natural sciences, technology, engineering, and mathematics. This course consists of both lecture and laboratory components including an inquiry-based demonstration and participation lab that provides the opportunity to integrate early learning theory with the content and conceptual knowledge base in science and the environment. This course includes lecture and laboratory components, meets three hours per week and includes a school-based field experience. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Prerequisites: ED 100, ED 205/206, and PY 115 or consent of the instructor. Three credits.

ED-250 READING AND WRITING FOR EARLY AND SPECIAL LEARNERS

This course addresses the development of emergent literacy skills in young children with and without special needs ranging in age from preschoolers through fourth grade who are “learning to read.” Emphasis is placed on studying theories of learning, models of instruction, and their application in the design of appropriate language arts lessons for early and special learners. Special attention is given to the topics of balanced literacy, phonemic awareness, phonics instruction, whole language, vocabulary development, comprehension, and beginning writing skills. Students will learn how to use the Fred Rogers archive and children’s literature to enrich reading and writing curriculum as a learning medium with learners. Students are engaged in the planning and presentation of thematic units of instruction and language arts lessons that correlate with State and National Standards. Observations of language arts lessons in local schools and/or a tutoring experience are required. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Three credits.

ED-290 EDUCATION AND PSYCHOLOGY OF THE EXCEPTIONAL STUDENT

This course examines the characteristics of exceptional individuals and effective educational strategies for their inclusion in the general education setting. All areas of exceptionality including early intervention and the gifted and talented are included. Other topics include the legal bases for education of the exceptional, techniques for identification and assessment, adaptation of curriculum and materials, the use of technology, available educational and community resources for positive intervention for students and their families, and current developments in the field. Tubercular check, FBI, Act 151, Act 126, and Act 34 clearances must be obtained before beginning the class. Prerequisite: ED 115. Three credits.

ED-300 TEACHING OF FOREIGN LANGUAGE, K-12

This course is designed to prepare students for a career in foreign language education. Students gain knowledge of current and past theories of language acquisition, learning, and teaching. Students develop a philosophy and style of teaching and are required to design and present lessons for students of various ages, abilities, aptitudes, and physical conditions from diverse socioeconomic and cultural settings, backgrounds, and environments. Students familiarize themselves with the National Standards for Foreign Language Teaching, the Pennsylvania State Standards K-12, and the ACTFL Proficiency Guidelines. Students incorporate these standards in their lesson designs and instruments for assessment of student performance. Students integrate effective technological tools in the design of classroom lessons. Opportunities for reflection and self-evaluation concerning one's development as an effective teacher are provided. Membership in professional associations is encouraged. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Three credits.

ED-302 TEACHING OF SOCIAL STUDIES, 7-12

The major emphasis of this standards-driven course is the systematic investigation of teaching strategies and techniques, including lesson planning and student micro-teaching demonstrations, authentic learning and assessment, global education, instructional needs of special students, religion in the curriculum, and multicultural education. Current trends and issues in social studies education are also explored through required readings in periodical literature and educational research. Special attention is given to the teaching of current events, individualization and differentiation of instructional strategies and techniques, and the utilization of inquiry techniques. Membership in professional associations is encouraged. Appropriate research and instructional technology applications are included. One field-based experience is required. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Prerequisites: ED 205/206 or consent of the instructor. Three credits.

ED-303 TEACHING OF MATHEMATICS, 7-12

Course topics and experiences include: the identification of content area skills, development of scope and sequence charts, applications of technology to the teaching of mathematics, text and resource analysis, investigation of mathematics curricula with respect to Pennsylvania Core Standards and the NCTM National Standards, review of learning theory and its application to teaching methods, identification of specific learning groups and their special needs, and the development and use of teaching materials including written lesson plans and units of instruction. Videotaped micro-teaching and follow-up analyses are required. Membership in professional organizations is encouraged. This course includes

field-based experience. This course includes both lecture and laboratory components and meets three hours per week. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Prerequisites: ED 205/206 or consent of the instructor. Three credits.

ED-304 TEACHING OF SCIENCE, 7-12

Lectures and discussions focus on the philosophy of science; the human learning basis of science instruction; interaction analysis in the classroom; current trends in science curriculum and instruction aligned with the Pennsylvania Academic Standards; inquiry, direct instruction, cooperative learning, and discussion models of teaching; designing course, unit, and lesson plans; and authentic assessment of learning, micro-teaching, appropriate technology applications, and library research projects are required. Membership in professional associations is encouraged. One field experience is required. This course includes both lecture and laboratory components and meets three hours per week. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances, must be obtained before beginning the class. Prerequisites: ED 205/206 or consent of the instructor. Three credits.

ED-305 TEACHING OF ART, K-12

This course is designed to introduce the art education student to the teaching of art at the elementary and secondary levels. In addition to weekly class meetings, opportunities for classroom observation and directed teaching strategies will be provided. An emphasis is placed on developing a proficiency in art curriculum planning, motivational strategies, art room management, and methods of evaluation in art. Students will participate in mock-teaching and local art museum experiences. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Three credits.

ED-306 TEACHING OF BUSINESS, COMPUTER AND INFORMATION TECHNOLOGY, K-12

This comprehensive course is designed to present the theory and methodology necessary to develop, teach, and evaluate instructional lessons and units relating to business subjects including accounting, business law, career development, communication, computation, economics, and personal finance, entrepreneurship, information technology, international business, management, and marketing. Students will also learn about establishing and administering advisory committees, business clubs, and work experiences. School visitations and review of current literature are included. Applications are appropriate to the elementary, middle, and high school. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Three credits.

ED-307 PRACTICUM II

The requirements and content of this field-based course vary by arrangement with the instructor. It is designed to offer students opportunities for systematic observation and/or instructional interaction with children in a variety of learning environments. This course may be taken as an elective for those who wish to earn credit for working in educational settings. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Fee. One credit.

ED-308 PERFORMING AND VISUAL ARTS EARLY AND SPECIAL LEARNERS

This course addresses the principles, methodology, and decision-making skills essential for teachers to enrich elementary curriculum through the fine arts. It focuses on an integrated inter-disciplinary approach that increases teacher and student awareness of the

creative processes and their role in promoting child development. This course includes both lecture and laboratory components, meets three hours per week, and includes a school-based field experience. Tubercular check, FBI, Act 151, and Act 34 clearances must be obtained before beginning the class. Prerequisites: ED 100, ED 205, and ED 115 or consent of the instructor. Three credits.

**ED-311 FIELD EXPERIENCE III:
MIDDLE GRADE INSTRUCTION AND THEORY**

This field-based course is held on and off campus utilizing local school districts, Saint Vincent College Challenge program, and other youth programs for pre-student teaching experiences in the early adolescent setting. Supervised teaching and observations will be conducted to assist students in adapting curriculum and designing lessons for delivering instruction to middle (grades 4-8) learners. Students will have the opportunity to implement their lesson plans and self-evaluate their own practice teaching. Opportunities to observe veteran teachers and the middle school approach to teaching will be offered. Exploration of a variety of techniques to present the same topic to different levels and how to incorporate interdisciplinary teaming will be addressed. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Three credits.

**ED-317 PROGRAM DEVELOPMENT
FOR INFANTS AND TODDLERS**

This Fred Rogers-inspired course explores the importance of understanding the nature of young children (birth through 4 years), how they learn, and techniques for program planning. Through site visits and role play, participants explore the basics of infant care and how to address their physical, emotional, and cognitive needs. Appropriate curriculum and room design will be explored and adapted to a variety of ages and stages. State and National accreditations and rating scales for infants and infant spaces will be examined and adapted into program plans. The Rogers Center will be used to enhance programming and the selection and use of appropriate materials. Different types of available programs will be discussed. Prerequisite: ED 122. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Three credits.

**ED-318 FIELD EXPERIENCE III:
EARLY CHILDHOOD INSTRUCTION AND THEORY**

This field-based course is held on and off campus utilizing local Pre-K learning centers for pre-student teaching experiences in the preschool setting. Supervised teaching and observations will be conducted to assist students in adapting curriculum and designing lessons for delivering instruction to early learners. Students will have the opportunity to implement their lesson plans and self-evaluate their practice teaching. Opportunities to observe veteran teachers and the Fred Rogers approach to teaching will be offered. Exploration of a variety of techniques to present the same topic to different levels and how to incorporate topics into discovery areas will be a focus. Students will be asked to incorporate room and program design from ED 122 into their teaching experiences. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Three credits.

**ED-319 INQUIRY INVESTIGATION, DESIGN, AND
ASSESSMENT IN STEM EDUCATION**

This course concentrates on the theory and practice of inquiry learning, project design, and assessment of inquiry-based activities. Students will participate in using new tools, developing ideas, and construction of proposed solutions that demonstrate a strong STEM knowledge. This course will require students to utilize the design process, employ fundamental concepts of mathematics,

engineering, and scientific principles, to complete a final project that demonstrates STEM and the process of communicating through the disciplines. Presentations and group projects will be required as well as technical reports and construction of valid and reliable assessments. This course is a STEM-content course in which students should expect to demonstrate mastery of basic skill concepts in mathematics and science. Three credits..

**ED-320 COMPOSITION AND LANGUAGE ARTS
FOR UPPER ELEMENTARY**

This course addresses the continuing development and refinement of literacy skills in the intermediate grades. The focus is on presenting the components required in a balanced program for language arts instruction. Reading, writing, speaking, and listening strategies across the curriculum are emphasized along with problem-solving and higher-level thinking skills. Various approaches for reading and writing instruction are examined including the use of basal readers and reading and writing workshops. Guidelines and techniques for teaching grammar, spelling, and handwriting are learned and presented in lesson plans that comply with State and National Standards. Students continue their study of children's literature by reviewing several chapter books, participating in a literature response group, and by developing a literature focus unit. Appropriate instructional technologies are included. Observations of language arts lessons and/or a tutoring experience are required. This course includes both lecture and laboratory components and meets three hours per week. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Three credits.

**ED-322 FIELD EXPERIENCE III:
SECONDARY AND K-12 INSTRUCTION AND THEORY**

This field-based course is held on and off campus utilizing local school districts and other youth programs for pre-student teaching experiences in the K-12 or secondary setting. Supervised teaching and observations will be conducted to assist students in adapting curriculum and designing lessons for delivering instruction to K-12 and secondary (grades 7-12) learners. Students will have the opportunity to implement their lesson plans and self-evaluate their own practice teaching. Opportunities to observe veteran teachers and the secondary school approach to teaching will be offered. Exploration of a variety of techniques to present the same topic to different levels and instruction regarding young adult transition to post-secondary education, armed forces, or workforce will be emphasized. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. One credit.

**ED-325 PHYSICAL HEALTH AND WELLNESS
FOR EARLY EDUCATORS**

This course involves the study of personal health and wellness as it relates to the early childhood educator when performing as a leader and mentor for young children. It includes instruction on the development of physical education activities appropriate for early learners. The prospective classroom teacher will be provided with a knowledge base in health, fitness, and wellness. Students will be exposed to a rounded approach to life-long wellness as an individual and teacher. Assignments will include lesson planning, exams, physical inventories, microteaching, student discussion, etc. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Three credits.

**ED-330 EARLY CHILDHOOD LEADERSHIP
AND COMMUNITY ADVOCACY**

This Leadership course focuses on the administrative aspects of early childhood, beginning with an historical overview of preschool. It focuses on the role of a director or administrator in both a

business and leadership aspect. State and national accreditations for the preschool (DHS, STARS, NAEYC) as well as the director (Director Credential) and Staff (CDA, PDR) are explained and explored. Determining how to write a business plan, quality improvement plan, and the development of handbooks (Parents, Staff, and Policy and Procedure) are included in the class work. Practice in developing strategies on how to be a leader not a manager, developing your team, utilizing your team's strengths, and furthering your staff's development. The importance of political advocacy and how to get involved are discussed. Advertising opportunities and designing brochures for enrollment enhancement are a focus. Community engagement groups, parent groups, grants, and awards to enhance programming are explored. Communicating and interfacing with parents is addressed through the design and delivery of a parent informational meeting, held in an early-learning site. Prerequisite: ED 317. Three credits.

ED-340 STUDY ABROAD IN EDUCATION

The Study Abroad in Education course presents students with opportunities to explore cross-cultural connections in Education. Students investigate a variety of dimensions of educational practice, including curriculum design, instructional delivery, and topics bridging specialized areas of practice in education with the emphasis on identifying the commonalities of practice and differences that invite reflective reform. 0 or 1 credit.

ED-345 URBAN EDUCATION PRACTICUM

The Urban Education Practicum is a summer field-based experience in an urban setting. The course participants work with at-risk elementary-age students in varied settings, including inner-city schools, community service centers, and a summer day camp. Participants will (1) work in a classroom setting to help children maintain and develop skills in basic content areas or (2) supervise outdoor activities designed to reinforce basic learning skills and to build teamwork, character, and self-esteem. Requirements include submission of a reflective journal and participation in 30 hours of training and orientation activities for effectively working with at-risk children in an urban environment. Three credits.

ED-350 INDEPENDENT STUDY — EDUCATION

Open to junior and senior students with the approval of the department chairperson. Independent studies are administered only by special need and on a case-by-case basis. Variable credit.

ED-355 INSTRUCTIONAL INTERVENTIONS FOR STUDENTS WITH HIGH INCIDENCE DISABILITIES

This course addresses various strategies and techniques for successful teaching of students with high incidence disabilities. Within this course, there is a concentration on remediation and adaptation in the general curriculum areas of reading, written and spoken language, and mathematics. Students are exposed to secondary curricular areas of life-skill strategies, self-determination strategies, and self-advocacy strategies. Emphasis will be placed on supporting students with high incidence disabilities in the general curriculum and collaborating with general education teachers. Course requirements include practice teaching and field experiences, lesson planning, consultation, and research of available journals and resources for teaching. Tubercular check, FBI, Act 151, Act 126, and Act 34 clearances must be obtained before beginning the class. Three credits.

ED-360 STRATEGIES AND ASSESSMENT FOR STUDENTS WITH SIGNIFICANT AND MULTIPLE DISABILITIES

This course concentrates on diagnostic and evaluation techniques used with students who have significant, developmental, and multiple disabilities. The use of formal and informal assessment tools in areas specific to functional and life skills is emphasized. Students acquire knowledge of various assessment procedures used to identify students for special education and for individual education program designs implemented within the traditional or non-traditional classroom. This course requires students to perform simulated hands-on and practical implementation of assessment tools to monitor students' progress. In addition, the course focuses on methods teachers use to organize curriculum and implement assessment and instruction to ensure maximum learning for students with moderate and/or severe disabilities. Students are exposed to the curriculum needs such as life, vocational, social skills, and functional academics. Three credits.

ED-362 CLASSROOM APPROACHES FOR STUDENTS WITH BEHAVIORAL AND AUTISM SPECTRUM

This course informs students about techniques for the instruction of students with emotional disabilities and autism, the principles of applied behavior analysis, and the use of behavior assessments in the classroom. In addition, students are exposed to the multiple characteristics of students with autism and other emotional and behavioral disabilities. Students are taught classroom approaches



for helping students with emotional disabilities and autism gain access to the general curriculum. This course focuses on the implementation of various positive behavior techniques in order for special educators to ensure maximum learning and class management. Three credits.

ED-381 EDUCATIONAL TESTING

This course is designed for Psychology Education majors and Elementary Instruction majors and provides an overview of psychological and educational testing of preschool and school-age children and youth. Topics include the history, issues, and problems of psychological and educational assessment; test design and evaluation; an overview of tests of intelligence, academic achievement, interests, and aptitude; ecological assessment of classroom behavior; and a review of ethical issues. Consideration will be given to assessing the needs of exceptional children and ways of critically reviewing such assessment for purposes of educational decision-making. Fee. Three credits.

ED-385 APPLIED PRACTICUM IN STEM TEACHING AND LEARNING

This authentic experiential course is designed to use a project-based and data-driven approach to provide future STEM professionals with the experiences and scholarship necessary to be successful STEM leaders or educators. This course requires students to participate in a conference(s) or workshop(s) related to STEM Education and to present research that enhances STEM teaching and learning. Students will be required to travel to sites and mobile labs to experience the variety of STEM instructional settings and assess their effectiveness in supporting STEM education. Students will also tour factories and workplaces that use 21st-century technologies for production to help align instructional program design to real-world occurrences. Three credits.

ED-390 TEACHING NON-NATIVE AND CULTURALLY DIVERSE STUDENTS

This course is intended to provide both practical and theoretical insights into challenges and difficulties in human communication that result when representatives of different countries interact. The course addresses the history and current realities and principles of the field of second language learning and teaching. It focuses on the needs of the learner, the role of the teacher, cultural differences and international challenges, and the application of methodology in developing communicative competence. Using current techniques and teaching exercises, the course provides students with applied training in approaches of instruction for non-native speaking learners. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Three credits.

ED-400 FIELD EXPERIENCE IV: PRE-STUDENT TEACHING PRACTICUM

Student registers for ED 400 the semester prior to student teaching. The course is designed to provide supervised instructional experiences with children and adolescents and an interactive didactic seminar to address the prerequisite skills specific to student teaching. Topics include familiarization with instructional aids and materials, reinforcement of basic teaching pedagogy, knowing and understanding school policies, developing rapport with students and faculty, and providing ample opportunities for systematic observation and supervised teaching in the certification area. ED 400 includes a weekly seminar and a commitment of one full day per week of fieldwork for a semester. Requirements include school site teaching with a minimum of two teaching periods observed by the College supervisor. Appropriate research and technology

applications are included. Students must have gained formal admission to the teacher certification program before enrolling in this course. Tubercular check, FBI, Act 151, and Act 34 clearances must be obtained before beginning the class. Prerequisites: ED 115, ED 100, ED 101, ED 205, and at least one teaching methods course. Fee. Two credits.

ED-410 FIELD EXPERIENCE V: STUDENT TEACHING INTERNSHIP

The Student Teaching Internship is a full-semester experience. A variety of supplemental assignments are designed to enhance professional competencies. Prerequisites include completion of all other certification requirements, with the exception of Professional Seminar (ED 411). Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. (Student must take ED 411 concurrently with ED 410). Fee. Nine credits.

ED-411 PROFESSIONAL SEMINAR

The seminar meets weekly and is required of all students who enroll in ED 410. Lectures, demonstrations, and discussions draw upon the immediate problems and experiences of student teaching. Supplemental assignments are designed to assist the student in applying educational principles of instruction in actual classroom settings. Appropriate research and technology applications are included. Additional emphasis is placed on preparation of credentials package. Prerequisites include completion of all other certification requirements with the exception of student teaching. Tubercular check, FBI, Act 126, Act 151, and Act 34 clearances must be obtained before beginning the class. Student must take ED 411 concurrently with ED 410. Three credits.

ED-412 SPECIAL EDUCATION CONSULTATION, TRANSITION, AND LAW

Within this course, candidates will focus on Special Education laws, Special Education paperwork, and transition for students with disabilities. Candidates will gain practical knowledge of how to complete required teacher-generated paperwork that is mandated by the current Special Education law. They will also gain knowledge of what Special Education law says about students with disabilities transitioning into adulthood and how to develop programming to meet the variety of needs for secondary students with disabilities. Three credits.

ED-413 INTERNSHIP IN SPECIAL EDUCATION

Similar to Student Teaching, this internship requires the candidate to spend time with a special education teacher. The 150 required hours are split between high-incidence and low-incidence disabilities so the student gains experience with various students and disabilities within their certification range. During the semester, the student will develop a professional portfolio that provides evidence of mastery for each of the 10 Council for Exceptional Children Initial Content Standards. In addition, the student will be observed twice by a mentor and twice by the supervisor. This course will coincide with ED 412 – Special Education Consultation, Transition, and Law. Prerequisites: ED 355, ED 360, ED 362. Three credits.

ED-550 EDUCATION INTERNSHIP

This course is a self-designed internship in education that provides students the opportunity to learn and practice education theory through experiential fieldwork. The internship design, duties, and course evaluation must be monitored by the assigned faculty member. Variable credit.

CL-129 YOUNG ADULT LITERATURE

This literature course provides the opportunity for students to review recent trends in young adult literature. Class members read and discuss a selection of at least ten contemporary young adult novels in addition to secondary sources. Course requirements include short essays, reading quizzes, exams, and class participation. This course is required of all students seeking secondary teaching certification in English. Three credits.

CL-130 CHILDREN'S LITERATURE

This literature course invites students to explore the evolution of children's literature. Students will read and discuss a selection of at least 12 different authors of literature for children. Assigned readings include the picture book, realistic fiction, nonfiction, historical fiction, science fiction, fantasy, and secondary sources. The goal of the course is to enable students to make substantive, independent evaluations of the texts at hand and other texts they encounter. Course requirements include short essays, reading quizzes, two exams, and class discussion. Three credits.

CL- 221 HISTORICAL LITERATURE FOR CHILDREN

The course will focus on three interrelated themes through the study of more than twelve pieces of historical literature for children and young adults, including the historical context in which childhood takes place and is defined; the diversity of childhood with respect to economic class, gender, race, ethnicity, geographical residence, and religious belief; and the shifting power relationships between parents and children. At the completion of the class, students should be able to explain and exemplify the inherent complexities of presenting historical fiction and non-fiction to children and adolescents, discuss thoughtfully and intelligently issues raised with reading historical fiction and nonfiction for children and adolescents, and write with authority and thoughtful depth concerning works of historical fiction and nonfiction for children and adolescents. Three credits.

CL-259 CRITICAL APPROACHES TO CHILDREN'S LITERATURE

Critical studies of children's literature draw not only on literary theory but also on an interdisciplinary approach to age-specific fiction. This literature course helps students interrogate children's and young adult literature and the roles it has played in national and familial identity, social reform, aesthetic movements, and other topics. In this discussion-orientated class, readings include approximately five novels and critical essays; assignments include weekly papers, one substantial paper, and class participation. Three credits.

CL-272 SPECIAL TOPICS IN CHILDREN'S LITERATURE

This literature course offers students unique opportunities for more intensive study of children's literature. Topics vary from semester to semester, and students should consult the registration system for specific descriptions of courses offered. Three credits.

CL-295 WRITING FOR CHILDREN AND YOUNG ADULTS

This course will introduce undergraduates to the art of writing for young people. It may focus on a single genre in depth (for instance, the young adult novel) or invite students to read and write broadly across a range of genres (picture books, children's poetry, nonfiction for the young, etc.). Three credits

ENGINEERING

Stacy Birmingham, *Chairperson*

Derek Breid; David Carlson, O.S.B.; Paul Follansbee;

David Grumbine; Stephen Jodis

Adjunct Faculty: Daniel Saffer

Saint Vincent College has two degree options for students who wish to pursue Engineering. These two programs, a four-year Bachelor of Science in Engineering program and a 3-2 Mathematics/Engineering program, are designed to complement each other and provide different opportunities to students in building a growing community of engineers at Saint Vincent College. These programs are described below.

ENGINEERING

The Bachelor of Science in Engineering program at Saint Vincent College is a general engineering program. The mission of the Engineering program is to provide students with a solid foundation in engineering and engineering problem-solving in the broad context of the liberal arts. The program provides not only a strong foundation in science, mathematics, and general engineering concepts but also depth in a selected engineering discipline through upper-level engineering courses and a year-long senior capstone project.

This program provides excellent preparation for employment or graduate school in engineering or a related field. The liberal arts core common to all Saint Vincent College degrees ensures that our students will be able to design ethical engineering solutions to local, national, and global problems with an understanding of the global and societal impact of the solutions. The Engineering program provides excellent preparation for a variety of post-graduate opportunities, including the following:

- Immediate employment in an engineering field
- Enrollment in a graduate engineering program
- Engagement in another field such as medicine, law, or business, where the engineering education provides transferrable skills such as creative problem-solving and ethical decision making

Students in the Engineering program are required to select an engineering concentration to fulfill the depth requirement. The concentrations that are currently offered are the following:

- Environmental Engineering
- Chemical Engineering
- Materials Engineering
- Mechanical Engineering

In addition, all students must select at least one technical elective from a set of science, mathematics, computer science, and engineering courses. This allows students to broaden their foundational knowledge, such as by taking a course in biology or environmental science, or to take an upper-level engineering course in an area outside of their selected concentration.

Program Educational Objectives

The objectives of the Engineering program are to produce graduates who, within a few years after graduation, will be able to:

1. Pursue a career or graduate studies in engineering or a related field.

2. Demonstrate leadership and teamwork skills in their chosen field and dedication to technical innovation and problem-solving.
3. Pursue a lifestyle of service and active involvement with professional, civic, or religious organizations, to prepare them to contribute to the greater benefit of society.

ENGINEERING STUDENT LEARNING OUTCOMES

To ensure that our graduates attain the program educational objectives, the curriculum of the Engineering program is designed so that students have the following abilities at the time of graduation:

1. Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. Communicate effectively with a range of audiences.
4. Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. Acquire and apply new knowledge as needed, using appropriate learning strategies.

Requirements for the Bachelor of Science degree in Engineering

(See core curriculum requirements.)

Major Requirements (82 credits)

(11 of these satisfy Core Curriculum requirements)

The student must complete the requirements listed in the following categories:

Mathematics Requirements

(19 credits; 3 meet Core Curriculum requirements)

MA 111	Analytical Calculus I	4
MA 112	Analytical Calculus II	4
MA 211	Analytical Calculus III	4
MA 212	Ordinary and Partial Differential Equations	4
MA 311	Probability and Statistics I	3

Science Requirements

(12 credits; 8 meet Core Curriculum requirements)

CH 101	General Chemistry I	3
CH 103	General Chemistry I Laboratory	1
PH 111	General Physics I	3
PH 113	General Physics I Laboratory	1
PH 112	General Physics II	3
PH 114	General Physics II Laboratory	1

Engineering Core Requirements (33 credits)

ENGR 100	Introduction to Engineering	2
ENGR 115	Introduction to Engineering Computation	3

or

CS 110	C++ Programming I	2
ENGR 220	Engineering and Computing Ethics	2
ENGR 223	Statics	3
ENGR 226	Materials Engineering	3
ENGR 228	Materials Engineering Lab	1
ENGR 240	Engineering Design and Lab	4
ENGR 261	Introduction to Electrical Circuits	3
ENGR 263	Introduction to Electrical Circuits Lab	1
ENGR 310	Engineering Thermodynamics	3
ENGR 315	Junior Engineering Laboratory	1
ENGR 366	Control Theory	3
ENGR 440	Capstone Design Project	2
ENGR 441	Capstone Design Project II	2

Technical Elective (3 credits)

Students pursuing concentrations in chemical engineering, materials science, and mechanical engineering must take at least one three-credit course from the following list of science, mathematics, computer science, and engineering course as a technical elective. Students pursuing the environmental engineering concentration must take an engineering course as a technical elective. Note that students must have the required prerequisites to take any of these courses. In addition, this technical elective cannot be satisfied by AP or IB credit, or by independent study or independent research courses.

Any 200-level Bioinformatics course

Any 100-level or 200-level Biology course

CH 102 and 104 (General Chemistry II and General Chemistry II Laboratory)

Any 200-level Chemistry course

Any 100-level, 200-level, or 300-level Computer Science course, excluding CS 102, CS 110, CS 357 and CS 358

Any Engineering course not required in the Engineering Core or in the student's selected concentration

Any 100-level or 200-level Environmental Science course

Any 200-level Integrated Science course

Any 200-level, 300-level, or 400-level Mathematics course, excluding those required in the Engineering core

Any 200-level or 300-level Physics course, excluding PH 214, PH 215, PH 223, PH 224, PH 225, and PH 381

Engineering Concentration Requirements (15 credits)

Students must complete the requirements for one of the following engineering concentrations:

Chemical Engineering Concentration

ENGR 230	Chemical Engineering Fundamentals	3
ENGR 330	Fluid Mechanics	3
ENGR 340	Heat and Mass Transport	3
ENGR 360	Separation Processes	3
ENGR 420	Chemical Reaction Engineering	3

Environmental Engineering Concentration

ENGR 235	Introduction to Environmental Engineering	3
ES 220	Introduction to Geographic Information Systems	3
ENGR 330	Fluid Mechanics	3
ENGR 340	Heat and Mass Transport	3
ENGR 350	Alternative Energy Systems	3

Materials Engineering Concentration

ENGR 320	Mechanics of Materials	3
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ENGR 326	High-Temperature Materials	3
ENGR 327	Soft Materials	3
ENGR 340	Heat and Mass Transport	3
ENGR ---	ENGR 200-level or higher class	3

Mechanical Engineering Concentration

ENGR 222	Engineering Graphics and Design	3
ENGR 224	Dynamics	3
ENGR 320	Mechanics of Materials	3
ENGR 330	Fluid Mechanics	3
ENGR 340	Heat and Mass Transport	3

Typical First-Year Schedule

(Actual schedule may vary based on a student's needs and prior educational history)

Fall Semester (14 credits)

CH 101	General Chemistry I	3
CH 103	General Chemistry I Laboratory	1
ENGR 100	Introduction to Engineering	2
MA 111	Analytical Calculus I	4
EL 102	Language and Rhetoric	3
	First Year Seminar	1

Spring Semester (17 credits)

ENGR 115	Introduction to Engineering Computation	3
or		
CS 110	Computing and Information Science I	3
MA 112	Analytical Calculus II	4
PH 111	General Physics I	3
PH 113	General Physics I Laboratory	1
TH 119	First Theology	3
	Social Science Core	3

3-2 MATHEMATICS/ENGINEERING PROGRAM

Saint Vincent College offers a five-year cooperative liberal arts and engineering program in conjunction with three affiliate institutions: The Catholic University of America, The Pennsylvania State University, and The University of Pittsburgh. Students enrolled in this program spend the first three years at Saint Vincent College and then transfer to the cooperating engineering institution. The mission of the 3-2 Mathematics/Engineering Degree Program is to provide students with a solid foundation in mathematics, science, and the liberal arts informed by Benedictine and Catholic values so they may succeed in their engineering education at a partner institution and use their talents to contribute to the greater good.

Students who successfully complete this program receive a Bachelor of Science in a specific engineering discipline from the cooperating institution and a Bachelor of Arts in Math/Engineering from Saint Vincent College. Students in this program may graduate from Saint Vincent College upon the successful completion of 45 credit hours of coursework at the cooperating engineering institution (excluding co-op assignments). This degree program is well-suited for students who want the foundational skills afforded by a liberal arts education rooted in the Catholic and Benedictine tradition but also desire an engineering degree in a specific discipline.

Important considerations for this program are the following:

- A student must have an overall GPA of 3.0 or higher to be considered for transfer by the cooperating institutions with the following exception: for transfer into the bioengineering degree program at The University of Pittsburgh, a student must have an overall GPA of 3.5 or higher to be considered for transfer.
- Only courses in which a student achieves a final grade of C or better can be transferred to the cooperating institution.
- Each cooperating institution establishes which engineering degree programs are open to transferring students.
- At least two years (four semesters) of coursework at the cooperating institution is required. For certain programs, summer courses before the student's first fall term or an additional one or two semesters may be required.

Further information is available from the 3-2 Mathematics/Engineering Program Chair at Saint Vincent College.

Program Educational Objectives

The 3-2 Mathematics/Engineering program provides the initial preparation for students in the following ways: Establish the foundation of liberal arts, mathematics, and science tools at Saint Vincent College to enable a successful engineering education at a partner institution.

Expose students to select engineering courses to nurture, support, and reinforce their interest in the engineering discipline.

Foster well-rounded individuals by uniting math and science with the liberal arts, in preparation for a wide variety of engineering disciplines and vocations.

3-2 MATHEMATICS/ENGINEERING STUDENT LEARNING OUTCOMES

To ensure that our 3-2 Mathematics/Engineering students attain the program educational objectives, the curriculum of the program is designed so that students have the following abilities at the time of transfer to the cooperating engineering institution:

1. An ability to identify, formulate, and solve engineering problems by applying principles of engineering, science, and mathematics
2. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies
3. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts

Requirements for a Bachelor of Arts Degree in Mathematics/Engineering

Core Curriculum requirements (39 credits*)

History	(one 100 level and one 200+ level)	6
PL 101	First Philosophy	3
PL	Philosophy course	3
EL 102	Language and Rhetoric	3
EL 108	Technical Writing (Penn State) or any other English course (Pitt)	3
	Foreign Language (intermediate level)	6
EC 101	Microeconomics	3
	Social Science course (BA, EC, PS, PY, SO)	3
TH 119	First Theology	3
	Theology course	3
	Music or Fine Arts (e.g., AR 100)	3

* There are actually 50 required Core Curriculum requirements, but 11 of them are satisfied by Math and Science courses listed below.

Major Requirements (at least 58 credits)		
ENGR 100	Introduction to Engineering	2
MA 111	Analytical Calculus I*	4
MA 112	Analytical Calculus II	4
MA 211	Analytical Calculus III	4
MA 212	Ordinary and Partial Differential Equations	4
MA 251	Linear Algebra	3
MA 311	Probability and Statistics I	3
ENGR 222	Engineering Graphics and Design	3
ENGR 223	Statics	3
ENGR 224	Dynamics	3
CS 110	C++ Programming I	3
or		3
ENGR 115	Introduction to Engineering Computation (Pitt)	3
or		
CS 270	Introduction to Numerical Computation (Penn State)	3
CH 101	General Chemistry I**	3
CH 102	General Chemistry II**	3
CH 103	General Chemistry I Lab**	1
CH 104	General Chemistry II Lab**	1
PH 111	General Physics I	3
PH 112	General Physics II	3
PH 113	General Physics I Lab	1
PH 114	General Physics II Lab	1

* Calculus I is a four-credit course with three credits fulfilling the Mathematics Core Curriculum requirement.

** General Chemistry I and II, with the respective Labs, satisfy the Science Core Curriculum requirements.

Students will select two (2) courses from the following list. Students should work with the program director and advisor regarding these selections:

ENGR 220	Engineering and Computer Ethics	2
ENGR 230	Chemical Engineering Fundamentals	3
ENGR 235	Introduction to Environmental Engineering	3
ENGR 226	Materials Engineering	3
ENGR 240	Engineering Design + Lab	4
ENGR 261	Introduction to Electrical Circuits + ENGR 263 (Lab)	4
ENGR 310	Engineering Thermodynamics	3
ENGR 320	Mechanics of Materials	3
ENGR 330	Fluid Mechanics	3
ENGR 340	Heat and Mass Transport	3
ENGR 366	Control Theory	3
ENGR 425	Engineering Project Management	3
CH 221, 223	Organic Chemistry I + Lab	4
CA 120	Public Presentation (Required for Penn State)	3
CS 111	C++ Programming II	3

Typical First-Year Schedule

Fall Semester

ENGR 100	Introduction to Engineering	2
MA 111	Analytical Calculus I	4
CH 101	General Chemistry I	3
CH 103	General Chemistry I Lab	1
EL 102	Language and Rhetoric (or TH 119)	3
One other Core Class		
(e.g., history, philosophy, or language)		3
First-Year Seminar		1

Spring Semester

MA 112	Analytical Calculus II	4
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CH 102	General Chemistry II	3
CH 104	General Chemistry II Lab	1
TH 119	First Theology (or EL 102)	3
PH 111	General Physics I	3
PH 113	General Physics I Laboratory	1
One Core Class		3

ENGINEERING COURSE DESCRIPTIONS

ENGR-00X ENGINEERING EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. Zero credits. Pass/Fail.

ENGR-099 KENNAMETAL YOUNG ENGINEERS

The semester-long Young Engineers Program, taught in conjunction with Kennametal, provides an opportunity for students in 11th and 12th grade to learn about engineering and technology through experiences at Kennametal's Technology Center in Latrobe and its manufacturing facilities. Students attend eight three-hour sessions led by Kennametal and other local industry partners and college educators. They participate in a field trip to one of Kennametal's manufacturing facilities and complete an engineering project under the mentorship of Kennametal engineers and Greater Latrobe Senior High School teachers. During the class time at the high school, students prepare for and process their sessions at Kennametal, work on their projects, research various engineering careers and colleges, participate in STEM activities, and develop career skills such as public speaking and resume writing. College credit for the course is offered through Saint Vincent College.

The topics of the eight sessions include:

- Careers in technology, including a career fair
- Engineering case studies - marvels and failures
- Problem-solving - processes, failure analysis, and innovation
- Operational Excellence and manufacturing economics
- Engineering design - design criteria, risk analysis, and

CAD/CAM

- Investigative analyses, including a tour of the technology center
- Systems controls and digital manufacturing technology
- Ethics, law, and engineering

The general format of the eight sessions includes content presentation, hands-on activities, and project work. Students selected for the class are expected to have a strong foundation and interest in science and mathematics. College credit for the course is offered through Saint Vincent College.

ENGR-100 INTRODUCTION TO ENGINEERING

Introduction to the engineering discipline, with a focus on problem-solving, ethics, teamwork, and design. Topics also include an overview of the engineering disciplines and an introduction to using spreadsheets for data analysis. Students will also complete team-based projects. Prerequisite: None. Two credits.

ENGR-115 INTRODUCTION TO ENGINEERING COMPUTATION

The goal of this course is to introduce engineering students to engineering problem-solving using a modern computational environment. In the context of engineering applications, basic procedural programming concepts will be covered including input/output, branching, looping, functions, file input/output, and

data structures such as arrays and structures. Problem-solving will be demonstrated using standard engineering application software packages. Prerequisite: MA 111. Three credits.

ENGR-220 ENGINEERING AND COMPUTING ETHICS

Study of ethical issues in the fields of engineering and computing: Topics include safety and liability, professional responsibility to clients and employers, whistle-blowing, codes of ethics, legal issues that relate to privacy, intellectual property rights, and cybercrime. The course also examines issues concerning the use and development of developing and emerging technologies that may involve computers or be used by computing or engineering professionals. Prerequisite: PL 101. Two credits.

ENGR-222 ENGINEERING GRAPHICS AND DESIGN

Introduction to engineering design methodology. Topics include mechanical drawing, multiview projection, auxiliary projections, sections and conventions, pictorial drawing, dimensioning, and exposure to the types of drawings commonly used in industry. Extensive use of software for 3D designs. A portfolio of assigned drawings is completed during the course. Prerequisites: none. Three credits.

ENGR-223 STATICS

Statics is the structural analysis of non-deformable bodies that are at equilibrium. Students will use equilibrium of force (in 1, 2, and 3 dimensions) and moment to analyze various structures, including beams, trusses, and machines. Vectors used extensively. Prerequisites: PH 111 and MA 112. Three credits.

ENGR-224 DYNAMICS

Dynamics is the analysis of particles, rigid bodies, and systems in motion. This course applies concepts such as kinematics, Newton's second law, work/energy, and impulse/momentum to analyze the behavior of moving particles, rigid bodies, and systems such as flowing fluids and mechanical apparatuses. Vectors used extensively. Prerequisite: ENGR 223. Three credits.

ENGR-226 MATERIALS ENGINEERING

An introductory materials science and engineering course. Students learn about bonding and the influence of the structure of materials and inherent defects in materials on ultimate properties and performance. The emphasis is on strength and failure of metals and ceramics, phase transformations, phase diagrams, and processing. Electrical and thermal properties are also considered. Case studies are used to illustrate many of the instructional modules. Prerequisites: CH 101 and MA 111. Three credits.

ENGR-228 MATERIALS ENGINEERING LABORATORY

This is the laboratory course that supports Materials Engineering ENGR 226. Students will learn to mount, polish, and view metallic specimens. Students will perform hardness tests and will heat treat metallic specimens to alter their properties. Exposure to Scanning Electron Microscopy will be included in the course. Students will witness tensile testing and fracture testing in steels. Students will generate stress-strain curves and fracture energy versus test temperature data and will be asked to interpret these results. The course includes a phase transformation module. Laboratory reports will be submitted after each experiment. Must be taken simultaneously with or after successful completion of ENGR 226. One credit.

ENGR-230 CHEMICAL ENGINEERING FUNDAMENTALS

This course provides an introduction to formulating and solving material and energy balances in chemical engineering systems. Topics include engineering problem analysis, material balances on single-unit and multiple-unit systems, phase equilibria related to separation processes, and the application of the first law of thermodynamics to energy balances on process systems. Examples are drawn from a variety of industries, including pharmaceutical, food processing, and petrochemical. Prerequisites: CH 101 and MA 109 or MA 111. Three credits.

ENGR-235 INTRODUCTION TO ENVIRONMENTAL ENGINEERING

This course is an introduction to the discipline of environmental engineering. Topics include material and energy balances, applied chemistry, risk assessment, and ecosystems. Examples are drawn from water and wastewater treatment, water pollution, and solid waste management. Prerequisites: CH 101 and MA 109 or MA 111. Three credits.

ENGR-240 ENGINEERING DESIGN AND LABORATORY

This course will teach students the principles of engineering design and problem-solving. Students learn how to approach open-ended design problems with creativity, analyze and prioritize design requirements, function as part of a problem-solving team, and document and report their progress. In the lab portion of the course, students utilize applied mathematics and science in designing and testing a product or process that meets specified criteria. Fee. Prerequisites: ENGR 100 and ENGR 115 or CS 110. Four credits.

ENGR-261 INTRODUCTION TO ELECTRICAL CIRCUITS

Covers the fundamental aspects of electronic circuits. Topics include voltage and current sources, measurement techniques, the principles and application of impedance, Kirchhoff's Rules, Thevenin's Theorem, semiconductors, solid-state devices, amplifiers and feedback, Boolean algebra, digital logic, Karnaugh Maps, programmable logic, FPGAs, memory, and microcontrollers. Extensive use is made of Electronic Design Automation (EDA) software to allow students to follow circuit design from circuit analysis and schematic diagram to finished printed circuit board artwork. Must be taken in conjunction with ENGR 263 Electronics Laboratory. Prerequisites: PH 112 and MA 112. Offered fall semester. Three credits.

ENGR-263 INTRODUCTION TO ELECTRICAL CIRCUITS LABORATORY

Laboratory course to accompany ENGR 261 Electronics. Provides hands-on experience with real world circuits alongside the more theoretical development presented in ENGR 261. Includes measurement techniques, passive filters, transistor and operational amplifiers, combinational and sequential digital logic, and microcontrollers. Also includes design and fabrication of printed circuit boards and soldering techniques for both through-hole and surface-mount components. Corequisite: ENGR 261. One credit.

ENGR-310 ENGINEERING THERMODYNAMICS

Thermodynamics represents our understanding of the relationships governing temperature, pressure, energy, entropy, and other similar properties of bulk materials. This course covers the classical understanding of thermodynamics, including the first and second laws. The focus will be on engineering applications, including properties of steam and other working fluids, power and refrigeration cycles, combustion, and chemical reaction kinetics. Prerequisites: PH 111, CH 101, CH 102 Three credits.

ENGR-315 JUNIOR ENGINEERING LABORATORY

This laboratory course gives students the opportunity to apply topics from the core engineering curriculum. Students will prepare written laboratory reports and give an oral presentation on a self-designed experiment. Prerequisites: ENGR 223 and ENGR 310. One credit.

ENGR-320 MECHANICS OF MATERIALS

Mechanics of materials analyzes the elastic deformations in structural components. Axial, torsional, and bending loading of shafts, deflections of beams, stresses and strains in tubes and pressure vessels are addressed. The state of stress resulting from combined loading conditions is described using general equations. Three-dimensional definitions of scalar stress and strain variables are reviewed. Stress concentrations around corners and holes and residual stresses due to variations in plastic strains also are discussed. Exact solutions to mechanics problems are emphasized. Prerequisite: ENGR 223. Three credits.

ENGR-325 ADVANCED STRENGTH OF MATERIALS

Constitutive relations for deformation in metals are introduced from the basis of strengthening mechanisms and phenomenological understanding of deformation processes. Contributions to strength and modeling of these contributions using an internal state variable constitutive law are the focus of this course. Predicting strength in engineering alloys and model materials with novel strengthening mechanisms, e.g., radiation damaged metals, is included. Prerequisite: ENGR 226. Three credits.

ENGR-326 HIGH-TEMPERATURE MATERIALS

High-temperature materials are materials that find use at temperatures greater than 1/2 of the melting point. Some of the properties, manufacturing methods, and applications of high temperature materials are very different from those of materials that are restricted to use at less than 1/2 of their melting point. High-temperature materials covered in this course will include super alloys and titanium alloys for turbine engine applications and ceramics and ceramic matrix and metal matrix composites for numerous other applications. This course will cover the mechanical and physical properties required for high-temperature applications. It also will cover manufacturing methods used to process high temperature materials and to shape them into component. Prerequisite: ENGR 226. Three credits.

ENGR-327 SOFT MATERIALS

Soft materials are those which undergo large deformations with relatively small forces, and include polymers, elastomers, gels, biological materials, and even some fluids. These materials exhibit an extreme diversity of properties, behaviors, and applications, and have been increasingly utilized over the past several decades in a wide variety of consumer products and applications. This course will draw connections between the molecular structures of these materials and the properties (mechanical, chemical, optical, etc.) they exhibit, with a focus on plastics, rubbers, biological tissues, and composites. Topics of special interest may include "smart" (stimulus-responsive) materials, bio-inspired material design, adhesion, and bio-compatible materials. Prerequisite: ENGR 226. Three credits.

ENGR-330 FLUID MECHANICS

This course introduces students to the flow of fluids under both steady and unsteady conditions through mass, momentum, and energy balances on finite and differential systems. Topics include pressure and fluid statics, kinematics, flow in open and closed channels, dimensional analysis and modeling, lift and drag, and turbomachinery. Students will work to formulate the models necessary to study, analyze, and design fluid systems through the

application of these concepts, and to develop the problem-solving skills essential to good engineering practice of fluid mechanics in practical applications. Prerequisites: PH 111 and MA 112. Three credits.

ENGR-340 HEAT AND MASS TRANSPORT

This course investigates the transport of matter and energy within a system, using concepts from thermodynamics, physics, chemistry, and differential equations to describe the transport of thermal energy (heat) through conduction, convection, and radiation. Analogous mechanisms concerning mass transport (diffusion, flow, and separation) will also be examined. Numerous applications will be studied, including building design, heat dissipation, heat exchangers, food safety, solar heating, and phase changes. Prerequisites: MA 112, ENGR 310. Three credits.

ENGR-350 ALTERNATIVE ENERGY SYSTEMS

This course provides a survey of alternative energy systems, including hydropower, wind energy, solar energy, fuel cells, biomass, ocean energy, geothermal energy, nuclear energy, hybrid vehicles, and hydraulic fracturing. Topics include a review of national and global energy usage and the viability of each alternative energy system. This course is balanced between theory and application, and is designed to provide students with a working knowledge of a wide variety of alternative energy systems currently in use. Prerequisite: ENGR 310 or PH 215 or CH 232. Three credits.

ENGR-360 SEPARATION PROCESSES

This course provides the fundamentals of separation processes related to chemical engineering applications. Topics include distillation, absorption, stripping, and membrane separation. Examples are drawn from a variety of applications including bioprocessing and nanotechnology. Prerequisites: ENGR 230 and ENGR 310 or PH 215 or CH 232. Three credits.

ENGR-366 CONTROL THEORY

Automatic control, through the use of feedback, is widely used in all branches of engineering. In mechanical engineering it is used to control physical dynamic systems, in chemical engineering it is used in process control, in electrical and computer engineering it is used in robotics, and in bioengineering it is used to analogize the nervous system. These are only a few examples of the multitude of applications for automatic control. This course will introduce the basics of automatic controls by covering the following concepts: modeling of dynamic systems, the Laplace transform, stability analysis of linear systems, and feedback control design. Prerequisites: PH 111 and MA 112. Three credits.

ENGR-420 CHEMICAL REACTION ENGINEERING

This course introduces students to the fundamentals of chemical reaction engineering including reactor sizing and design. Topics include rate laws, kinetics, isothermal and nonisothermal reactor design, and homogeneous and heterogeneous reaction systems. Prerequisites: ENGR 230 and ENGR 310 or PH 215 or CH 232. Three credits.

ENGR-425 ENGINEERING PROJECT MANAGEMENT

Introducing concepts related to engineering project management. Defining roles and responsibilities, analyzing program risk, developing schedules and budgets. Concepts of resource management, team management, stake holder management, risk management, schedule management, and knowledge management are presented and discussed using actual and conjured case studies. The course includes considerable in-class discussion and student presentation. Prerequisite: ENGR 240. Three credits.

ENGR-440 CAPSTONE DESIGN PROJECT I

This is the first of a two-course senior design project sequence. This course focuses on design team formation, project definition, and project feasibility. Lecture topics include team formation, engineering standards, professionalism, and engineering economics. Students build on prior coursework to develop a solution to a complex engineering problem that meets desired needs and specifications within given constraints. Prerequisite: ENGR 240. Two credits.

ENGR-441 CAPSTONE DESIGN PROJECT II

This is the second of a two-course senior design project sequence. This course focuses on the development, testing, and delivery of a solution to a design problem. Lecture topics include technical design, risk analysis, and engineering ethics. Students build on prior coursework to develop a solution to a complex engineering problem that meets desired needs and specifications within given constraints. Prerequisite: ENGR 440. Two credits.

ENGR-550 ENGINEERING INTERNSHIP

Work experience program extending the learning experience beyond the college into the world of work. Students are employed in an area related to their academic endeavor. Academic credits are awarded according to the extent of the work experience. Students may or may not be paid depending on the site. The purpose of the program is to integrate academic studies and employment activities. May be repeated. Variable credit.

ENGLISH

Dennis D. McDaniel, *Chairperson*

Wulfstan Clough, O.S.B.; Michelle Gil-Montero; Sara Lindey; William C. Snyder

Adjunct Faculty: Marissa Carlson; Lea Delcoco-Fridley; Sara Hart; Vera Hisker; Adam Reger; Robert Welch

Professor Emeritus: Ronald E. Tranquilla, Richard D. Wissolik

The English Department at Saint Vincent College provides an atmosphere and a setting for professors and students to continue the 2,500-year-old conversation about text, language, creativity, and imagination. With literature at the center of the conversation, students pursue focused intra-textual reading and apply wider insights that cross national, historical, critical, and disciplinary boundaries. Teachers engage students in the perennial investigation of beauty and truth, the elasticity and fixity of language, the moral valences of narratives and arguments, the complexities of expressions of gender, and the quest for self through the ideas of others. The English curricular sequence invites students to become agents in these academic processes, and designers of their own creative and scholarly paths. Giving direction and resonance to these departmental endeavors are the Benedictine values of community, hospitality, stewardship, and care and concern for the individual. Ultimately, Saint Vincent English graduates, having explored the felicitous tension between creative impulse and artistic forms, will comprehend language both as an instrument and an art.

ENGLISH STUDENT LEARNING OUTCOMES

English students will be able to:

- Analyze and interpret literature by recognizing and responding to context, genre, and style.
- Write well, reflecting Saint Vincent College's Six Principles of Good Writing.
- Explain and apply literary theory.
- Produce substantial literary and creative projects that reveal keen analysis, persistent revision, and thoughtful, responsible, scholarship.

THE ENGLISH MAJOR: 36 CREDITS

Students majoring in English must complete the following requirements:

- An Electronic Portfolio that includes electronic copies of four Term Projects, the Senior Capstone Project, and responses to brief surveys regarding the composition of these projects. During their final semester, to fulfill requirements for the Exit Interview grade, majors will upload a Senior Reflection paper that assesses how well their work has met departmental learning objectives.
 - Four Common Courses: EL 202, 325, 326, and 400 (EL 102 does not count toward the major);
 - Four courses in their chosen concentration;
 - Four elective courses;
 - Four term projects, two of which must be researched literary analyses (Assignments completed in EL 202, 325, 326, and 400 do not satisfy the term project requirement).

Concentrations:

By the end of their freshman year, English majors, in consultation with their English advisors, should choose one of the following concentrations. Advisors will work with students to create term projects and a senior project that spring from their concentrations.

- American Studies: Take four of the following: EL 113, EL 133, EL 137, EL 138, EL 139, EL 143, EL 242, EL 256, EL 258, EL 274.
- Classicism and Romanticism: Take these four classes: EL 115, EL 131, EL 210, EL 224, EL 242.
- Creative Writing: Take four of the following: EL 110, EL 203, EL 204, EL 230, EL 244, EL 252.
- Drama and Performance: Take four of the following: EL 114, EL 126, EL 127, EL 210, EL 213, EL 214, EL 236.
- Interdisciplinary Studies: Take four of the following: EL 111, EL 127, EL 128, EL 138, EL 147, EL 149, EL 211, EL 224.
- Literary Publishing: Take these three courses: EL 110, EL 142, EL 230. Take one of the following: EL 203, EL 204, EL 244, or EL 252.
- Literary Translation: Take EL 110 and EL 252. Take two of these courses: EL 230, EL 236, EL 250; Take one of the following: EL 203, EL 204, EL 244.
- Literature and Politics: Take four of the following: EL 111, EL 113, EL 138, EL 139, EL 143, EL 179, EL 256.
- Literature and Spirituality: Take four of the following: EL 124, EL 143, EL 148, EL 211, EL 216.
- Literature and the Family: Take four of the following: EL 113, EL 128, EL 138, EL 256, EL 273, EL 216, EL 244.
- Literature of Dissent: Take four of the following: EL 139, EL 143, EL 179, EL 126, EL 203, EL 224.
- Medieval and Renaissance Studies: Take four of the following: EL 114, EL 127, EL 147, EL 211, EL 212, EL 213, EL 214, EL 216.
- Modernism and Postmodernism: Take four of the following: EL 126, EL 138, EL 143, EL 236, EL 258, EL; one of the following may be substituted: EL 203, EL 204, EL 244, EL 252.
- Narrative: Take these two courses: EL 110, EL 204; Take two of the following: EL 137, EL 236, EL 244, EL 256, EL 258.
- Poetry: Take these two courses: EL 110, EL 203; Take two of the following: EL 114, EL 115, EL 143, EL 210, EL 212, EL 216.
- Pop Culture Studies: Take four of the following: EL 111, EL 125, EL 126, EL 127, EL 130, EL 149, EL 256.
- Shakespeare: Take four of the following: EL 114, EL 127, EL 213, EL 214, EL 216.
- Women's Literature: Take four of the following: EL 113, EL 138, EL 148, EL 244, EL 250, EL 256.
- World Literature: Take four of the following: EL 110, EL 111, EL 138, EL 210, EL 236, EL 244, EL 252.
- Writing: Take these three courses: EL 110, EL 107, EL 108; Take one of the following: EL 142, EL 203, EL 204, EL 244, EL 252.

Courses that Require Term Projects:

- Courses requiring Term Projects that satisfy the major requirement: EL 110, 125, 126, 128, 143, 147, 148, 149, 203, 204, 224, 244, and 252.
- Courses requiring Researched Literary Analyses that satisfy the Major requirement: EL 203, 210, 211, 212, 213, 214, 216, 236, 242, 242H, 244, 250, 256, 256H, 258, 258H, and 273.

Please note that this list of courses is subject to change; majors should consult the English Department's Schoology page during each registration period for updates.

Secondary Education Certification

In the process of fulfilling the requirements of the English major, majors seeking Secondary Education Certification must choose from the following English courses, which may serve as elective or concentration credits: EL 119, CL 129 or EL 273; either EL 127, EL 133, 213, or 265.

Minor in English: 18 credits

The minor in English offers a flexible program of study that allows students to build skills in writing, analytical reading, and critical thinking. This minor nurtures curiosity and fosters appreciation of literature, art, and culture. A minor in English communicates both technical and analytical competencies to future employers and graduate admissions counselors. Because it enhances intellect, conversational agility, and marketability, a minor in English complements any major.

Students seeking a minor in English must take either EL 325 or 326 and five other English courses, two of which must require researched literary analyses.

Minor in Creative Writing: 18 credits (6 courses)

The Minor in Creative Writing serves students who have a passionate interest in writing. Following a flexible program of student in fiction, poetry, creative non-fiction, and literary translation, aspiring writers learn to navigate the contemporary landscape of genres and forms with attention to elements of craft and critique. Minors explore intersections with their major field of study and, in the creative process, find a vehicle for inquiry that can be applied to other academic subjects. The minor in Creative Writing cultivates an appreciation for the richness, flexibility, and power of language, as well as a capacity for expression that distinguishes students in an array of professional pursuits. In addition to EL 110, which may be taken before or at the same time as 200-level Creative Writing courses, Creative Writing minors may choose four of the following courses: EL 142, EL 203, EL 204, EL 230, EL 244, EL 250, or EL 252, plus one 200-level literature course.

Minor in Literary Translation (18 credits):

The Departments of English and Modern and Classical Languages co-sponsor the Literary Translation Minor program at Saint Vincent College. The program combines creative practice with the study of languages, literatures, and critical theory. Students draw from their skills as writers, readers, and speakers of a second language, while exploring the intersections of languages and cultures and participating in the production of international literature.

Creative Writing Requirements:

EL 110 (must be taken before or at the same time as other Creative Writing courses); EL 252, EL 250, (offered every other fall) OR EL 236, and EL 205 (offered once a year). Literary Translation minors must take one of the following elective courses, in the genre of translation: EL 203 (offered once a year), EL 204 (offered once a year), or EL 244 (offered once a year).

Foreign Language Requirements:

These requirements are subject to substitution, with the permission of the foreign language advisor, by applicable study-abroad courses or other suitable department offerings.

For Chinese: CHI 306, CHI 310, or CHI 311

For French: FR 316, Any 300-level French-language literature course

For German: GE 315, Any 300-level German literature course

For Italian: IT 315, IT 321

For Spanish: SP 228, Any 300-level Spanish-language literature course

For Latin: Any two 300- or 400-level Latin literature courses

Typical First-Year Schedule

Fall Semester

EL 102 Language and Rhetoric	3
English Elective	3/4
Classical or Modern Language	
Mathematics or other core elective	3
100-level History	
All students must take one course designated as a First-Year Seminar to satisfy a core curriculum requirement.	3

Spring Semester

TH 119 First Theology	3
Classical or Modern Language	3
Mathematics or other core elective	3
PL 101 First Philosophy	3/4
English Elective	3/4

ENGLISH COURSE DESCRIPTIONS

EL-00X ENGLISH EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. Zero credits. Pass/Fail.

EL-102 LANGUAGE AND RHETORIC

This first-year writing course develops students' ability to read analytically, think critically, and write formal, documented essays that incorporate readings. Through four formal essay assignments, students learn how to apply the Six Principles of Good Writing as a compositional guide and rubric for evaluation. To improve their management of the writing process, students practice the Three Stages of Good Writing Practice, and to prepare them for future assignments, students learn how to use outside sources responsibly and how to document sources properly. All students must complete this course to satisfy the Core Curriculum. This course does not count toward the English major. Periodically offered as a first-year seminar or honors course. Three credits.

EL-103 PRINCIPLES OF LITERARY STUDY

This course is an introduction to college-level literary studies. Students will become familiar with a variety of literary texts drawn from the genres of short fiction, poetry, drama, and creative non-fiction, and will learn the formal features that distinguish these genres. Just as importantly, students will develop the reading and analytical skills needed to appreciate more fully the intellectual and emotional rewards that literary writing offers to its active, interested readers. Such readers will be able to apply these skills to other disciplines, and will find reading literature to be not merely a dry academic exercise, but a means by which they can more richly understand themselves and their world. Three credits.

EL-107 NEWS WRITING

In this writing course, students will learn about the nature and role of journalism in a democratic society and practice and publish their own news writing. Along with the function and ethics of journalism, students will learn how to determine what is newsworthy, gather information and check sources, structure a news article, compose various kinds of feature articles, write paragraphs and sentences in a journalistic style, and edit their own writing and that of others. Students submit completed articles to

the college's student newspaper; if accepted for publication, those articles receive bonus points. Three credits.

EL-108 TECHNICAL WRITING

In this writing course, students learn how to plan, compose, and revise technical documents. Assignments include problem analyses, instructions, proposals, process descriptions, and formal reports. In the process of completing these assignments, students practice strategies for analyzing audience, writing clear sentences, composing memos and letters, paraphrasing, organizing reports, and using new media. Three credits.

EL-110 INTRODUCTION TO CREATIVE WRITING

This creative writing course introduces the fundamentals of creative writing craft in three genres: poetry, fiction, and creative non-fiction. Students read and discuss short contemporary texts and respond to in-class writing prompts. In the workshop element of the course, students give and receive peer feedback on their drafts and collaboratively explore strategies for revision. Students produce a final portfolio of revised work in all three genres. This course is a prerequisite for advanced courses in Creative Writing and may not be taken after students have enrolled in advanced courses in Creative Writing. Three credits.

EL-111 ENVIRONMENTAL LITERATURE

This literature course engages the connections among literature and the environment, reading touchstone texts in nature writing and branching out into units on culture, animals, children's literature, global warming, and post-apocalyptic representations of environmental disaster. This course mixes short readings with novels and considers various ecocritical and interdisciplinary perspectives in order to explore imaginative literature. Discussion-oriented class; requirements include weekly reading reflections, group presentation, take-home mid-term and final short-answer and essay exams, as well as class discussion. Three credits.

EL-113 WOMEN'S LITERATURE

This literature course examines the various roles assumed by women, both as characters and authors, to issues such as the possibility of a particularly female aesthetic and literary tradition. Readings may include Rowson, Jacobs, Austen, Woolf, Mukerjee, Morrison, among other writers, and consider texts across space, time, class, and ethnicity. Discussion-oriented class; requirements include weekly papers or reading reflections, quizzes, group presentation, final, and class discussion. Three credits.

EL-114 BRITISH LITERATURE: MIDDLE AGES TO RESTORATION

This introductory-level literature course surveys British literature from Anglo-Saxon times until the restoration of the monarchy in 1660. Students will read representative selections from several genres from the pre-Medieval, Medieval, and Renaissance periods, including epic and lyric poetry, ballads, dramas, and prose works. Stress will be placed on the accomplishments of Chaucer, Shakespeare, and Milton, as well as other notable writers. Some literary history will provide a context within which to examine the development of English literature during these periods. Students must take two-to-three exams and write two-to-three papers. Periodically offered as a first-year seminar or honors course. Three credits.

EL-115 BRITISH LITERATURE: NEOCLASSICISM TO MODERNISM

This introductory-level literature course covers major literary works in Britain from the Restoration of the Crown to the 20th century.



All major genres within the time span – drama, the verse-essay, the novel, the short story, and lyric poetry – are explored and examined as reflections of historical and aesthetic contexts. Authors covered include Dryden, Pope, Swift, Johnson, Wordsworth, Coleridge, Keats, Austen, Tennyson, Arnold, Hopkins, T. S. Eliot. Class members acquire skills in reading the various works of literature; they respond to questions and prompts on a weekly basis. Students must complete four papers or projects and a final exam. Three credits.

EL-119 HISTORY OF ENGLISH LANGUAGE

This course examines the history of English from a technical standpoint and also from a political, social, and even religious perspective. Students begin with an overview of linguistic theory. Then, concentrating on such linguistic phenomena as Grimm's Law and the Great Vowel Shift, they examine how Anglo-Saxon (Old English) became middle English, and how that in turn evolved into modern English. They also analyze how historical, psychological, and social forces have shaped modern English and what forces may shape it in the future. Student progress is measured by periodic quizzes and in-class exercises, two hourly exams, and a comprehensive final exam. Students have the option of substituting an oral presentation or a major paper for the second hourly exam. This course will also satisfy the interdisciplinary requirement for English majors; it is required of all English majors seeking secondary certification to teach English. Three credits.

EL-125 HISTORY AND DEVELOPMENT OF SCIENCE FICTION

This literature course examines science fiction as a genre of literature, from its beginnings in the 19th century through the

present day. After a look at the mythic roots of science fiction, students read classic works by Jules Verne and H. G. Wells, and proceed to the present with representative works by writers like Arthur C. Clarke, Robert Heinlein, and Ursula K. LeGuin. Along the way they analyze recurring motifs, themes, and concerns; they also examine why this genre holds such fascination for so many people, and how it functions as a kind of 20th-century mythology. Student progress will be evaluated through a midterm and a final exam, a major paper or major project, occasional quizzes and homework assignments, and class participation. Three credits.

EL-126 ROCK 'N' ROLL CRITICISM

In this literature course, students examine the history, artistry, and cultural impact of contemporary popular music by reading the work of critics from academia, mainstream music journals, and the underground press. Students read about and discuss such issues as genre, audience, image, aesthetic value, history, race, and gender. Also, students examine and learn how to analyze the prose style of such popular music critics as Cohn, Marcus, Christgau, Bangs, and Tate. Finally, students develop their ability to write criticism by learning how to listen critically, establish aesthetic criteria, and apply them in written pieces. Students must compose a series of worksheets, deliver an oral report, take a midterm and final, and complete a course project, which may be creative. Three credits.

EL-127 SHAKESPEARE ON FILM

In this literature course, students read and discuss several key Shakespeare plays and screen a variety of film adaptations from such directors as Kurosawa, Jarman, Zeffirelli, and Olivier. Students will learn how to watch films critically, to understand various approaches to adapting a written text to film, and to express their

discoveries effectively through discussion and writing. This course requires a reading and screening journal, as well as a midterm and final exam. Three credits.

EL-128 CHILDREN'S LITERATURE: FABLES - 1900

This literature course explores the cultural construction of childhood and children's literature from classical antiquity to 1900. Students move from medieval children's literature to Puritan children's literature, rationalist children's literature, and romantic children's literature. Readings include literary texts, secondary essays, and two 19th-century novels. Course requirements include reading logs, unit tests, final exam, and participation in group and class discussion. Three credits.

EL-133 AMERICAN LITERATURE: BEGINNINGS TO PRESENT

This literature course explores the evolution of literary genres, themes, and forms from the colonial era through the present. This course explores the poetry, fiction, and various narrative forms that help define and develop the American literary tradition. In this discussion-oriented class, readings include a multitude of short works. Students take reading comprehension quizzes and write three-to-four papers. Three credits.

EL-137 AMERICAN SHORT STORY

This literature course covers the form and evolution of the short story and short story collection as invented and mastered by American authors from Poe to Updike. Symbolism, Regionalism, Nationalism, Realism, Naturalism, Primitivism, and Modernism provide frameworks for understanding writers such as Poe, Hawthorne, London, Baum, Crane, Cather, Hemingway, Anderson, Chopin, Bierce, Hughes, and Carver. The typical class includes lectures that provide contextualization. Students participate in group work and write three formal literary analyses. Three credits.

EL-138 MULTIETHNIC LITERATURE OF U.S.

This literature course engages questions of national literature as expressed, developed, and critiqued in a multicultural arena. While it is impossible for the readings in this class to be totally representative of the emerging multicultural canon, nonetheless, students will read texts from a variety of different American ethnicities and their themes. Readings include approximately eight books that explore the diverse perspectives of writers representing African Americans, Hindus, Muslims, Hispanics, and Latinos, Asians, and Middle Easterners, among others. Assignments include short reflections on novels, reading quizzes on each book, group culture/ethnic presentation, a paper, final exam, and class participation. Three credits.

EL-139 AFRICAN AMERICAN LITERATURE

This literature course studies the major themes and artistic innovations in African-American literature from the Africans' diaspora in the 17th century to the present. Moving from slave narratives, songs, and early American documents through the aftermath of slavery, into the Harlem or New Negro Renaissance, through the Civil Rights Movement, and arriving at contemporary literature and the election of our first African American president, this course provides an historic and literary overview of African American literary production. Course requirements include short unit response papers, a group presentation, unit quizzes, final exam, and class participation. Three credits.

EL-142 LITERARY MAGAZINE INTERNSHIP

This internship is for students with editorial leadership roles on the staff of "Generation," the Saint Vincent College literary annual. Interns lead an editorial team to solicit and select submissions from students and college alumni. In addition, interns independently design, print,

and bind the handmade magazine. This internship is intended for students with a strong pre-existing interest in creative writing, visual art, and/or print media design. Students must have instructor's permission to enroll in this course. Three credits.

EL-143 THE BEAT GENERATION

This literature course explores the major poetry and prose of Kerouac, Ginsberg, Burroughs, Snyder, and others within a framework of post-WWII history, art, literature, and music. Students write a series of short papers, take a midterm and final exam, deliver oral presentations, and submit a course project, which may consist of creative work. Three credits.

EL-145 THE VICTORIANS

This once per week course will center on the PBS Masterpiece series *Victoria*. Students will screen episodes in sequence as they advance through the monarch's reign from 1837 to 1901, and each class period will connect the literary persons, works, events, and productions occurring during a particular episode's time span. Readings will feature the works of Carlyle, the Brownings, the Brontës, Tennyson, Arnold, Newman, Hopkins, Hardy, Eliot, Wilde, and the Rossetts. The course will also introduce The Pre-Raphaelite Brotherhood, The Oxford Movement, and The Aesthetic Movement. The great Victorian themes of Crisis of Faith, Realism, Suffrage, and Feminism will be placed into context. Students will give one presentation and write two literary analyses and one final essay. Three credits.

EL-147 ARTHURIAN LITERATURE

Probably no legend has influenced modern culture more than that of King Arthur. The ideals represented by him and his knights continue to inspire after more than 1,000 years. This intermediate-level literature course traces the history and development of this compelling myth, from a vague reference in an obscure chronicle, through the medieval French romances and Malory's *Morte d'Arthur*, to modern interpretations of the legend by such writers as T. H. White and Marion Zimmer Bradley. Students will examine the figure of Arthur and what he has represented to different cultures, and what he has come to mean to us. Student achievement will be measured through a midterm and a final exam, one major paper, occasional quizzes and assignments, and class participation. Three credits.

EL-148 MODERN CATHOLIC LITERATURE

This literature course will examine literature by Catholic authors from the mid-19th century to the present day. Students will read and discuss works by such writers as Gerard Manley Hopkins, G. K. Chesterton, Dorothy Day, Flannery O'Connor, and Shusaku Endo, among others, and so explore the ways that the writers' faith affects their imaginations, their views of moral conflict and of character, and their spirituality. The readings and the specific focus of the course may vary from semester to semester. A midterm, a final, a research paper, quizzes and other short assignments, and class participation. Three credits.

EL-149 J.R.R. TOLKIEN

In this literature class, we will study the life and works of J. R. R. Tolkien, one of the 20th century's most popular authors. We will begin with a look at Tolkien's life and then examine some of his early work, as well as classic works from Old Norse, Anglo-Saxon, and other sources that influenced him. Our main focus will be on his masterpiece, *The Lord of the Rings*. Through an examination of this work, as well as Tolkien's philosophy of literature, we will see how it develops his concepts of myth, heroism, honor, and other themes. One final, some short assignments, class participation, and two of the following: a midterm, a term paper or creative work, or an oral report. Three credits.

EL-154 SPECIAL TOPICS IN LITERATURE

This literature course offers students unique opportunities for more focused study of literary periods, figures, genres, creative writing modes, and interdisciplinary topics. Topics vary from semester to semester, and students should consult the registration booklet for specific descriptions of courses offered. Three credits.

EL-155 SPECIAL TOPICS: CREATIVE WRITING

This creative writing course offers students unique opportunities for more focused study of topics in Creative Writing. Topics vary from semester to semester, and students should consult the registration booklet for specific descriptions of courses offered. Three credits.

EL-156 SPECIAL TOPICS: PROFESSIONAL WRITING

This writing course offers students unique opportunities for more focused study of topics and methodologies in Professional Writing. Topics vary from semester to semester, and students should consult the registration booklet for specific descriptions of courses offered. Three credits.

EL-157 SPECIAL TOPICS CHILDREN'S LITERATURE

This literature course offers students a unique opportunity for more focused study of topics in Children's Literature. Topics vary from semester to semester, and students should consult the registration booklet for specific descriptions of courses offered. Three credits.

EL-158 SPECIAL TOPICS IN CREATIVE WRITING: LEADERSHIP AND CHARACTER

This course is designed to guide SSS-TRIO students through the process of creating believable characters and presenting them to the reader effectively. The characters they create will exemplify specific leadership traits, but will be required to break beyond idealism into realism. We will discuss how to avoid unnecessary exposition, how to choose a perspective, and how to construct a story within the scope of flash fiction and short stories – the usual starting place for fiction writers. Students will write several short pieces, focusing on character development and presentation. They will then write a final paper comparing their character to George Milton from *Of Mice and Men*, and determine which is a better leader based on the characteristics discussed in class. Three credits.

EL-179 THE LITERATURE OF PROTEST

In this discussion-based course, students explore the ways in which literature, art, music, and film have responded to injustice, censorship, and militarism. Papal encyclicals, the Universal Declaration of Human Rights, and the U.S. Bill of Rights establish the moral basis for an analysis of a diverse group of artists that includes John Stuart Mill, John Milton, Mary Wollstonecraft, James Baldwin, Henry David Thoreau, Bob Dylan, Rebecca Harding Davis, Larry Kramer, Adrienne Rich, Tim O'Brien, and Abbie Hoffman. Students will maintain a reading blog, deliver an oral report, and take a midterm and final. Three credits.

EL-202 INTERMEDIATE WRITING

This upper-level composition course focuses on pre-professional training and practice in all rhetorical modes, especially in exposition and argumentation. A process methodology adheres to the Six Principles of Good Writing while emphasizing invention, development, citation, revision, grammar, and research. The ultimate goal of the course is for each student to produce an essay magazine consisting of three polished essays – the outcome of three cycles, which contain a variety of focused-writing projects. Seven quizzes assess mastery of microskills. Three credits.

EL-203 POETRY WORKSHOP

In this advanced creative writing workshop, students deepen their study of poetic craft while beginning to navigate the landscape of contemporary poetry and poetics. In weekly reading assignments, students explore the variety of forms, questions, and impulses driving poetry today, building a context for their own writing in the genre. Requirements include one term paper; and weekly writing and workshop of poems, which culminate in a final portfolio of original work. Prerequisite: EL 110 or permission of instructor. Three credits.

EL-204 FICTION WORKSHOP

In this advanced creative writing workshop, students deepen their study of the craft of short fiction. Students read modern and contemporary short story collections in addition to a book of short fiction craft. This course requires extensive reading assignments – usually one short story collection per week, plus chapters from a craft book – in addition to the writing and workshop discussion of stories for the final portfolio project. Prerequisite: EL 110 or permission of instructor; no prerequisite for English majors. Three credits.

EL-210 CLASSIC GREEK POETRY AND DRAMA

The literature and culture of ancient Greece has influenced modern culture greatly. In this upper-level literature course students will study representative works from this time and discuss this influence. Readings will include the epic poetry of Homer, the lyrics of Sappho and Archilochus, and the drama of Aeschylus, Sophocles, Euripides, and Aristophanes. Students will also examine the critical theories of Plato and Aristotle and how these classical thinkers have shaped our thought. The grade will be based on a midterm, a final exam, a major paper and a few short essays, quizzes, and class participation. Three credits.

EL-211 MEDIEVAL STUDIES

This literature course investigates three major areas of Medieval life and literature, e.g., the form of Romance, the theme of Courtly Love, and the technique of Allegory. Participants read selected works of Old English Literature, selections from Chaucer's *Canterbury Tales*, and *Dante's Inferno*, in addition to selected lyrics, ballads, drama, and other works. Participants especially work toward a synthesis of ideas and an understanding of the progress and development of early literary form and technique in later periods in literature. Course requirements include a journal, scheduled quizzes, a mid-term, and final exam. Prerequisites: Completion of EL 102 Language and Rhetoric and at least one introductory-level literature course. Three credits.

EL-212 CHAUCER

The life and representative works of Geoffrey Chaucer are the subjects of this upper-level literature course. Our main concentration will be on his *Canterbury Tales*, with selections from some of Chaucer's other poetry; we will also examine the Middle English and Continental traditions that influenced it. We will read Chaucer's works in Middle English and spend some time studying its structure and pronunciation; part of the grade, in fact, will be based on students' ability to read and interpret the Middle English of Chaucer. A midterm, a final exam, a major paper, an oral report, some quizzes and short assignments, and class participation comprise the remainder of the grade. Three credits.

EL-213 SHAKESPEARE'S HISTORIES

This literature course comprises a study of Shakespeare's history plays. Students examine the sources and influences for the plays such as Latin history, medieval chronicle, contemporary English drama, and the political, philosophical, and social writings of the

age. The major emphasis of the course is on the plays themselves, including both the Roman and the English history plays. Students thus explore theme, character, setting, language, style, and tone, noting what is characteristic of the Renaissance as well as what is distinctive of Shakespeare. Course requirements include one major paper, a midterm, a final examination, quizzes, and class participation. Three credits.

EL-214 SHAKESPEARE'S COMEDIES/TRAGEDIES

In this literature course, students engage in an intensive study of these plays from both traditional and contemporary perspectives. Students will trace Shakespeare's plays to their sources, examine dramatic conventions, review the plays' formal literary qualities, and situate the plays in their historical and philosophical context, but students will also historicize the plays, deconstruct Shakespeare's language, and consider questions of gender, race, and colonialism. Course requirements include a midterm and final exam, an oral report on a contemporary scholarly article, and a research-based term paper. Three credits.

EL-216 BRITISH RENAISSANCE LITERATURE

This literature course focuses on the major texts of Spenser, Donne, and Milton. Along with their close reading of the primary texts, students will locate these texts within the religious, political, and philosophical crises that distinguish the early modern era. The course familiarizes students with the criticism of these writers and their work by requiring that they write a short essay, deliver an oral presentation on a scholarly article, take a midterm and final exam, and compose a research-based paper. Three credits.

EL-224 THE ROMANTIC AGE

While Romanticism in Europe enjoyed its high period in the first half of the nineteenth century, this upper-level course examines romanticism as a cultural influence with principles that predate 1798, and which reach beyond 1840. While the canonical Romantic writers—Blake, Wordsworth, Coleridge, Shelley, and Keats—occupy center stage, thinkers and ideas influencing them and modifying their work are given significant attention, especially neo-classicism, touring, the French Revolution, feminism, and landscape painters. Genres include poetry, polemics, and fiction. Students of sophomore standing or above complete two literary analyses, participate in four workshops, and take a final exam. Three credits.

EL-230 SMALL PRESS PUBLISHING

This course serves as a hands-on introduction to the editorial and production processes involved with publishing a book in the small press poetry market. Students work directly with Eulalia Books, a poetry-in-translation press on campus, while exploring the phenomenon of small press publishing in a broader sense. Readings and discussions focus on the historical, aesthetic, ethical, and social dimensions of independent publishing, with a focus on how small presses form a subversive space for new literatures to emerge. A series of practical workshops run by editor, book artists, and writers will introduce students to the aesthetics of publishing handmade books, from design (typography, layout) and printing techniques (screenprinting, letterpress), to important digital and print formats (blog, zine, chapbook). Beyond workshop attendance and reading, requirements are a review of a small press, weekly blog posts, and a final publishing project. Three credits.

EL-236 MODERN EUROPEAN LITERATURE

This course covers the major literature, art, and film of the Realist, Symbolist, Modernist, Surrealist, and Contemporary periods of European literature. Students will connect literature to key philosophical and cultural movements of the era, and will apply both

traditional modes and contemporary literary theory in their analyses of texts. Required work includes a short essay, an oral presentation on a scholarly article, a midterm and final examination, and a research-based term paper. Three credits.

EL-242 AMERICAN RENAISSANCE

This literature course centers on the mid-19th-century literary production that constitutes the American Renaissance, an explosion of touchstone texts that defined our nation, reflected its own time, and forecast our own. Readings may include Emerson, Thoreau, Hawthorne, Melville, Stowe, Whitman, and Dickinson. Discussion-oriented class, readings include approximately four novels, two poetry oeuvres, and 10 critical essays. Assignments include weekly papers and essay reading rubrics, researched term paper, and class participation. Three credits.

EL-244 CREATIVE NON-FICTION WORKSHOP

In this advanced creative writing workshop, students deepen their study of creative non-fiction. This course requires extensive reading assignments – usually one book per week – in addition to the writing and workshop discussion of essays for the final portfolio project. Prerequisite: EL 110 or permission of instructor; no prerequisite for English majors. Three credits.

EL-250 CONTEMPORARY WORLD LITERATURES IN TRANSLATION

This reading-and-writing seminar covers notable 20th- and 21st-century works in English translation from a variety of languages, with an emphasis on recent translations from Latin America, Asia, and Africa. What does it mean to read a translation? In this course, we learn to pay attention to the special linguistic and cultural considerations involved in simply reading translations, while also addressing the many ethical and aesthetic dimensions of the translator's task. Students will dabble in new contemporary literary contexts, cultures, and styles while learning about the cultural forces at play in how we read and re-create foreign texts. Required work includes weekly quizzes, a midterm exam, and one research-based term paper. Three credits.

EL-252 LITERARY TRANSLATION WORKSHOP

This advanced creative writing workshop introduces students to the theory and practice of literary translation. This course requires extensive reading assignments, which touch on the cultural, aesthetic, and linguistic challenges of literary translation – in addition to the writing and workshop discussion of student translations for the final portfolio project. To succeed in the course, students must have achieved at least intermediate proficiency in a foreign language. Prerequisite: EL 110 or permission of instructor; no prerequisite for English majors. Three credits.

EL-256 SENTIMENTAL FICTIONS: 19TH-CENTURY WOMEN'S LITERATURE

Centering on the gendered conventions of sentimental literature, this literature course explores the social reform movements surrounding 19th-century America, including emancipation and women's suffrage. Readings may include work by Catharine Maria Sedgwick, Fanny Fern, Frances Harper, Harriet Jacobs, Sarah Callahan, among others. Discussion-oriented class, readings include approximately six novels, selected poetry, and 10 critical essays, assignments include weekly papers and essay reading rubrics, researched term paper, and class participation. Periodically offered as an honors course. Three credits.

EL-258 AMERICAN MODERNISM

This literature course will explore American expressions of Modernism from the turn of the 20th century to World War II,

making room for a wide variety of voices. Readings may include Chopin, Johnson, Hemingway, Fitzgerald, Stein, Faulkner, and Ellison. Discussion-oriented class, readings include approximately six novels and 10 critical essays. Assignments include weekly papers and essay reading rubrics, researched term paper, and class participation. Periodically offered as an honors course. Three credits.

EL-261 ADVANCED STUDIES IN LITERATURE

This literature course offers students a unique opportunity for more intensive study of literary periods, figures, genres, creative writing modes, and interdisciplinary topics. Topics vary from semester to semester, and students should consult the registration booklet for specific descriptions of courses offered. Three credits.

EL-263 ADVANCED STUDY IN MODERN LITERATURE

This literature course enables students to more intensively study writers, genres, and interdisciplinary topics from modern British and European and American literature. Topics vary, and students should consult the registration booklet for specific descriptions of courses. Prerequisites: Completion of EL 102 Language and Rhetoric and at least one introductory-level literature course. Three credits.

EL-264 ADVANCED STUDY IN CREATIVE WRITING

This creative writing course offers students the opportunity for more intensive study of a specialized topic in creative writing. Topics vary from semester to semester, and students should consult the registration booklet for specific descriptions of courses offered. Prerequisites: EL 110 or permission of the instructor; no prerequisite for English majors. Three credits.

EL-264C POETRY OF RESPONSE

In this advanced creative writing course, we will explore the phenomenon of poetic response. How, and why, do poets engage with other poets, texts, and art forms? What is “collaborative poetics,” and how pervasive is it today? Topics range from poetry and the visual arts (ekphrasis), textual interrelationships (e.g., erasure), translation as collaboration (transnational/translingual exchanges), and adaptation and performance. Also, we will consider new digital perspectives to poetic collaboration and experiment with new online techniques for collaboration. Course work includes weekly book-length readings, writing experiments, a collaborative online literary magazine project, and a final portfolio. Prerequisite: introductory or intermediate workshop course in creative writing.

EL-265 SHAKESPEARE IN LONDON

In this study-abroad course, students will experience Shakespeare’s plays in the city in which they were first performed. Before travelling to London, students will read the playtexts and exchange their interpretations through blog posts. In London, students will visit key sites, hear lectures from scholars and actors, and see the plays that they have read at the two preeminent Shakespeare theaters: Shakespeare’s Globe in London and the Royal Shakespeare Company in Stratford-Upon-Avon, the bard’s birthplace. In London, students will maintain a journal that will include their impressions of the city and reviews of the plays. Three credits.

EL-266 ADVANCED STUDIES IN PROFESSIONAL WRITING

This writing course offers students unique opportunities for more intensive study and practice of Professional Writing. Topics vary from semester to semester, and students should consult the registration booklet for specific descriptions of courses offered. Three credits.

EL-272 ADVANCED STUDIES IN CHILDREN’S LITERATURE

This literature course offers students unique opportunities for more intensive study of children’s literature. Topics vary from semester to semester, and students should consult the registration booklet for specific descriptions of courses offered. Three credits.

EL-273 REPRESENTATIONS OF CHILDHOOD IN YOUNG ADULT LITERATURE

This topical course explores American representations of childhood in landmark fiction. Primary texts may include Twain’s *The Adventures of Huckleberry Finn*, James’s *The Turn of the Screw*, Wharton’s *The Children*, Harper’s *To Kill a Mockingbird*, Salinger’s *Catcher in the Rye*, and Morrison’s *The Bluest Eye*. These writers were foundational in articulating both what adults imagined childhood to be and how children may actually act and think. Discussion-oriented class, readings include both primary texts and critical essays. Assignments include weekly short papers and essay reading rubrics, artifact analysis in coordination with the Fred Rogers Archive, and researched term paper. Three credits.

EL-325 LITERARY CRITICISM I: ANCIENT TO MODERN

The basic framework for this course is historical, as students read and discuss critical statements from the ancient to the modern periods, beginning with Plato and ending with early 20th-century critics such as T.S. Eliot and Virginia Woolf. Major influences and ideas that reach across authors and across cultural periods include mimesis, pragmatism, organicism, and modernism. Also, students learn literary criticism as a skill, writing analytically about literature and developing a working understanding of the way the discipline is researched and shared. This intermediate-level course requires two literary analyses and a recovery project. EL 325 is required of all English majors. It does not fulfill requirements for the core. Three credits.

EL-325H LITERARY CRITICISM I: ANCIENT TO MODERN

This course examines texts that indicate the values of seven literary periods: Classical, Medieval, Renaissance, Neo-Classical, Romantic, Victorian, and Modern. Lectures unpack the key primary texts. Students write three literary analyses. The Honors distinction in this course is represented by the Recovery Project, which involves deep literary and biographical research, multimedia presentation, mastering online as well as paper research tools, and a publishable work of literary criticism involving a particular author whose work is in need of updating or fuller interpretation. This is the third literary analysis. In the final two weeks of the course students are required to make a 15-minute presentation to the class and to the community in a public space. Required of English majors and open to Honors students. Three credits.

EL-326 LITERARY CRITICISM II: CONTEMPORARY THEORIES

In this course, English majors and minors survey and practice the literary theories of the 20th and 21st centuries. Beginning with New Criticism, students concentrate on such critical theories of the contemporary period as Structuralism, Deconstruction, Marxism, Feminism, Cultural Studies, Post-Colonial Theory, and Post-Modernism. Emphasis, however, will be placed on applied criticism, through three short essays in which students examine text from the perspective of specific critical schools. Along with the three essays, students must take midterm and final exams. This course is required of all English majors. This course does not fulfill requirements for the core. Three credits.

EL-326H LITERARY CRITICISM II: CONTEMPORARY THEORIES

In this advanced course designed for English majors and interested Honors Program students, students will learn and apply the key literary theories of the 20th- and 21st-century, including Formalism, Deconstruction, New Historicism, Psychoanalysis, Postcolonialism, Critical Race Theory, and Gender Studies, and Ecocriticism. Readings include theoretical statements, commentaries on those statements, and scholarly essays that apply these theories to a literary text. Through this course, students will better understand their interpretive assumptions, enlarge their repertoire of reading strategies, and read works of contemporary literary theory and applied criticism with greater understanding. Requirements include a reading blog, a midterm and final exam, and three analytic essays. Three credits.

EL-350 INDEPENDENT STUDY – ENGLISH

In this course, topics of research are chosen and developed by the student with the guidance of the professor directing the study. May be repeated. Variable credit.

EL-400 SENIOR PROJECT

This is the capstone course for English majors. In it, senior majors will complete their senior projects – papers of 20-30 pages – under the supervision of the course's instructor and a second reader, whom the student writer will select based on that reader's expertise. Students pursue senior projects based on their area of concentration: students in any area of Literary Studies, including Secondary Education, will write works of literary criticism; students concentrating in Creative Writing or Literary Translation will write or translate works of fiction, creative nonfiction, or poetry prefaced by an aesthetics statement; and students concentrating in Literary Publishing will complete an individual publishing project of their own design, accompanied by a paper. The fundamental requirement of the course is the completion of the project, but students must also submit outlines and drafts, conference regularly with the instructor and/or other readers as specified, and deliver a public presentation of an excerpt of their projects. Only English majors with senior standing will be admitted to this course. Three credits.

EL-550 ENGLISH INTERNSHIP

In this course, students work in a professional setting in order to extend their learning experience beyond college into the world of work; relevant experiences can take the form of internships, field work, and cooperative programs, particularly in advertising, public relations, journalism, and communications. Students may or may not be paid, depending on the policy of the employer. May be repeated. Variable credit.

ENVIRONMENTAL SCIENCE

Caryl L. Fish, *Director*

James Kellam; Timothy Kelly; Eugene Torisky; Peter Smyntek

Adjunct Faculty: Angela Belli; Beth Bollinger; Patrick Jaquay; Jean Keene

The environmental science program is multidisciplinary in its approach to environmental problems. The philosophy of the program is that environmental problems are best solved through careful scientific investigation within the context of social, political, and ethical structures. To prepare individuals to achieve this goal, the environmental science major is multidisciplinary in its structure. Required course work in general and advanced science gives students a solid foundation for scientific investigations. Courses in the humanities and social sciences broaden students' perspective and allow them to analyze problems for unique solutions. Students have the opportunity to develop field skills in nearby aquatic and terrestrial ecosystems. This combination of courses and field experience provides students with a broad background to understand environmental problems and a strong scientific approach to find answers to those problems.

The environmental science major has been designed to provide students with the background to pursue careers in the environmental field. Students have the flexibility to focus their studies in a specific area such as biology, chemistry, education, public policy, or communication by obtaining a minor in that area. Students could pursue graduate programs in environmental science, environmental law, or education. They may also choose to prepare for careers in environmental monitoring or testing, environmental communication, watershed management, or environmental education.

ENVIRONMENTAL SCIENCE STUDENT LEARNING OUTCOMES

- **Scientific Skills.** Demonstrate a proficiency in laboratory skills to collect data, and technological competency from multiple disciplines.
- **Scientific Principles.** Apply scientific principles to environmental problems).
- **Communication.** Express scientific information clearly in both written work and oral communication.
- **Data Analysis.** Analyze and display scientific data and utilize it as evidence for a conclusion.
- **Information Literacy.** Find, evaluate and utilize sources of information appropriately and ethically.
- **Diverse Perspectives.** Consider and evaluate environmental problems from multiple perspectives in the context of our modern society to synthesize and develop a holistic understanding of the key issues linked to these problems.

To accomplish these goals the environmental science major has the following components:

- A strong foundation in math and natural science with at least 40 credits in this area including advanced environmental science courses.
- A multidisciplinary approach with required credits from seven different departments in the natural sciences, social sciences, and humanities.
- A flexible schedule. Students have 17-20 elective credits to tailor their education to fit their career goals.
- A strong emphasis in laboratory and field work. Students are required to complete 300 hours of laboratory work; several courses offer extensive opportunities for field studies in many unique ecosystems near campus.

- Opportunities to expand class work through internships, summer research, and programming at the Saint Vincent College Environmental Education Center.

- An emphasis on writing throughout the program. Many of the required courses are “writing designated” indicating participation by the professor in the College’s Interdisciplinary Writing Program. Through this program students learn to write within their disciplines following a campus-wide model for good writing.

- All students are required to complete a senior research project, which serves as a “capstone experience.” In the spring semester of their junior year students prepare a proposal for original research. The student then conducts his/her research and writes a senior thesis under the guidance of an environmental science faculty member. The research project provides the student with first-hand experience investigating and reporting on an environmental problem.

Requirements for Environmental Chemistry:

See Chemistry Department.

ENVIRONMENTAL SCIENCE (B.S.)

Requirements for a Bachelor of Science Degree in Environmental Science

(See core curriculum requirements.)

Environmental Science Major Requirements (66-69 credits):

ES 150-152	Earth Systems Science and Lab	4
MA 109-110	Calculus with Applications I and II*	8
or		
MA 111-112	Analytical Calculus I and II	
CH 101-104	General Chemistry I and II and Labs*	8
CH 216, 218	Quantitative Analysis and Lab	4
BL 150-153	General Biology I and II and Labs	8
BL 232, 233	Ecology and Lab	4
PH 109/113	College Physics I and Lab	4
ES 220	Introduction to Geographic Information Systems	3
ES 301	Capstone Experience: Senior Research	2
ES 300	Junior Seminar	1
ES 302	Senior Seminar	1
ES 550	Environmental Science Internship	1

Humanities: Choose at least two: 6

EL 111	Green Writing: Literature and the Environment*	
HI 226	Society and the Environment: the American Experience*	
PL 217	Environmental Ethics*	
TH 274	Green Discipleship	

Social Science: 6

PS 390/BA 340	Environmental Law and Policy*	
SO 161	Environmental Sociology*	

Advanced Environmental Courses 6-9 credits

Environmental Biology: Choose 1 course with Lab if available (3-4 credits)

BL 228, 229	Wildlife Biology and Lab	
BL 230	Ornithology	
BL 238-239	Aquatic Ecology and Toxicology Lab	
BL 240-241	Conservation Biology and Lab	

Physical Environmental Science: Choose 1 course with Lab (3-5 credits)

ES 230	Energy and the Environment	
ES 240	Geophysics	

CH 276, 277	Advanced Environmental Chemistry and Methods of Environmental Analysis	
ES 250	Advanced Environmental Mapping	
ES 245/246	Hydrology and Limnology and Lab	
* Fulfill core curriculum requirements		

Electives : 17-20 credits

Those students interested in pursuing graduate degrees should carefully choose electives to meet basic requirements for their chosen program. Students should consult with their academic advisor early in their bachelor’s program. Since the environmental science major is interdisciplinary there is significant overlap with other programs. A minor should have at least eight credits in addition to those courses in the major.

Requirements for Minor in Environmental Studies** (16-19 credits)**

Choose five of the following with at least one NSCI or ES course and one humanities or social science course:

ES 150/152	Earth System Science and Lab	4
NSCI 125-126	Introduction to Environmental Science and Lab	4
NSCI 140-141	Science and Global Sustainability and Lab	4
NSCI 220	Endangered Species and Conservation and Lab	4
NSCI 225	Field Biology	4
NSCI 227	Forestry and Forestry Management and Lab	4
NSCI 252-253	Science of Sustainable Living and Lab	4
NSCI 250	Science of Abandoned Mine Drainage	4
NSCI 265	Science for International Development	4
SO 161	Environmental Sociology	3
EL 111	Green Writing: Literature and the Environment	3
HI 226	Society and the Environment: The American Experience	3
PS 390	Environmental Law and Policy	3
PL 217	Environmental Ethics	3
ES 220	Introduction to Geographic Information Systems	3
TH 274	Green Discipleship	3

Requirements for Minor in Environmental Science** (15-17 credits):**

ES 150-152	Earth Systems Science and Lab	4
BL 232-233	Ecology and Lab***	4
CH 216-218	Quantitative Analysis and Lab***	4

Choose one course with lab if available: (May not count toward major)

CH 276	Advanced Environmental Chemistry***	3
CH 277	Methods of Environmental Analysis (Lab)***	2
CH 228-229	Wildlife Biology and Lab***	4
BL 230	Ornithology***	3
BL 238-239	Aquatic Ecology and Toxicology and Lab***	4
BL 240-241	Conservation Biology and Lab***	4
ES 230	Energy and the Environment***	4
ES 240	Geophysics***	3
ES 245/246	Hydrology and Limnology and Lab	4
ES 250	Advanced Environmental Mapping	3

*** General Chemistry I and II and/or General Biology I and II are prerequisites for these courses.

**** Environmental Science and Environmental Chemistry majors may not minor in Environmental Science or Environmental Studies.

Typical First-Year Schedule

Environmental Science (B.S.)

Fall Semester

CH 101	General Chemistry I	3
CH 103	General Chemistry I Laboratory	1
SO 161	Environmental Sociology	3
	Modern and Classical Language	3/4
EL 102	Language and Rhetoric	3
First-Year Seminar		1
Total Fall		14 or 15

All students will take one course designated as a First-Year Seminar which will satisfy a core curriculum requirement.

Spring Semester

CH 102	General Chemistry II	3
CH 104	General Chemistry II Laboratory	1
or		
CH 101-102	General Chemistry I and Lab	
ES 150	Earth Systems Science	3
ES 152	Earth Systems Science Laboratory	1
Modern and Classical Language		3
TH 119	First Theology	3
Total Spring		14
Total First Year		28-29

ENVIRONMENTAL SCIENCE COURSE DESCRIPTIONS

ES-00X ENVIRONMENTAL SCIENCE EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. Zero credits. Pass/Fail.

ES-150 EARTH SYSTEMS SCIENCE

This course will explore the interconnections between the components of the Earth, the hydrosphere, the atmosphere, the lithosphere, and the biosphere. In doing this, we will examine the systems that provide balance and stability to the Earth while at the same time explain processes of Earth's evolution. We will accomplish this through an interdisciplinary approach that combines resources from geology, chemistry, biology, oceanography, and meteorology. Offered spring semester. Prerequisite: CH 101 or CH114. Three credits.

ES-152 EARTH SYSTEMS SCIENCE LABORATORY

This laboratory course is designed to illustrate and discover principles in Earth Systems Science. This will include computer simulations, physical models, and scientific investigations. Must be taken simultaneously with, or after successful completion of ES 150. One credit.

ES-220 INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS

This course will focus on examining environmental data using a computer-based geographic information system (GIS). Students will learn to manipulate tabular data, query GIS databases, and present data in charts and maps. Students will utilize existing geographic data as well as develop new data sets. Offered fall semesters. Three credits.

ES-230 ENERGY AND THE ENVIRONMENT

We will explore the relationship between energy resources and the environment. First we will examine thermodynamics and efficiency of energy resources. Then we will examine the array of different energy resources including both fossil fuels and renewable sources. Topics of discussion will include hydraulic fracking, abandoned mine drainage, wildlife mortality, sustainability. This will be an integrated lecture laboratory to allow time for field trips and special projects. Prerequisite: CH 102. Offered odd-numbered fall semesters. Four credits.

ES-235 GEOLOGY AND ENVIRONMENT IN ICELAND

Students in this course will spend a week in Iceland examining the unique geologic features, sustainable energy utilization and northern lights. In addition to the trip, students will read scientific articles, write blog posts, and write a literature review on one area of scientific research. Students must be signed up for the spring break trip to Iceland. Variable credit.

ES-240 GEOPHYSICS

A first course on geophysical theories and applications. The course will start by introducing rock properties and geological concepts. Then it will also cover geophysical theories and methods; including seismic, electrical, electromagnetic, magnetic, and gravity methods. The application of geophysical methods to Earth studies, resource exploration and environmental/engineering testing and investigation will also be examined. Prerequisite: CH 101. Three credits.

ES-245 HYDROLOGY AND LIMNOLOGY

This course examines key physical and biogeochemical processes in stream and lake ecosystems. These include the hydrologic cycle, precipitation, evaporation, infiltration, run-off, discharge, floods, dissolution, lake stratification, lake mixing, and nutrient cycling. This course also explores how these processes are affected by environmental change over varying temporal and spatial scales. Finally, current environmental problems (locally, nationally and internationally) that are linked to streams and lakes are considered through the analysis of recent scientific literature and news stories. Three credits.

ES-246 HYDROLOGY AND LIMNOLOGY LAB

This course focuses on measuring and modeling physical and biogeochemical characteristics of stream and lake ecosystems. It involves the use of common instruments and data analysis tools to examine water velocity, discharge, mixing, chemical composition, and related parameters that define these dynamic ecosystems. Field sampling, laboratory experiments, and computer modeling and simulations will be used to assess a variety of stream and lake systems. One credit.

ES-250 ADVANCED ENVIRONMENTAL MAPPING

This course will require students to develop a project that uses GIS to analyze a local environmental problem. Students will learn new GIS techniques such as digitizing and vectorization, metadata documentation, network analysis, GPS data collection, and processing using case studies. Prerequisite: CH ES 220. Offered even-numbered spring semesters. Three credits.

ES-300 RESEARCH SEMINAR I

This course will introduce the student to the research experience and will include an orientation to the library and use of reference materials. Students will be assigned articles to read and discuss. An introduction to writing and presenting a research proposal will be included. Students will be introduced to the procedure for maintaining a laboratory research notebook. Outside speakers may

present seminars on selected topics. Prerequisite: Junior standing. One credit.

ES-301 RESEARCH LABORATORY

Independent study or investigation involving intensive work with faculty guidance in the laboratory and library. This course includes an assessment of cumulative laboratory skills. Prerequisite: ES 300. Two credits.

ES-302 RESEARCH SEMINAR II

Presentation of research work completed during the previous semester; the oral presentation is made after the thesis report has been written. Outside speakers may present seminars on selected topics. Prerequisite: ES 301. One credit.

ES-350 INDEPENDENT STUDY– ENVIRONMENTAL SCIENCE

Studies to be chosen and developed by the student with the guidance of the professor directing the study. May be repeated. Variable credit.

ES-550 ENVIRONMENTAL SCIENCE INTERNSHIP

Work experience program extending the learning experience beyond the college into the world of work, through internships, field work, and cooperative programs. Students may or may not be paid depending on the site. May be repeated up to a maximum of three credits. Variable credit.

FINE ARTS

Thomas Octave, *Chairperson*

Art Faculty: Gregory Brandt; Mark Floreanini, O.S.B.; Ben Schachter; Placid Sellers, O.S.B.

Adjunct Art Faculty: Joseph Materkowski

Music Faculty: Cyprian Constantine, O.S.B.; Thomas Octave

Adjunct Music Faculty: Christina Andrae; Scott DiTullio; Jeremy Frantz; Susanna Lemberskaya; Christine Mahady; Josie Merlino; J. Christopher Pardini; Dawn Posey; Lisa Thackrah;

“I am firmly convinced that a monastic school, which does not strive to advance art as much as science and religion, will be deficient in its work.”

Boniface Wimmer, O.S.B.

The Department of Fine Arts offers several majors that lead to the Bachelor of Arts degree. They are Art Education, Studio Art, Digital Art and Media, Music, and Music Performance. We offer several minors including: Art History, Digital Art and Media, Music, Sacred Music, Music History, and Studio Art. Certification in Art Education is also available through a joint program with the Department of Education.

Admission to the Department is based on a successful audition for music majors and minors, or a portfolio review for art education, studio art, and digital art and media majors. These materials are in addition to what is required to be admitted to the College. The visual arts portfolio should include 10 images of student work arranged in a PowerPoint presentation. The entire file should be 4MB or smaller. Each slide should be labeled with a title, material, and date created. Also, students should include their name and which major they would like (Studio Art, Art Education, or Digital Art and Media). Please email these materials to the chair of the department, ben.schachter@stvincent.edu.

Our department hosts art exhibitions and musical concerts throughout the year. Students often have the chance to meet visiting performers, and on occasion, take a master class with them. The Saint Vincent College Gallery mounts several exhibitions each year including the Senior Exhibition. The Saint Vincent College Choir, open to all students, performs at campus Liturgies and academic events.

In addition, students have the opportunity to submit artwork to *Generations*, the student-run literary and art magazine. Saint Vincent also holds several art collections including the Foster and Muriel McCarl Gallery’s collection of 19th-century American coverlets and the Archabbey and College art collections. Students have the opportunity to work with faculty and staff on exhibitions and concerts. Our combination of coursework and “hands-on” experience provides strong exposure and training for careers in the arts.

Music Department Mission Statement

The founder of Saint Vincent College, Boniface Wimmer, stated that we will teach our students, “first what is necessary, then what is useful, and finally, that which is beautiful.” The goal of the Department of Music follows our founder’s goal. The curriculum is designed within a liberal arts structure to give the strongest possible foundation in the history and theory of western music, and its practice and performance through applied music lessons, performance, and ensembles.

MUSIC STUDENT LEARNING OUTCOMES

Students will:

- Analyze the musical styles of the Western tradition and at least one style from the non-Western traditions.

- Apply vocabulary related to performing and composing music.
- Play the piano proficiently and play the piano, organ, or another instrument, including voice, at the advanced level.
- Apply standards of performance and portfolio development.

Music

Students must successfully pass an audition to be admitted to this major. Please contact the department chairperson to schedule an audition and receive audition guidelines. Students may choose their primary instrument from one of the following instruments: voice, piano, organ, violin, viola, guitar (acoustic, classical, jazz, bass), flute, clarinet, saxophone, trumpet, French horn, and trombone. All Music majors are required to demonstrate piano proficiency before graduation. In addition, all Music majors are expected to participate in an ensemble each semester.

While it is possible to begin work as a musician after having completed the program, it is recommended that graduates continue their musical training by entering a graduate program to pursue a master's or doctoral degree or to begin a professional apprenticeship with an orchestra or an opera company.

MUSIC MAJOR REQUIREMENTS (49 CREDITS):

Required each semester (16 credits):

MU 090	Recital Attendance	0
MU 325	Primary Instrument for Majors/Minors	2

(2 credits for 8 semesters or a total of 16 credits)

Required courses (23 credits):

MU 108	Music History: Baroque and Classical Periods	2
MU 109	Music History: Romantic and Contemporary Periods	2
MU 110	Music History: Medieval to Renaissance	2
MU 205	Sight Singing, Ear Training, and Solfeggio I	3
MU 206	Sight Singing, Ear Training, and Solfeggio II	3
MU 208	Harmony I	3
MU 209	Harmony II	3
MU 220	Form and Analysis	3
MU 430	Senior Recital	2

Any combination of ensembles selected from (8 credits):

MU 171	Marching Band	1
MU 175	Instrumental Ensemble	1
MU 180	Saint Vincent College Singers	1
MU 181	Musical Theater Workshop	1
MU 182	Opera Workshop	1
MU 185	Saint Vincent Camerata	1

Additional requirements for voice majors (2 credits):

MU 317	Diction for Singers: Italian, Spanish, and Latin	1
MU 318	Diction for Singers: English, German, and French	1

Typical First-Year Music Major Schedule

Fall Semester (17-19 credits)

MU 090	Recital Attendance	0
MU 108	Music History: Baroque and Classical Periods	2
MU208	Harmony I (provided students passes placement exam)	3
MU 325	Primary Instrument for Majors/Minors	2
MU	Music Ensemble	1
EL 102	Language and Rhetoric	3

or

TH 119	First Theology Elementary/Intermediate Language	3 3/4
MA	Mathematics	3/4

If Mathematics is postponed, then one of the following should be taken:

HI	History	3
	Social Science	3

One of the courses listed above will be taken and designated as a First-Year Seminar which will satisfy a core curriculum requirement.

Spring Semester (17/18 credits)

MU 090	Recital Attendance	0
MU 109	Music History: Romantic and Contemporary Periods	2
MU 325	Primary Instrument for Majors/Minors	2
MU 108	Harmony I	3
MU	Music Ensemble	1
EL 102	Language and Rhetoric	3

or

TH 119	First Theology Elementary Modern or Classical Language	3 4
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or

	Intermediate Modern or Classical Language	3
MA	Mathematics	3 or 4

If Mathematics was taken in the fall, then one of the following should be taken:

HI	History	3
	Social Science	3

MUSIC MAJOR — CONCENTRATION IN SACRED MUSIC (51 CREDITS)

Required each semester (20 credits):

MU 090	Recital Attendance	0
MU 280	Supervised Sacred Music Practicum (1 credit per year)	4
MU 325	Primary Instrument for Music Majors (2 credits for eight semesters or a total of 16 credits) Voice, Organ, Sacred Music Composition, Gregorian Chant	

Required courses (23 credits):

MU 108	Music History: Baroque and Classical Periods	2
MU 109	Music History: Romantic and Contemporary Periods	2
MU 110	Music History: Medieval to Renaissance	2
MU 205	Sight Singing, Ear Training, and Solfeggio I	3
MU 206	Sight Singing, Ear Training, and Solfeggio II	3
MU 208	Harmony I	3
MU 209	Harmony II	3
MU 220	Form and Analysis	3
MU 250	Gregorian Chant Workshop	
MU 430	Senior Recital	2

Ensemble (8 credits):

MU 185	Saint Vincent Singers	8
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Additional Courses recommended (core curriculum requirements)

1. Theology (one or two of the following) EM 725: Sacramental Theology and Liturgy; TH 325 Vatican II History and Theology; TH 330 Catholic Sacraments, TH 345 Christian Spirituality
2. Language: LT 101,102 Elementary Latin, LT 203, 204 Intermediate Latin

MUSIC MINOR REQUIREMENTS (18 CREDITS):

Students must successfully pass an audition to be admitted to this minor. Please contact the department chairperson to schedule an audition and receive audition guidelines.

Required each semester:

MU 090	Recital Attendance	0
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Required courses (9 credits):

MU 108	Music History: Baroque and Classical Periods	3
MU 109	Music History and Literature: Romantic and Contemporary Periods	3
MU 115	Fundamentals of Music Theory	3

Two or three semesters of private instruction (3 credits):

MU 325 Primary Instrument for Majors/Minors 1 or 2
Any combination of ensembles or private instruction selected from:
(6 credits): Two semesters of piano study are recommended if the minor's primary instrument is non-keyboard.

MU 225	Secondary Instrument for Majors/Minors	1 or 2
MU 171	Marching Band	1
MU 175	Instrumental Ensemble	1
MU 180	Saint Vincent College Singers	1
MU 181	Musical Theater Workshop	1
MU 182	Opera Workshop	1
MU 185	Saint Vincent Camerata	1
MU 325	Primary Instrument for Majors/Minors	1 or 2

MUSIC HISTORY MINOR (18 CREDITS):**Required each semester:**

MU 090	Recital Attendance	0
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Required courses:

MU 106	World Music	3
MU 108	Music History: Baroque and Classical Periods	3
MU 109	Music History: Romantic and Contemporary Periods	3
MU 112	Survey of Musical Theater and Opera	3
MU 205	Sight, Singing, Ear Training, and Solfeggio I	3
MU 720	Gregorian Chant*	3

* Offered through Saint Vincent Seminary.

SACRED MUSIC MINOR

The Sacred Music minor is designed to provide students from any school of the College with formation in the arts and disciplines of Sacred Music performance. Intended for students with previous musical experience who wish to advance in their training, this minor will support and provide structure to their interests in Catholic/Christian sacred music traditions. This will be achieved through (1) private lessons on an instrument or voice, in Gregorian Chant or in sacred composition; (2) participation in specialized choral performances (concert and liturgical), and (3) in supervised liturgical practice (cantoring, small choral ensemble singing, directing, organ service playing). An audition is required for entrance into this minor.

Required Courses (Total 18 credits)

- MU 090 Recital attendance — 0 credits
- MU 325 Primary Instrument — 6 credits (1 credit per semester) from one of the following: Voice, Organ, Sacred Music Composition, Gregorian Chant
- Gregorian Chant study — 2 credits Either MU 250 Chant Summer Workshops, or one semester of MU 325
- MU 280 Sacred Music Practicum — 1 credit (2 semesters)
- MU 185 Saint Vincent Camerata and/or Camerata Scholars — 6 credits (6 semesters)
- One Music Theory or Music History Course — 3 credits MU 115 Fundamentals, MU 205 Sight Singing, MU 208 Harmony I, MU 104 Monasticism, MU 106 World Music, MU 108 Baroque/Classical, MU 109 Romantic/Contemporary Music History

MUSIC PERFORMANCE STUDENT LEARNING OUTCOMES

Students will:

- Analyze the musical styles of the Western tradition and at least one style from the non-Western traditions.
- Apply vocabulary related to performing and composing music.
- Play the piano proficiently and play the piano, organ, or another instrument, including voice, at the advanced level.
- Apply standards of performance and portfolio development.

MUSIC PERFORMANCE

Students must successfully pass an audition to be admitted to this major. Please contact the director of music to schedule an audition and receive audition guidelines. The Music Performance major is a select major and is restricted to the following instruments: organ, piano, voice. Only the best students who are single-mindedly resolute to become a professional musician should audition for this major.

All Music Performance majors are required to demonstrate piano proficiency before graduation. In addition, all Music Performance majors are expected to participate in an ensemble each semester.

While it is possible to begin work as a musician after having completed the program, it is recommended that graduates continue their musical training by entering a graduate program to pursue a master's or doctoral degree or an apprenticeship for young artists with an orchestra or opera company.

MUSIC PERFORMANCE MAJOR REQUIREMENTS (67-69 CREDITS):**Required each semester (32 credits):**

MU 090	Recital Attendance	0
MU 425	Primary Instrument for Performance Majors	4

(4 credits for 8 semesters or a total of 32 credits)

Required courses (24 credits):

MU 108	Music History: Baroque and Classical Periods	2
MU 109	Music History: Romantic and Contemporary Periods	2
MU 110	Music History: Medieval to Renaissance	2
MU 205	Sight Singing, Ear Training, and Solfeggio I	3
MU 206	Sight Singing, Ear Training, and Solfeggio II	3
MU 208	Harmony I	3
MU 209	Harmony II	3
MU 220	Form and Analysis	3
MU 330	Junior Recital	1
MU 430	Senior Recital	2

Any combination of ensembles selected from (8 credits):

MU 171	Marching Band	1
MU 175	Instrumental Ensemble	1
MU 180	Saint Vincent College Singers	1
MU 181	Musical Theater Workshop	1
MU 182	Opera Workshop	1
MU 185	Saint Vincent Camerata	1

Additional requirements for voice majors (2 credits):

MU 317	Diction for Singers: Italian, Spanish, and Latin	1
MU 318	Diction for Singers: English, German, and French	1

Typical First-Year Music Major Schedule**Fall Semester (18/19 credits)**

MU 090	Recital Attendance	0
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MU 108	Music History: Baroque and Classical Periods	3
MU 425	Primary Instrument for Music Performance Majors	4
MU	Music Ensemble	1
EL 102	Language and Rhetoric	3
or		
TH 119	First Theology Elementary Modern, or Classical Language	3 4
or		
	Intermediate Modern, or Classical Language	3
MA	Mathematics	3 or 4

One of the courses listed above will be taken and designated as a First-Year Seminar which will satisfy a core curriculum requirement.

Spring Semester (17/19 credits)

MU 090	Recital Attendance	0
MU 109	Music History: Romantic and Contemporary Periods	3
MU 425	Primary Instrument for Music Performance Majors	4
MU	Music Ensemble	1
EL 102	Language and Rhetoric	3
or		
TH 119	First Theology Elementary Modern or Classical Language	3 4
or		
	Intermediate Modern or Classical Language	3
MA	Mathematics	3 or 4

If Mathematics was taken in the fall, then one of the following should be taken:

HI	History	3
	Social Science	3

MUSIC PERFORMANCE MAJOR — CONCENTRATION IN SACRED MUSIC (69 CREDITS)

Required each semester (36 credits):

MU 090	Recital Attendance	0
MU 280	Supervised Sacred Music Practicum (1 credit per year)	4
MU 425	Primary Instrument for Performance Majors (4 credits for eight semesters or a total of 32 credits) Voice, Organ, Sacred Music Composition, Gregorian Chant	

Required courses (25 credits):

MU 108	Music History: Baroque and Classical Periods	2
MU 109	Music History: Romantic and Contemporary Periods	2
MU 110	Music History: Medieval to Renaissance	2
MU 205	Sight Singing, Ear Training, and Solfeggio I	3
MU 206	Sight Singing, Ear Training, and Solfeggio II	3
MU 208	Harmony I	3
MU 209	Harmony II	3
MU 220	Form and Analysis	3
MU 430	Senior Recital/Senior Project	2
MU 250	Gregorian Chant Workshop	

Ensemble (8 credits):

MU 185	Saint Vincent Singers	8
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Additional Courses recommended (core curriculum requirements)

1. Theology (one or two of the following) EM 725: Sacramental Theology and Liturgy; TH 325 Vatican II History and Theology;

TH 330	Catholic Sacraments
TH 345	Christian Spirituality

2. Language: LT 101,102 Elementary Latin, LT 203, 204 Intermediate Latin

MISSION STATEMENT

The founder of Saint Vincent College, Boniface Wimmer, stated that we will teach our students, “first what is necessary, then what is useful, and finally, that which is beautiful.” The goal of the Visual Arts is to follow our founder’s goal, demonstrating a connection between what is done in the studio and research in other disciplines.

ART STUDENT LEARNING OUTCOMES

Students will:

- Analyze the artistic styles of the Western tradition and at least one style from the non-western traditions.
- Apply vocabulary related to making art.
- Use a variety of materials and techniques, including digital tools.
- Apply professional standards of exhibition and portfolio development.
- Develop their observational skills shown by their use of a representational style.

ENTRANCE PORTFOLIOS FOR STUDIO ART AND ART EDUCATION

A portfolio is required for entrance into the Studio Art or Art Education major. Portfolios should be organized as a PowerPoint presentation that includes the student’s name and selected major. Each slide must be labeled with title and material for the artwork. The whole presentation should include 10 images and not exceed 4 MB. Any portfolio that does not meet these requirements will not be reviewed. Students should select their best work for review. The Chairperson of the Fine Arts makes decisions regarding acceptance in consultation with other Fine Arts faculty. Students may be accepted, provisionally accepted, or encouraged to choose a minor in the department. Provisionally accepted students can enter the major after taking a studio course at SVC and receiving a recommendation from the instructor.

ART EDUCATION MAJOR REQUIREMENTS (42 CREDITS)

Required courses (33 credits)

AR 101	Caves to Cathedrals	3
AR 102	Art History II: Baroque/Present	3
AR 130	Drawing I	3
AR 131	Point, Line, Plane, and Beyond	3
AR 135	Materials and Process	3
AR 225	Painting I	3
AR 230	Drawing II	3
AR 238	Clay and Pottery	3
AR 240	Sculpture I	3
AR 325	Painting II	3
AR 405	Senior Exhibition and Professional Seminar	3
One course selected from		
AR 310	American Art and Architecture	3
One non-western art history		
Two courses selected from		
AR 233	Drawing and Illustration for Design	3
AR 234	Introduction to Stained Glass	3
AR 236	Fiber Arts	3
AR 330	Digital Photo/Post-Production	3
AR 338	Printmaking I	3
AR 348	Printmaking II	3

CA 235	*Web Design	3
CA 285	*Digital Layout and Design	3

* Course descriptions are listed with the Communication Department.

Note: In addition, Art Education majors seeking certification must also complete the requirements set by the Department of Education. Each student needs to see the Education Department for acceptance in the certification program and receive advising for the particular education courses needed. Some students elect to complete the requirements for the art education major and graduate, and then finish completing the requirements for certification.

Typical First-Year Art Education Major Schedule

Fall Semester (16/18 credits)

AR 101	Caves to Cathedrals	3
AR 131	Point, Line, Plane, and Beyond	3
EL 102	Language and Rhetoric	3
	or	
TH 119	First Theology	3
	Elementary Modern or Classical Language	4
	or	
	Intermediate Modern or Classical Language	3
MA	Mathematics	3 or 4

If mathematics is postponed, then one of the following should be taken:

ED 100	Foundations of Education	3
PY 100	Introduction to Psychological Science	3

One of the courses listed above will be designated as a First-Year Seminar that will satisfy a core curriculum requirement.

Spring Semester (16-18 credits)

AR 102	Art History II: Baroque/Present	3
AR 130	Drawing I	3
EL 102	Language and Rhetoric	3
	or	
TH 119	First Theology	3
	Elementary Modern or Classical Language	4
	or	
	Intermediate Modern or Classical Language	3
MA	Mathematics	3 or 4

If mathematics was taken in the fall, then one of the following should be taken:

ED 100	Foundations of Education	3
PY 100	Introduction to Psychological Science	3

DIGITAL ART AND MEDIA MAJOR

GRAPHIC DESIGN CONCENTRATION

VIDEO AND ANIMATION CONCENTRATION

The Digital Art and Media major is an interdisciplinary program developed by the Fine Art and Communication faculty. The program grew out of the success of the graphic design major. Courses build practical skills balanced with the history and theory of digital art and media viewed from the liberal arts tradition. All students take a set of shared courses and then choose between two specialized concentrations - graphic design or video and animation. The Digital Art and Media minor serves students from other majors who have an interest in the material. Course descriptions for AR courses are listed under the Fine Arts Department and CA courses are listed under the Communication Department.

STUDENTS WILL:

- Analyze the artistic styles of the Western tradition and at least one style from the non-western traditions.
- Apply vocabulary related to making art and the application of design.
- Use a variety of materials and techniques, including digital tools.
- Apply professional standards of exhibition, presentation, and portfolio development.
- Develop personal style or artistic process, and when appropriate adapt to the needs of the workplace or client.

DIGITAL ART AND MEDIA MAJOR REQUIREMENTS (45 CREDITS)

24 credits:

AR 130	Drawing I	3
AR 233	Drawing and Illustration for Design	3
AR 330	Digital Photo and Post-Production	3
AR 340	Visual Story Telling	3
CA 100	Introduction to Mass Media	3
CA 130	Introduction to Digital Media	3
CA 285	Digital Layout and Design	3
CA 435	Digital Media Professional	3

Elective Courses (6 Credits):

AR 139	Outside the Box: Package Design	3
CA 251	Media Effects	3
AR 240	Sculpture I	3
AR 338	Printmaking I	3
CA 230	Writing for Media	3
CA 270	Children's Books on Film	3
AR/CA 550	Internship	3

GRAPHIC DESIGN CONCENTRATION (15 credits):

AR 101	Caves to Cathedrals	3
or 102	Art History II: Baroque to Present	3
AR 334	Typography	3
CA 235	Web Design	3
CA 325	Digital Deliberation and Remix	3
CA 301	Sports and Retail Branding	3

VIDEO AND ANIMATION CONCENTRATION (15 credits):

AR 218	Animation and Effects	3
AR 318	3D Modeling for Art and Animation	3
CA 309	Advanced Digital Editing	3
CA 225	Documentary Studies	3
CA 200	Film Studies	3

Typical First-Year Digital Art and Media Major Schedule

Fall Semester (15/18 credits)

AR 233	Drawing and Illustration for Design	3
CA 100	Introduction to Mass Media	3
EL 102	Language and Rhetoric (or TH 119)	3
	Two or three other Core Classes (e.g., math, history, or language)	6-9

One of the courses listed above will be designated as a First-Year Seminar, which will satisfy a core curriculum requirement.

Spring Semester (18 credits)

AR 130	Drawing I	3
CA 130	Introduction to Digital Media	3
TH 119	First Theology (or AL 102)	3
	Two or Three other Core Classes (e.g., history, philosophy, or language)	6-9

DIGITAL ART AND MEDIA MINOR REQUIREMENTS (21 CREDITS)

AR 130	Drawing I	
AR 233	Drawing and Illustration for Design	
AR 330	Digital Photo and Post-Production	
AR 340	Visual Storytelling	
CA 100	Introduction to Mass Media	
CA 130	Introduction to Digital Media	
CA 285	Digital Layout and Design	

STUDIO ART MAJOR REQUIREMENTS (42 CREDITS)

21 credits:

AR 101	Caves to Cathedrals	
or 102	Art History II: Baroque to Present	3
AR 130	Drawing I	3
AR 131	Point, Line, Plane, and Beyond	3
AR 225	Painting I	3
AR 325	Painting II	3
AR 404	Senior Studio	3
AR 405	Senior Exhibition and Professional Seminar	3

6 Credits of Elective:

AR 135	Materials and Process	3
AR 234	Introduction to Stained Glass	3
AR 238	Clay and Pottery	3
AR 236	Fiber Art	3
AR 240	Sculpture I	3
AR 384	Advanced Stained Glass	3
AR 388	Advanced Ceramics	3
AR 386	Advanced Fiber Arts	3

3 credits:

Any additional Art History or Art Criticism Course

9 credits:

Any AR courses or CA 235, CA 285

Non-credit course:

Senior Exit Interview

Typical First-Year Studio Art Major Schedule

Fall Semester (16/18 credits)

AR 101	Caves to Cathedrals	
or 102	Art History II: Baroque to Present	3
AR 131	Point, Line, Plane, and Beyond	3
EL 102	Language and Rhetoric	3
or		
TH 119	First Theology	3
	Elementary Modern or Classical Language	4
or		
	Intermediate Modern or Classical Language	3
MA	Mathematics	3 or 4

If Mathematics is postponed to the spring, then one of the following should be taken:

HI	History
	Social Science

One of the courses listed above will be designated as a First-Year Seminar which will satisfy a core curriculum requirement.

Spring Semester (16-18 credits)

AR 130	Drawing I	3
EL 102	Language and Rhetoric	3
or		
TH 119	First Theology	3
	Elementary Modern or Classical Language	4
or		
	Intermediate Modern or Classical Language	3
MA	Mathematics	3 or 4

If Mathematics was taken in the fall, then one of the following should be taken:

HI	History
	Social Science

ART HISTORY MINOR REQUIREMENTS (18 CREDITS)

6 credits:

AR 101	Caves to Cathedrals	3
or		
AR 102	Art History II: Baroque to the Present	3
AR 130	Drawing I	3
or		
AR 131	Point, Line, Plane, and Beyond	3

12 credits selected from:

Any AR Art History courses including History of Photography, Film Studies (Communications course), and Musical Theater History

STUDIO ARTS MINOR (18 CREDITS)

Required courses:

AR 130	Drawing I	
or AR 131	Point, Line, Plane, and Beyond	3
AR 101	Caves to Cathedrals	
or AR 102	Art History II: Baroque/Present	3
AR 234	Introduction to Stained Glass	
or AR 236	Fiber Arts	
or AR-238	Clay and Pottery	3
3 additional AR courses		9

FINE ARTS COURSE DESCRIPTIONS

MU-00X MUSIC EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. This course will be automatically added to the student's registration upon submission of the graduation application. Zero credits. Pass/Fail.

MU-090 RECITAL ATTENDANCE

Because attending live musical performances are a key element of a music student's education, all music majors and minors are required to attend six performances each semester. Students have the opportunity to see, hear, and meet internationally acclaimed artists through The Saint Vincent College Concert Series, and four of the six required concerts should be from the Concert Series. The other two concerts may be other performances on or off campus. These concerts should be solo recitals, chamber ensembles, choral concerts, operettas, operas, ballet with live music, or symphony performances. Jazz concerts are also acceptable. The level of proficiency of these concerts should be college-level, semi-professional or professional. Many classical venues give discounts on student admissions, and all Department of Fine Arts-sponsored concerts are free to Saint Vincent students. Required for all music majors and minors every semester. May be repeated. Offered both semesters. Zero credits.

MU-101 MUSIC APPRECIATION

A survey of the music of western culture which is frequently generically called classical, but in reality includes Medieval, Renaissance, Baroque, Classical, Romantic, Modern, and Contemporary periods. The course is designed to teach students

how to listen to music and how to discuss music's aesthetic nature and purpose. Representative composers and works from the major periods of music will be placed in their historical context, studied, and discussed. No prerequisites. Fulfills the Core Curriculum Fine Arts requirement. Offered both semesters. Periodically offered as a first-year seminar or honors course. Three credits.

MU-104 MONASTICISM AND THE ARTS

The course will begin with a discussion of beauty and the theology of sacramental aesthetics, taking into account the writings of such authors as St. Thomas Aquinas, St. John Damascene, and Pope Benedict XVI, and then view this through the lens of monastic contributions to art, music, iconography, painting, illumination, sculpture, and architecture up to the present time. Three credits.

MU-106 WORLD MUSIC

A survey of the music of the world and an introduction to ethnomusicology. Students explore the music of the world through performance analysis, case studies, and listening to live and recorded performances. The course also looks at the cultural aspects of a society and how they affect the music that the society creates. No prerequisites. Fulfills the Core Curriculum Fine Arts requirement. Offered spring semester in even-numbered years. Three credits.

MU-108 MUSIC HISTORY AND LITERATURE: BAROQUE – CLASSICAL

This course is designed to help the student of music to discover the characteristics of Baroque and Classical styles; to discuss the forms, styles, and compositional techniques of the period; and to identify representative composers and their major works. No prerequisites. Fulfills the Core Curriculum Fine Arts requirement. Offered fall semester. Two credits.

MU-109 MUSIC HISTORY AND LITERATURE: ROMANTIC – CONTEMPORARY

This course is designed to help the student of music to discover the characteristics of Romantic and Contemporary styles; to discuss the forms, styles, and compositional techniques of each period; and to identify representative composers and their major works. No prerequisites. Fulfills the Core Curriculum Fine Arts requirement. Offered spring semester. Two credits.

MU-110 MUSIC HISTORY: MEDIEVAL TO RENAISSANCE

This course covers the musical history of the Medieval and Renaissance Periods. Representative composers, musical works, and historical events will be discussed in detail. Historical performance practice and critique of performances will be highlighted. Two credits.

MU-111 THE SPIRITUALITY OF MUSIC

This course is designed to survey Western music through the lens of the spirituality of the composers who composed the music and to discover the catalyst for their creation of particular pieces of music. Emphasis will be placed on the music of Jewish, Muslim, and Christian composers and how their spirituality influenced the creation of their compositional output. Fulfills the Core Curriculum Fine Arts requirement. Three credits.

MU-112 SURVEY MUSICAL THEATER AND OPERA

This course offers students the chance to explore the history of opera and musical theater. Aspects of historical performance practice and the study of specific operas and musicals will be covered. The American musical will be discussed in light of historical and cultural developments. No prerequisites. Fulfills the Core Curriculum Fine Arts requirement. Offered spring semester in odd-numbered years. Three credits.

MU-115 FUNDAMENTALS OF MUSIC THEORY

This course consists of a thorough and unified presentation of music principles such as notation, intervals, scales, chords, rhythms, and simple piano familiarization. Through interactive classroom and board work, the student will acquire a firm foundation for the study of harmony and all other music courses which follow. Although it is the first music theory course required for all music majors and minors, no prior musical training or knowledge is required so it is equally appropriate for the general student who wishes to gain a basic working knowledge of the fundamentals of music. No prerequisites. Fulfills the Core Curriculum Fine Arts requirement. Offered fall semester. Three credits.

MU-118 MUSIC HISTORY AND LITERATURE OF THE MEDIEVAL AND RENAISSANCE ERAS

This course is designed to help the student of music to discover the characteristics of the music of the Medieval and Renaissance eras; to discuss the forms, styles, and compositional techniques of each period; and to identify representative composers and their major works. For music majors and minors; others with permission of the instructor. Fulfills part of the Core Curriculum Fine Arts requirement. Offered spring semester. Two credits.

MU-125 INSTRUCTION LESSONS FOR NON-MAJOR/MINOR

This instruction is for non-music majors and non-music minors at any skill level. One-half hour (1 credit) or one-hour (2 credits) of individual weekly instruction in piano, organ, voice, guitar, violin, flute, trumpet, French horn, clarinet, saxophone, and trombone is available. Can fulfill the Core Curriculum Fine Arts requirement if a total of three credits of lessons on the same instrument are taken. Permission of the instructor and chair required. May be repeated. Offered both semesters. Fee. One or two credits.

MU-171 MARCHING BAND

The Saint Vincent Marching Band is an ensemble that performs for football games, parades, and band festivals throughout the fall semester. Students are encouraged to continue their study of their instruments and work in an ensemble through this course. Can fulfill the Core Curriculum Fine Arts requirement if a total of three credits of the same ensemble are taken. May be repeated. Offered fall semesters. Zero or one credit.

MU-175 INSTRUMENTAL ENSEMBLE

Because ensemble playing is vital for the training of any music student, students are required to participate in instrumental ensembles as these ensembles become available. Can fulfill the Core Curriculum Fine Arts requirement if a total of three credits of the same ensemble are taken. Permission of the instructor is required. May be repeated. Offered both semesters. Zero or one credit.

MU-180 SAINT VINCENT COLLEGE SINGERS

Saint Vincent College Singers is an ensemble that explores the various genres of secular vocal music throughout all periods with an emphasis on popular song and American music. The ensemble is open to majors and non-majors and rehearses once a week. Several concerts are presented each semester. Can fulfill the Core Curriculum Fine Arts requirement if a total of three credits of the same ensemble are taken. Permission of the instructor is required. May be repeated. Offered both semesters. Zero or one credit.

MU-181 MUSICAL THEATER WORKSHOP

In this course students participate in every aspect of producing a musical theater production. Aspects of production that will be covered will be musical preparation, stagecraft, and acting. Can fulfill the Core Curriculum Fine Arts requirement if a total of three credits of the

same ensemble are taken. Permission of the instructor is required. May be repeated. Offered both semesters. Zero or one credit.

MU-182 OPERA WORKSHOP

This course will offer the experience of participating in either an opera scenes program or in a full opera production. Students will be involved in musical preparation including the correct use of the diction of the language in which the piece is composed. Other aspects covered will be acting, stagecraft, and historical performance practice. Can fulfill the Core Curriculum Fine Arts requirement if a total of three credits of the same ensemble are taken. Permission of the instructor is required. May be repeated. Offered both semesters. Zero or one credit.

MU-185 SAINT VINCENT CAMERATA

The Saint Vincent Camerata, founded in 1968, specializes in the choral/orchestral repertoire from the Baroque through the Contemporary periods. The Camerata offers two major programs per year, performing in the Saint Vincent Basilica, and in major churches in Pittsburgh and elsewhere. It is open to all students of the College and to all members of the Saint Vincent community, by audition. Can fulfill the Core Curriculum Fine Arts requirement if a total of three credits of the same ensemble are taken. May be repeated. Offered both semesters. Zero or one credit.

MU-205 SIGHT SINGING, EAR TRAINING, AND SOLFEGGIO I

This is the first course in learning the ability to sing melodic and harmonic pitches at sight and to be able to recognize these pitches when heard. Melodic and harmonic dictation is included and the study of the effective use of solfeggio syllables, in both rhythmical and tonal articulation, provides a sturdy foundation for a more precise performance of music. Prerequisite MU 115. Offered spring semester in even-numbered years. Three credits.

MU-206 SIGHT SINGING EAR TRAINING II

This is the second course in the series that continues with a more advanced study of the singing of melodic and harmonic pitches at sight. More rigorous melodic and harmonic dictation and a greater facility of solfeggio syllabification enables the student to attain musical precision both rhythmically and tonally, which is essential for the realization of a more mature and professional performance. Prerequisite MU 205. Offered fall semester in even-numbered years. Three credits.

MU-208 HARMONY I

Harmony I introduces the student to the harmonic language of Western music. The approach will emphasize composing four-part harmonic phrases, but will also regularly incorporate singing, harmony at the keyboard, ear training, movement, and harmonic analysis. The goal of the study of harmony is to acquire fluency with musical vocabulary (chords) and musical grammar (chord progressions and modulations), understanding both as necessary components of musical literacy. Topics include Major Mode, Minor Mode, and Dissonance Treatment. Prerequisites: MU 115 or permission of instructor. Three credits.

MU-209 HARMONY II

Harmony II is a continuation of Harmony I, again emphasizing the composition of four-part phrases, together with singing, playing, ear training, movement, and analysis exercises. Topics include Modulation, Harmony and Rhythm, Chromatic Harmony, Cadences, Harmonization of chorale melodies and of figured basses. Prerequisites: MU 208 or permission of the instructor. Three credits.

MU-210 HARMONY III

Harmony III is a continuation of Harmony II. New topics introduced include: Chromatic Harmony, Minor Subdominant, Modulation, "Non-Harmonic" Tones, and Harmonic Language of the 20th Century. Three credits.

MU-220 FORM AND ANALYSIS

The study of musical form, traditionally called "Form and Analysis," integrates previous courses in Music Theory with the student's study of musical repertoire. The goals of Form and Analysis are first, to introduce the student to the most common and significant musical forms, and second, to develop each student's "sense of form." The repertoire to be studied will include an historical survey of a selection of musical forms from Gregorian Chant to the Contemporary period. The development of a "sense of form" comes with active listening, movement exercises, simple composition exercises, and the application of these in musical performance. Prerequisites: MU 209 or permission of the instructor. Three credits.

MU-225 SECONDARY INSTRUMENT LESSONS

This instruction is for the music major or music minor's secondary instrument of study. Individual instruction in piano, organ, voice, guitar, violin, flute, trumpet, French horn, clarinet, saxophone, and trombone. Other instruments of study may be arranged through the department chair. One half-hour (1 credit) or one hour (2 credits) of weekly instruction are possible. Permission of the instructor and chair is required. May be repeated. Offered both semesters. Fee. One or two credits.

MU-250 GREGORIAN CHANT WORKSHOP

The two-week summer Gregorian Chant Workshop is structured in two parts: Part 1. Introduction to Historical Performance Practice which includes an historical outline of Gregorian Chant from its origins to the most recent printed editions, practice in the study of Gregorian Chants characteristic "melodic-verbal style," aesthetics of the Latin language, elements of modality, principles of Gregorian Semiology, and the application of these to singing simpler antiphons from the Graduale Simplex and Graduale Triplex. Part 2. Introduction to Gregorian Semiology of Eugene Cardine, O.S.B., and the New Science of Gregorian Modality (Jean Claire, O.S.B., and Alberto Turco) includes singing simpler Mass antiphons using the Xth century St.Gall neumatic notation, application of recent research into Gregorian Modality including the "mother tones," archaic modes, and an introduction to the Graduale Novum (2011). No prerequisites, but experience with choral singing and the ability to read music are recommended. Two credits.

MU-280 SUPERVISED PRACTICUM

This course is open only to students enrolled in the Sacred Music minor, or in the concentration in Sacred Music. Students enrolled in this course participate in Liturgies on campus (Wednesday Evening Community Mass, Student Chapel Masses, or other approved liturgies) in a variety of music ministries according to their areas of expertise and level of experience, including: 1. Organ service playing, with supervision in liturgical planning, techniques of hymn and chant accompaniment, choral and vocal solo accompanying. 2. Cantoring and small ensemble singing, with supervision in choral/vocal techniques, liturgical planning, vocal pedagogy, choral pedagogy, rehearsal techniques, conducting, choral repertoire, a cappella singing. 3. Sacred Music Composition of responsorial psalm settings, hymn descants, chant accompaniment, motets. Faculty supervision will focus on the technical, liturgical, pastoral, and spiritual considerations necessary for the formation of liturgical musicians. Students will

keep a journal of their activities to be presented at the end of each semester. Course is taken one semester for zero credit and one semester for one credit each academic year.

MU-301 INTRODUCTION TO COUNTERPOINT

Students will complete species counterpoint exercises, compose in species counterpoint, and improvise species counterpoint at the keyboard. Two credits.

MU-317 DICTION FOR SINGERS ITALIAN, SPANISH, LATIN

This course deals with the correct articulation of diction and the pronunciation of words for singers as they are sung in Italian, Spanish, and Latin. Students will learn the International Phonetic Alphabet. Required for all music majors whose primary instrument is voice. Offered as needed. One credit.

MU-318 DICTION FOR SINGERS GERMAN, ENGLISH, FRENCH

This course deals with the correct articulation of diction and the pronunciation of words for singers as they are sung in German, English, and French. Students will learn the International Phonetic Alphabet. Required for all music majors whose primary instrument is voice. Offered as needed. One credit.

MU-320 JUNIOR SEMINAR

This seminar is intended for juniors in the Performing Arts Concentration of the Arts Administration major as a preparation for MU 410 Senior Research Project/Thesis. It will focus on identifying a research topic and emphasize research techniques, presentation skills, and writing skills. For Arts Administration majors with Performing Arts concentration. Offered spring semester or as needed. Three credits.

MU-325 PRIMARY INSTRUMENT LESSONS

This private instruction is for music majors and minors studying their primary instrument (organ, voice, guitar, violin, flute, trumpet, French horn, clarinet, saxophone, and trombone). Majors should register for one hour (two credits) of weekly instruction. Minors may register for one-half hour (one credit) or one hour (two credits) of weekly instruction. A jury is required for both majors and minors. May be repeated. Permission of instructor and chair is required. Offered both semesters. Fee. One or two credits.

MU-330 JUNIOR RECITAL

Music Performance majors are provided with an invaluable opportunity to perform a solo recital on his or her major instrument during the junior year of study. Required for music performance majors. Offered as needed. Fee. One credit.

MU-350 INDEPENDENT STUDY—MUSIC

Topics of research are chosen and developed by the student with the guidance of the faculty member directing the study. For junior or senior music majors and minors only. May be repeated. Permission of the instructor and chair required. Offered as needed. Variable credit.

MU-410 SENIOR RESEARCH PROJECT/THESIS

This Senior Research Project/Thesis takes several forms depending upon the student's major and interest. For instance, Arts Administration majors with a Performing Arts Concentration are guided through the writing of a thesis or documenting of a research project; whereas Music majors or Music Performance majors may wish to do further study, one-on-one with a faculty member in such areas as musical composition, choral or orchestral conducting techniques, music theory, or music history. Whatever form the course takes, the student will work closely with a faculty

member who will serve as the advisor. The finished project will be submitted to a committee for review. Offered fall semester, or as needed. Three credits.

MU-420 GREGORIAN CHANT

An introduction to the history, theory, spirituality, and performance of Gregorian chant. Three credits. Offered spring semester in even-numbered years. Cross-listed in Saint Vincent Seminary as MU 720. Three credits.

MU-425 PRIMARY INSTRUCTION LESSONS FOR PERFORMANCE MAJORS

This individual instruction is limited to music performance majors studying piano, organ, or voice. Two hours of weekly private instruction. A jury is required. May be repeated. Permission of instructor and chair is required. Offered both semesters. Fee. Four credits.

MU-430 SENIOR RECITAL

The Senior Recital is the culmination of the Music Performance major's course of study, providing the challenge and prestige of a solo recital on the major instrument. Required for music performance majors. Offered as needed. Fee. Two credits.

MU-550 MUSIC INTERNSHIP

Students may work in a professional setting in order to extend their learning experience beyond college into the professional world of music; relevant experiences can take the form of internships, field work, and cooperative programs, particularly in music studios, music businesses, music schools, music organizations, and music management offices. Students may or may not be paid, depending on the policy of the employer. For junior and senior music division majors and minors only. May be repeated. Offered both semesters. Variable credit.

AR-00X ART EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. This course will be automatically added to the student's registration upon submission of the graduation application. Zero credits. Pass/Fail.

AR-100 ART AND MUSIC OF WESTERN CULTURE

An interdisciplinary course designed to provide students with an introductory experience in the fine arts. The course is divided into two components. The first consists of a survey of the evolution of art and music in the context of the historical and cultural background of major periods of western civilization. The second is a study of the principles inherent in both musical composition and the structure and meaning of style and expression in architecture, painting, and sculpture. No prerequisites. Fulfills the Core Curriculum Fine Arts requirement. Offered both semesters. Periodically offered as a first-year seminar. Three credits.

AR-101 CAVES TO CATHEDRALS

What does art communicate? This course provides an introduction to the art and architecture of western culture from pre-history through the Renaissance. Topics include the Neolithic Age, Ancient Near East Art, Egyptian Art, Greek and Roman Art, the Middle Ages (Early Christian, Romanesque, and Gothic), and Renaissance Art. Emphasis is placed on how art and architecture reinforce the social, religious, and cultural beliefs of civilizations. No prerequisites. Fulfills the Core Curriculum Fine Arts requirement. Offered fall semester. Three credits.

AR-102 ART HISTORY II: BAROQUE/PRESENT

How avant-garde is contemporary art really? This course explores art and architecture of western culture and shows how it continues to influence contemporary art. We'll examine Baroque, Neoclassical, and the Romantic periods as well as all the "isms" of the 20th century. Other topics such as poetry, dance, performance, and emerging art forms will be discussed. No prerequisites. Fulfills the Core Curriculum Fine Arts requirement. Offered spring semester. Three credits.

AR-103 MODERN ART AND MODERNISM

Modernism had a tremendous influence on the politics, culture, and art of the 20th century. This course explores how Modernism is seen in the art of the 20th century. Topics include: the development of modern art, abstraction, surrealism, influential art critics, and art at the close of the 20th century. No prerequisites. Satisfies the Fine Arts Core Requirement. Three credits.

AR-106 CONTEMPORARY ART FROM THE MIDDLE EAST AND ISRAEL

In this course we will examine what contemporary artists are making who either live in Middle East countries including Israel or have left those places. We will look at art made for museums, public art, and popular culture including music videos and cinema. We will examine style, method of construction, and subject matter of artworks in order to address the following questions: What artistic styles and techniques influence these artists? What new artistic

developments do they pursue? What cultural, political, or religious ideas do these artists explore? How does an artist's background or life experience inform their work? Which of these artists have received international attention? What are the major international art and film venues for their work? Is it possible to form a description of Global Art? Should we? How does our study inform the catholic, Benedictine, liberal arts intellectual tradition? This course satisfies the core requirement in the Fine Arts. This course also satisfies the non-western/American art course requirement for Art Education majors. Three credits.

AR-125 EXPRESS YOURSELF: ACTING I

This course will teach fundamental skills for acting for the stage. The major emphasis is on actor development and growth through various acting exercises, techniques, character portrayal, monologue work, and scene study. Fulfills the Core Curriculum Fine Arts requirement. No prerequisites. Offered both semesters. Three credits.

AR-130 DRAWING I

Drawing is fundamental to developing observational skills, brainstorming ideas, and thinking visually. In this course students will learn the fundamentals of form, rendering, and composition. These skills will be used in a variety of ways and with various materials. No prerequisites. Fulfills the Core Curriculum Fine Arts requirement. Fee. Offered every semester. Three credits.



AR-131 POINT, LINE, PLANE, AND BEYOND

Pencil, marker, ink, layering, shading, stippling: these are just a few of the materials and techniques we will use in this class. Come join us and learn about their theoretical and practical uses. Open to all students. No prerequisites. Fulfills the Core Curriculum Fine Arts requirement. Fee. Offered fall semester. Three credits.



AR-135 MATERIALS AND PROCESS

Want to explore how to make stuff? Come join us as we learn how to use a variety of materials including fiber, clay, glass, and more. Along the way, we'll learn about positive and negative form, how materials feel, and how they work. All are welcome. Fulfills the Core Curriculum Fine Arts requirement. Fee. Offered spring semester odd-numbered years. Three credits.

AR-136 INTRODUCTION TO FIBER ARTS

This class includes traditional and non-traditional fibers. We will explore various methods of creating artwork using knitting, crocheting, felting, and weaving. Animal, vegetable, and mineral fibers will be spun into useable strands to create cloth and other art pieces. The use of embellishments such as beads, embroidery, and trim will also be employed. Can replace AR 135, AR 240, or AR 336 requirement for all AR majors. This course can replace AR 236 for all major and minor requirements, where listed. Fee. Three credits.

AR-139 OUTSIDE THE BOX; PACKAGE DESIGN

Walk through any wholesale food store and you'll find cardboard boxes in all shapes and sizes. Some boxes are meant to break open and display product; others are hefty and protect fragile items; and others have eye-catching shapes. Take that same walk through a bookstore and each new publication feels different in your hands. Some are coarse and rugged, other books feel slick and modern. How does the designer use paper and cardboard in so many different ways? This course will include demonstrations, play, and experimentation to explore package design and bookbinding. The course is open to everyone including digital art and media, visual

art, and engineering students. Meets the requirements for the Fine Arts Core Requirement. Fee. No prerequisites. Periodically offered as an honors course. Three credits.

AR-155 HISTORY OF PHOTOGRAPHY

From its earliest beginnings with albumen egg protein to cell phones, photography has changed how we see the world. This survey lecture course explores the technological and creative developments of photography from pre-photographic discoveries, such as the pin-hole camera, to film, and now, digital imagery. Fulfills the Core Curriculum Fine Arts requirement. Offered fall semesters of even-numbered years. Three credits.

AR-165 MUSICAL THEATER HISTORY

This course explores the history, development, creators and composers of musical theater. We will discuss the major elements from the mid-18th century to the present of a musical production; the book, lyrics, score, dance, and set design. We will trace the musical's evolution through the colorful eras of Minstrel Shows, Vaudeville, Burlesque, Revue, and the Golden Era up through the British Invasion and to the present day. You will learn the techniques and contributions from such great composers and lyricists as Irving Berlin, Jerome Kern, Cole Porter, Rodgers and Hammerstein II, and Stephen Sondheim's influences on the present day musical theater. Satisfies the Fine Arts Core Requirement. Three credits.

AR-168 MUSICAL THEATRE DANCE STYLES

This course covers a variety of dance styles used in musical theatre including jazz, ballet, tap, ballroom, musical theatre movement, street dance, and folk dance forms; the development of musical theatre from the early styles of Broadway to the present. It will also include the styles and contributions of major musical theatre choreographers. Three credits.

AR-170 IDOL WORSHIP: ICONOCLASM

How do we depict the divine? Some say, to even try limits our ability to imagine an all-powerful being. This course will look at a range of art historical examples from Egypt, Byzantine, Early Christian, Renaissance, Non-Western, Jewish, Baroque, and Contemporary Art. We will also read texts related to religious and cultural laws prohibiting certain images – the most famous being the second commandment's prohibition against graven images in the Old Testament. We will seek not only theological reason for such laws but historical and cultural influences as well. Satisfies the Fine Arts Core Requirement. Three credits.

AR-215 ACTING II

This course will strengthen and expand upon the basic stage acting skills. The focus will be on character building and scene analysis, along with the various tools (voice, movement, etc.) necessary for successful theatrical performances. Students will study various theoretical approaches to the art of acting, but our primary goal will be practical: most of the course will consist of exercises and scene work. Prerequisite: AR 125 or permission of instructor. Offered spring semester, as needed. Three credits.

AR-218 ANIMATION AND EFFECTS

This course introduces students to the history and aesthetics of animation. Class formats range from practical exercises, presentations, and viewings. Topics include the technological development of animation, the principles of perceiving movement, and artists' use of animation in different cultural contexts. Additionally, students will demonstrate their ability to create animated movement using traditional methods and digital tools. Hybrid Course. Three credits. Studio fee.

AR-225 PAINTING I

This intermediate level course is for students who want to learn the methods and materials of painting with oils and acrylics. Its purpose is to provide the student with solid foundational skills and an opportunity to explore a variety of approaches in the creation of paintings including layering, glazing, mixing paint medium, and proper studio maintenance. Prerequisites: AR 130 or AR 131. Fee. Offered fall semester. Three credits.

AR-230 DRAWING II

An introductory course to the methods and materials of drawing. Its purpose is to provide the student with solid foundational skills and the opportunity to explore a variety of approaches to drawing. Line, color, form, value, and composition will be the primary topics. No prerequisites. Fulfills the Core Curriculum Fine Arts requirement. Prerequisites: AR 130 or AR 131. Fee. Offered fall semester. Three credits.

AR-233 DRAWING AND ILLUSTRATION FOR DESIGN

This class develops skills using vector graphics for fine art, illustration, and design. Assignments focus on the use of layers, light, and shadow, and fluency in the use of digital tools. Later assignments explore creative and editorial considerations as well as how to export files to other programs for further work including animation. Fee. Offered fall semester. Three credits.

AR-234 INTRODUCTION TO STAINED GLASS

Students will be introduced to the tools and materials needed to create both two- and three-dimensional designs made with stained glass. Processes include: designing stained glass, cutting glass, assembling using the copper foil method and leading glass, soldering lead and copper foil, sealing leaded panels. Can replace AR 135, AR 240, or AR 336 requirement for all AR majors. Does not satisfy Fine Arts Core Curriculum requirement. Fee. Offered fall semester odd-numbered years. Three credits.

AR-236 FIBER ARTS

This class will include both traditional and non-traditional fibers. We will explore various methods of creating artwork using fiber which will include knitting, crocheting, felting, and weaving. Animal, vegetable, and mineral fibers will be spun into usable strands to create cloth and other art pieces. The use of embellishments such as beads, embroidery, and trims added to fabric will also be employed. Can replace AR 135, AR 240, or AR 336 requirement for all AR majors. Does not satisfy Fine Arts Core Curriculum requirement. Fee. Offered fall semester even-numbered years. Three credits.

AR-238 CLAY AND POTTERY

This course will introduce the student to various techniques used when working with clay. Students will create three-dimensional forms in clay through hand-building, pinching, coiling, and throwing on a potter's wheel. The finished forms will be fired in a kiln and glazed. The outcome of this class is to create clay-based art that will be included in the student's final portfolio. Can replace AR 135, AR 240, or AR 336 requirement for all AR majors. Does not satisfy Fine Arts Core Curriculum requirement. Fee. Offered Spring semester of odd-numbered years. Three credits.

AR-240 SCULPTURE I

Sculpture takes many forms. Students will be introduced to a variety of construction techniques involving clay, plaster, wire, fibers, and other materials. Assignments will challenge the student to find the scope of possibilities with each material. In addition to the development of artistic skills, students will participate in critiques

that reinforce critical thinking in the classroom. Fee. Offered fall semester odd-numbered years. Three credits.

AR-310 AMERICAN ART AND ARCHITECTURE

This course is a survey of American art and architecture that will focus on the 19th, 20th, and 21st centuries. Emphasis will be placed on the relationship of American Thought and the ever-shifting relationship between American artists and architects and their European contemporaries. Periodically offered as an honors course. Three credits.

AR-318 3D MODELING FOR ART AND ANIMATION

This advanced course introduces students to the principles of constructing and rendering three-dimensional forms in digital space. Students will begin by creating three-dimensional objects and environments. Topics include: workflow, building and moving forms, applying textures, and lighting. Class format includes: examination of professional examples, studio time, and demonstrations. Hybrid Course. Fee. Three credits.

AR-325 PAINTING II

This course is a progression of AR 225. Students will refine their skill and have the opportunity to expand their use of materials. The student should begin to develop a personal style. Prerequisite: AR 225. Fee. Three credits.

AR-330 DIGITAL PHOTO/POST-PRODUCTION

This course teaches students about digital photography and postproduction, providing them with the knowledge, skills, and experience necessary in professions which utilize photographs and digital art in various applications. Topics and skills the course will address include the history and development of the modern digital camera, terminology used in digital imagery, physical components and features of digital cameras, and post-production techniques in image enhancement and manipulation. Since mastering the complexity of the various features available on digital cameras today is an integral part of the course, each student is required to have a personal digital camera to use. This camera should have various features and functions, and be the best quality camera the student can afford. No prerequisites. Three credits.

AR-334 TYPOGRAPHY

The fundamentals of typography will be discussed. This will include an overview of the technology and history of text. Much of the course will be dedicated to the development of skills related to the design of typography. Students will become proficient in the use of vector graphics and understand how size, form, and layout affect legibility. Additionally, assignments will demonstrate how typography acts as a means of communication and a vehicle for expression. Does not satisfy Fine Arts Core Curriculum. No prerequisites. Three credits.

AR-336 SCULPTURE II

This advanced course is a continuation of AR 240 Sculpture I. Proficiency with a variety of materials is assumed. More challenging conceptual and theoretical assignments will challenge students to develop their own working methods and relationship to materials. Prerequisite: AR 240. Fee. Three credits.

AR-338 PRINTMAKING I

An introduction to the basic procedures of the four major processes for creating multiple originals: relief, serigraphy, intaglio, and lithography. Prerequisites: AR 130 or AR 131. Fee. Three credits.

AR-340 VISUAL STORY TELLING

Stories are all around us. They appear in three-pane comic strips, lengthy graphic novels, 15-second commercials, and even in print ads and, of course, animation. How do they work? How are they made? This course will examine a variety of visual storytelling media and introduce students to the basics of story boarding, backgrounds, and simple movement. Students will watch and critique examples. They will also be introduced to the principles of visual story development, the visual cues that advance narrative even in still pictures, stop-motion animation, and basic digital animation skills. Three credits.

AR-348 PRINTMAKING II

An in-depth investigation of student-selected processes with emphasis on refined basic technique as well as sophisticated technical applications. Prerequisite: AR 338. Fee. Three credits.

AR-350 INDEPENDENT STUDY – ART

Topics of research are chosen and developed by the student with the guidance of the professor directing the study. Prerequisites: AR 101 and AR 102 or AR 130, AR 131, and AR 225. May be repeated. Permission of the instructor and department chair required. Variable credit.

AR-368 ADVANCED CLAY AND POTTERY

This course builds on the basic skills introduced in AR 238. Students will continue to learn how to throw on the wheel, construct complex handbuilt projects, and explore the properties of glazes. Prerequisite: AR 238, Clay and Pottery. This course can replace the Sculpture II requirement for Visual Arts, Art Education, and Digital Art and Media majors. Fee. Three credits.

AR-370 AVANT-GARDE ART: 19TH AND 20TH CENTURY

This intermediary course follows the development of avant-garde art movements in the 19th and 20th Centuries. The 19th and 20th Centuries are marked by unprecedented change and invention. As the effects of Revolutions in Europe and America began to take form, art and architecture supported and responded to those influences. Even more abrupt are numerous other historical, political, economic, and technological advances. Some of them include: invention of photography, the dominance of Europe followed by the rise of the United States, and regional and world war. The Avant-garde, or perhaps multiple Avant-gardes, rose to prominence throughout the 19th and 20th Centuries. Did these have lasting effect on art? Was this tendency to break with the past the normal response to sudden change? Or did art follow its own history of reinvention? What connections can be drawn between the development of art and history? Are these connections still valid? This course will investigate the ideas and artistic production of those considered part of the Avant-Garde and puzzle over its lasting effects. Multiple disciplines will be used including art history, philosophy and criticism, and cultural history. Prerequisite: AR 101 or AR 102. Periodically offered as an honors course. Three credits.

AR-384 ADVANCED STAINED GLASS

This advanced course provides the student with new skills to further his or her ability in how she or he works with glass. Glass painting, fusing glass, etching on glass, and the use of beveled glass will take the craft of stained glass art to a whole new realm. We will also work with mosaic designs using the scrap glass. There will be an opportunity to create three-dimensional designs with glass such as Tiffany style lampshades as well as more modern projects. Students must have the basic techniques of cutting glass and lead assembly of glass well understood before taking this advanced course. One project will become a part of the Saint Vincent

Campus for further generations of students to enjoy. Three credits. Fee. Prerequisites: AR 234. This course may be taken again for credit.

AR-385 CONTEMPORARY ART SEMINAR

The specific subject of this seminar will alternate, but it will always address a significant aspect of contemporary art and architecture. Prerequisite: AR 101 or AR 102. Periodically offered as an honors course. Three credits.

AR-386 ADVANCED FIBER ART

Having developed basic skills in crocheting, weaving, felting, and sewing, students will now explore how these techniques can be used to create three-dimensional artistic forms. Wearable art, installation, and contemporary fibers will be the focus of the assignments. Students will be encouraged to develop their own vision and apply a mixture of techniques. Prerequisite: AR 236. Fee. Three credits. May be repeated for credit.

AR-388 ADVANCED CERAMICS

This advanced course will focus on joinery and scale. Students will further develop their consistency with throwing and how to join forms together to create studio pottery and sculptural forms. Basic glaze and firing chemistry will be covered. At the advanced level, students will be encouraged to integrate various techniques into a single project with the goal to develop self-expression and proficiency with the materials. Prerequisite: AR 238. Fee. Three credits. This course may be repeated for credit.

AR-404 SENIOR STUDIO

What kind of art do you want to make? This capstone course is to be followed by Senior Exhibition and is for graduating art education and visual arts majors only. Assignments are student-directed and faculty-mentored. All materials offered by the department are available for student use. Students are encouraged to develop their own style, be ambitious, and work in a professional manner. Work completed during the course will be exhibited in AR 405 Senior Exhibition. Three credits. Fee. Prerequisites: At least two 200- or 300-level studio courses. Graduating students only or permission of instructor.

AR-405 SENIOR EXHIBITION AND PROFESSIONAL SEMINAR

Senior Exhibition is the second part of the capstone project for art education and visual arts majors. Students will continue to develop a personal style and portfolio of work. Students are required to exhibit their work in the Saint Vincent College Gallery. To do so, they must follow all the guidelines, due dates, and produce the deliverables required by the Gallery Director and not the course professor. This opportunity affords the student a professional experience that is demanded of the field. Three credits. Fee. Prerequisite: AR 404. Graduating students only or permission of instructor.

AR-550 ART INTERNSHIP

Students may work in a professional setting in order to extend their learning experience beyond college into the world of work; relevant experiences can take the form of internships, field work, and cooperative programs, particularly in artist studios, commercial graphic design departments, art galleries, museums, and arts management offices. Students may or may not be paid, depending on the policy of the employer. For junior and senior art majors and minors only. May be repeated. Variable credit.



GLOBAL ENGAGEMENT CERTIFICATE

Dr. Elaine Bennett, *Chairperson*
 Doreen Blandino; Thad Coreno; Sara Hart; Tina Johnson;
 David Kelly, O.S.B.; Tim Kelly; Christopher McMahon; and
 Peter Smyntek

The world is increasingly interconnected and our local communities are part of larger political, social, cultural, ecological, and economic systems. The Global Engagement Certificate program seeks to teach students to consider how we, as we live our lives in our local communities, affect and are affected by the world around us.

Students who earn the Global Engagement Certificate will have demonstrated that they have developed skills and ways of thinking that will allow them to work productively with people and institutions from various cultures and backgrounds and that they are able to analyze how their actions, locally, play a part in the complex dynamics of our connected world.

The Global Engagement Certificate is designed to enhance any major program of study and nearly all required course work overlaps with Saint Vincent College core requirements. This is not a minor program, but rather a certificate, in that the focus is not so much on subject matter competence, but rather on habits of mind and skills that are important for understanding and engaging with the world around us, locally and globally.

GLOBAL ENGAGEMENT CERTIFICATE STUDENT LEARNING OUTCOMES

Students completing the Global Engagement Certificate program will demonstrate ability to:

1. Articulate a systemic understanding of the interrelationships among the self, local and global communities, and the natural and physical world.

2. Demonstrate skills that contribute to effective global engagement, including proficiency in a foreign language, interdisciplinary reasoning, and cross-cultural understanding.

3. Analyze the impact of ethical and power relations on people's lives both across the globe and within individual societies.

4. Recognize and exercise personal and social responsibility, locally, nationally, and globally through extra and co-curricular activities and reflection.

5. Apply knowledge and skills involving an integrated and systemic understanding of the interrelationships between contemporary and past challenges facing cultures, societies, and the natural world on the local and global levels to real-life problem-solving both alone and with others.

Program Structure

There are five major components of the Global Engagement Certificate:

- 1) Global Course work (three required courses and two electives)
- 2) Language Requirement (one course beyond core requirement)
- 3) Education Abroad (28 days of study abroad)
- 4) Extra and Co-curricular Engagement (participation in and reflective essays on five events)
- 5) Global Engagement Portfolio (artifacts from each certificate component and a final reflective essay)

Students pursuing the Global Engagement Certificate will complete a total of 18 credits of course work to fulfill the global coursework and language requirements. These courses may overlap with their other degree requirements. The course work consists of nine credits

of required courses, six credits of elective courses, and three credits in an advanced language course.

The Global Engagement Certificate program also includes focused co-curricular and extracurricular activities and education abroad requirements that guide students to exercise their learning with real world engagement.

Students completing the Global Engagement Certificate will submit artifacts or reflective essays for each component, including a final reflective essay on their portfolios.

(1) GLOBAL COURSEWORK

Global Engagement Certificate students will complete the following three required courses, listed below, and will select two electives from the list of elective options. These credits must come from at least three different departments. (The required courses already include course work in Anthropology and History; at least one of the electives should come from a third department.)

Required courses:

- AN222—Cultural Anthropology
- HI288—History of Global Health
- AN 322—Global Engagement Seminar
- Two elective courses
- An advanced language course, beyond the Intermediate II level (discussed in the next section)

Note: The certificate may only be awarded upon the completion of an academic degree at Saint Vincent College.

ELECTIVE OPTIONS

Select two—one must be outside of anthropology and history

PY 399	Child Welfare and Development in the International Context
HI 226	Society and the Environment in Historical Perspective
AR 106	Contemporary Art from the Middle East and Israel
NSCI 265	Science for International Development
NSCI 252	Science of Sustainable Living
NSCI	Global Climate Change
NSCI 140	Science and Global Sustainability
SO 106	Sociology and Global Issues
AN 285	Medical Anthropology
TH 327	Living Theology in Guatemala
AN 295	Culture and Health in Guatemala
AN 315	Applied Anthropology
AN 225	Anthropology and World Art
ES 230	Energy and the Environment
CA 218	Intercultural Communication

A relevant internship or capstone project may also fulfill one of the elective requirements, with approval of the program director.

Note: Some of these courses may have prerequisites and/or lab sections.

(2) LANGUAGE REQUIREMENT

Three credits of advanced study, beyond core requirement. It is strongly recommended that the students do their education abroad requirement (see #3 below) in a place where they can immerse themselves in the language they are studying.

(3) EDUCATION ABROAD

Students pursuing the Global Engagement Certificate must complete a minimum of 28 days of academically-oriented education abroad. Students who are not able to complete a full 28 days of academically-oriented education abroad can work with the program director to identify an appropriate in-country experiential learning opportunity that fulfills the objectives of the study abroad, to substitute for up to 14 days of study abroad time.

(4) EXTRA AND CO-CURRICULAR ENGAGEMENT

Students must demonstrate and reflect on active participation in an internationally oriented organization (e.g., a student club or civic organization that engages with global issues) and attending/participating in at least five campus or community globally themed events (e.g., lectures, forums, festivals, service events).

(5) GLOBAL ENGAGEMENT CERTIFICATE PORTFOLIO

Students will compile a digital portfolio documenting their accomplishment of the certificate requirements. Students will compile the portfolio as they complete different requirements for the program, and will finalize their portfolios, including a final reflective essay as part of the Global Engagement Seminar.

Contact Dr. Elaine Bennett (elaine.bennett@stvincent.edu) for additional information and more specific details about the program.

This program was developed with the support of a U.S. Department of Education Undergraduate International Studies and Foreign Languages grant.

HISTORY

Timothy Kelly, *Chairperson*

Gilbert M. Bogner; Brian Boosel, O.S.B.; Tina Phillips Johnson;
Karen Kehoe; Rene Kollar, O.S.B. (Wimmer Chair); Susan Mitchell
Sommers

Adjunct Faculty: Lauren Churilla; Pamela Curtain; Barry Fulks;
Katherine Macioce Stevens

DEPARTMENT PHILOSOPHY

The philosophy of the Department of History echoes the College Mission which commits to help students acquire a quality liberal arts education and achieve significant career goals. To accomplish this, the Department prepares students for graduate or professional school, or for a wide variety of careers. Department faculty work with students to develop their intellectual understanding of both the facts of historical events and their broader significance, and nurture students' skills in critical thinking and effective oral and written communication.

Department faculty believe that the study of history provides the context necessary to understand our contemporary world. By analyzing historical events, students can more fully appreciate the complexity of human experience. By examining social changes in other times, they develop a broad perspective and the ability to weigh evidence and arguments that are essential for those who

live in a rapidly changing world. The Department of History offers the B.A. degree through programs sufficiently structured to guide the student, yet flexible enough to encourage the development of individual interests.

HISTORY STUDENT LEARNING OUTCOMES

Students will:

- Demonstrate a detailed academic knowledge of history in particular settings.
- Analyze and evaluate primary and secondary sources.
- Place secondary sources in their historiographical context.
- Trace the interaction of various factors that shape history.
- Demonstrate effective academic writing.
- Demonstrate effective academic speaking.

REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE IN HISTORY

(See core curriculum requirements.)

The History major consists of 39 credits. The balance of the 124 credits required for graduation can be composed of electives or courses required for one or more minors or a second major. Students should choose electives in consultation with their major advisor.



MAJOR REQUIREMENTS (39 CREDITS)

A. Area Studies

History majors are required to complete three of the following areas for a total of 18 credits at the 100-level:

HI 102,103	Ancient Greece and Rome and Medieval and Renaissance Europe	6
HI 104,105	Contemporary Europe I and II	6
HI 106,107	Topics in U.S. History	6
HI 108,109	East Asian Societies, Traditional and Modern	6
HI 110,111	English History	6
HI 123,124	Global History I and II	6

B. Upper Division History Classes

History majors must take three courses, or nine credits, from the 200-level offerings.

C. Majors-only courses

History majors will be required to take HI 303: Historical Writing in the fall of their sophomore year, HI 300: The Historian's Profession in the spring of their sophomore year; HI 301: Junior Research Seminar in their junior year; and HI 302: Senior Writing Seminar in the fall of their senior year.

D. Non-Western Course Requirement

The History major is required to take one course that is designated non-Western. This is not an additional course, but should be fulfilled by careful selection of either area studies or upper division courses. Courses in this catalog that are designated as non-Western include: HI 108, HI 109, HI 123, HI 124, HI 208, HI 209, HI 224, HI 232, HI 233, HI 245, HI 270, HI 274, HI 280, HI 281, HI 283, and HI 288. Most non-Western courses will be offered on a two- to four-year rotation, so students should be aware of what is available in any given academic year. For an updated list of non-Western courses, consult with your advisor.

REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE IN PUBLIC HISTORY

(See core curriculum requirements.)

The Public History major consists of 48 credits. The balance of the 124 credits required for graduation can be composed of electives or courses required for one or more minors or a second major. Students should choose electives in consultation with their major advisor.

MAJOR REQUIREMENTS (51 CREDITS)

HISTORY REQUIREMENTS

Public History majors are required to complete two of the following area studies courses for a total of 12 credits at the 100 level:

HI 102, 103	Ancient Greece and Rome and Medieval and Renaissance Europe	6
HI 104, 105	Contemporary Europe I and II	6
HI 106, 107	Topics in U.S. History	6
HI 108, 109	East Asian Societies Traditional and Modern	6
HI 110, 111	English History	6
HI 123, 124	Global History I and II	6

Upper Division History Classes

Public History majors must take three courses, or nine credits, from the 200-level offerings.

Majors-only courses

Public History majors will be required to take HI 303: Historical Writing in the fall of their sophomore year, HI 300: The Historian's Profession in spring of their sophomore year; HI 301: Junior

Research Seminar in their junior year; and HI 302: Senior Writing Seminar in the fall of their senior year. The courses are:

HI 300	The Historian's Profession	3
HI 301	Junior Research Seminar	3
HI 302	Senior Writing Seminar	3
HI 303	Historical Writing	3

PUBLIC HISTORY REQUIREMENTS

Public History majors must complete five courses, 15 credits, in Public History courses. The courses are:

HI 201	Introduction to Public History	3
HI 202	Practicum in Public History	3
HI 200	Digital Humanities or	
or 293	Museum Studies: An Introduction	3
HI 306	Introduction to Non-Profit Organizations	3
HI 550	Internship in History	3

PUBLIC HISTORY ELECTIVES (6 CREDITS)

Select two from recommended electives:

BA 102	Survey of Accounting
BA 170	Organizational Behavior
BA 220	Principles of Marketing
BA 398	Project Management
CA 100	Introduction to Mass Media
CA 110	Introduction to Organizational Communication
CA 130	Introduction to Digital Media
CA 285	Digital Layout and Design
EL 131	American Literature: Exploration to Civil War
EL 132	American Literature: Civil War to Present
EL 113	Women's Literature
EL 139	African American Literature
AN 101	Introduction to Anthropology,
AN 222	Cultural Anthropology
AN 230	Archaeology

Other courses will be considered through consultation with the public history advisor.

TEACHER PREPARATION FOR ELEMENTARY AND SECONDARY CERTIFICATIONS

Requirements for Social Studies Certification and Elementary Education

In addition to a major in History and fulfillment of the Core Curriculum, the certification candidate must satisfy the requirements of the Education Department of Saint Vincent College in this *Bulletin*.

MINOR IN HISTORY

A minor in History consists of 18 credit hours. Six of these credit hours are in fulfillment of Core Curriculum requirements. The remaining 12 credit hours may be taken from any of the 100- or 200-level courses that the History Department offers. The Department requires that three (3) of the 18 credits be at the 200 level.

MINOR IN PUBLIC HISTORY

The minor in Public History consists of 18 credit hours. Required courses are HI 201, HI 202, HI 258, HI 306, and HI 550. The remaining credits may come from: AR 101, AR 102, HI 254, CA 100, CA 110, CA 130, CA 230, CA 240, or CA 245. Students are urged to take additional 200-level history courses. HI 201 and HI 202 cannot fulfill history major requirements. The option list may change as new courses are developed; check with the Public History minor director or your advisor for the most current list.

INTERDISCIPLINARY COURSES

Some semesters, the History Department may offer interdisciplinary or cross-listed courses. Students are urged to consult the course listings for each semester on the availability of these courses.

PRE-LAW

History majors interested in pursuing law as a career should consult with their academic advisor in the History Department. In addition, students with a major in History are eligible to participate in a cooperative program between Saint Vincent College and Duquesne Law School that allows students to earn their bachelor's degree and Juris Doctor degree in six years. In this program, qualified students who complete their first three years of study at Saint Vincent, fulfilling the core curriculum requirements and the requirements for the major, may transfer into the Law Program and complete the requirements for the Juris Doctor in three years. For details, see the explanation of this program in the Pre-Law section of the *Bulletin*.

Typical First-Year Schedule

Fall Semester

EL 102	Language and Rhetoric	3
or		
TH 119	First Theology	3
	History Area	3
	Classical or Modern Language	3
	Social Science	3
	Mathematics or First Philosophy (PL 101)	3

In the fall semester of the first year, all students will take one course designated as a First-Year Seminar which will satisfy a core curriculum requirement.

Spring Semester

EL 102	Language and Rhetoric	3
or		
TH 119	First Theology	3
	History Area	3
	Classical or Modern Language	3
	Social Science	3
	Mathematics or First Philosophy (PL 101)	3

Students are strongly urged to complete First Philosophy no later than the first semester of their sophomore year. History majors should select science courses to fulfill the core from among the offerings designated for non-science majors.

HISTORY COURSE DESCRIPTIONS

HI-00X HISTORY EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. This course will be automatically added to the student's registration upon submission of the graduation application. Zero credits. Pass/Fail.

HI-102 ANCIENT GREECE AND ROME

This course surveys the civilizations developed by the ancient Greeks and Romans, ca. 800 BC - AD 500. Topics include: the Trojan War; the rise of Greek city-states; the Persian and Peloponnesian Wars; Alexander the Great and the Hellenistic world; the Roman Republic and the formation of empire; the birth and spread of Christianity; the Roman imperial state; and the transformation of the Roman world.

HI-103 MEDIEVAL AND RENAISSANCE EUROPE

This course surveys the history of Europe, ca. AD 500 - 1700.

Topics include: the Germanic migrations and the disintegration of the Roman Empire; Charlemagne and the Carolingian world; the development of secular and papal monarchy; the Twelfth-Century Renaissance; the Crusades; the Black Death; the Italian Renaissance; the Protestant and Catholic Reformations; and the Age of Exploration. Three credits.

HI-104 CONTEMPORARY EUROPE I

In this course we will focus thematically on the political, social, economic, and cultural development of Europe in the 17th-19th centuries. Lecture topics include: comparisons of different political structures present in Europe and the Americas, the geography of Europe and its colonial possessions, the Scientific Revolution and the Enlightenment, the French Revolution, the Industrial Revolution, national unification movements, Romanticism, liberal revolutions, the growth of science, and the Age of New Imperialism. Extensive use of audio/visuals. Map work. Periodically offered as an honors course. Three credits.

HI-105 CONTEMPORARY EUROPE II

In this course we will focus thematically on the political, social, economic, and cultural development of Europe from the late 19th through the end of the 20th century. Lecture topics include: World War I, the Great Depression, the Spanish Civil War, World War II, Modern Art, the loss of colonies, the Cold War and its aftermath, and European economic and political unification. Explicit comparisons will be made between the different social, economic, and political structures present in Europe and America in the 20th century. We will discuss the geography of Europe and her colonies. Extensive use of audio/visuals. Map work. Three credits.

HI-106 TOPICS U.S. HISTORY TO 1865

This course surveys American History from the Colonial Era to the Civil War. Using a topical approach, the class will read about and discuss a wide variety of topics in the economic, social, political, and intellectual history of the United States. Periodically offered as a first-year seminar. Three credits.

HI-107 TOPICS U.S. HISTORY SINCE 1865

This course surveys American History from the end of the Civil War in 1865 to recent times. A variety of readings introduce students to questions that historians are asking about the modern history of the United States. Periodically offered as a first-year seminar or honors course. Three credits.

HI-108 TRADITIONAL EAST ASIAN SOCIETIES

This course surveys China, Korea, and Japan from ancient times to the early 19th century. It offers an introduction to the social, political, religious, and aesthetic ideas that together have formed the foundations of East Asian civilizations. Periodically offered as a first-year seminar. Three credits.

HI-109 MODERN EAST ASIAN SOCIETIES

This course covers the histories of China, Japan, Korea, and Vietnam from the 19th century to the present. The interaction of these countries with the rest of the world and their modern evolution and development is a central focus. Topics such as communism, the Pacific War, the Cultural Revolution, and the contours of contemporary East Asian society are also considered. Three credits.

HI-110 ENGLISH HISTORY TO 1485

This course traces the development of British life and institutions from the Celts to the Tudor Revolution in 1485. The lectures will discuss the following topics: early invasions, Anglo-Saxon society, the Norman Conquest, kingship and the royal prerogative, the growth of common law, the development of Parliament, and the

role of the Roman Church in English society. The personality of various monarchs and statesmen will be treated in respect to their contribution to the emergence of systematized government. Three credits.

HI-111 ENGLISH HISTORY: 1485 TO PRESENT

This course covers British history from the Tudors to Margaret Thatcher. Areas to be discussed include: the Reformation of Henry VIII and Elizabeth I, the Puritan Revolution, Industrialism, Victorianism, the 20th-century welfare state, the rise and decline of the British empire, the position of Great Britain in the 20th century with emphasis on the British rule in Ireland, World War I, and the European Economic Community. Periodically offered as an honors course. Three credits.

HI-122 HAITI -- WINDOW ON OUR WORLDS

This international “service learning” course combines academic learning and critical reflection with relevant service in a rural Haitian community to enable students to identify critical, global issues affecting Haiti and to deepen their understanding of cross-cultural issues and the connections between the U.S. and countries like Haiti. Through this experience students also grow in their awareness and understanding of self and contribute to building a global “culture of solidarity” and engaged citizenship at Saint Vincent College. This course requires travel to Haiti during the spring break in order to complete the “relevant service” component. One credit.

HI-123 GLOBAL HISTORY I

This course surveys the origins, development, and decline of the world’s early civilizations, empires, and regional states. Taking a comparative approach, it examines complex and diverse societies in relation to each other. What geographic, economic, social, and cultural factors molded these societies? How have different peoples interpreted, depicted, and shaped the worlds in which they lived? Periodically offered as a first-year seminar or honors course. Three credits.

HI-124 GLOBAL HISTORY II

This course focuses on the increasing interactions among the world’s societies since the 15th century. It begins with the age of Columbus and ends with the contemporary world. Topics include imperialism, industrialization, nationalism, revolution, and war. Three credits.

HI-200 DIGITAL HUMANITIES

Digital humanities encompasses a wide variety of computationally-assisted historical scholarship methods, tools, and publications. This course will introduce the rapidly evolving field of digital humanities with a focus on digital history. Students will learn how to use and critique digital methods; assess and employ digital tools; evaluate the merits and pitfalls of digitally publishing various forms of scholarship; and generally navigate this digital research environment. They will learn how to develop sound research questions that can be answered with DH methodologies and tools; they will create DH projects using the tools taught in the courses. Three credits.

HI-201 INTRODUCTION TO PUBLIC HISTORY

This class explores the connections between historical understanding and the interpretation of history in the public realm. While studying a period of local history in traditional academic sources, students will be introduced to a wide range of professional settings that cater to public audiences of all ages. Students will learn about the opportunities and challenges of presenting history through such varied methods and mediums as archives, museums,

historic preservation organizations, historic sites, and historical agencies. Through readings, discussion, field trips, and projects, the class will explore the development of the field of Public History. This class serves as an introduction to HI 202: Practicum in Public History but can be taken independently. It is limited to freshman and sophomore students unless the student has the permission of Dr. Karen Kehoe to enter the class. Three credits.

HI-202 PRACTICUM IN PUBLIC HISTORY

In this course we will apply the research, analysis, and writing skills of a historian in order to develop and complete a project for the use and benefit of an audience outside of academia. Students will work as a part of a team and will be responsible for all aspects of the project from defining the purpose of the project to its final presentation to the public. Possible projects include nominations of historic properties to the National Register of Historic Places, the creation of a museum exhibit, the creation of historic tourism guides and brochures, grant writing, or an oral history project. Prerequisite: HI 201, Introduction to Public History or permission of instructor and department chair. Three credits.

HI-203 MODERN INTELLECTUAL HISTORY

This course will examine the history of ideas in the West from the Scientific Revolution and Enlightenment through the present. Students will consider intellectual developments in the context of history to more fully integrate their understanding of human events and the ideas that inform them. The focus of this course will be cultural, with extensive use of images, films, and primary texts. Seminar format. Discussion-based. Three credits.

HI-205 CHIVALRY AND CHASTITY: LIFE AND THOUGHT IN MEDIEVAL EUROPE

This course examines various aspects of life and thought in medieval Europe, ca. 500 to 1500, through the reading of a selection of texts from the period. Topics include nobility and chivalry, women and courtly love, monastic life, philosophical thought, forms of poetry, views of space and time, art and architecture, town and country, animals and plants, education, and drama. Three credits.

HI-206 ACUPUNCTURE TO ALCHEMY MEDICINAL HISTORY

Chinese and Western medical theories and practices both have ancient and divergent roots. Though significantly different, the development of Chinese and Western medicine has followed similar trajectories, and in both the ancient and the modern display a series of interesting parallels. This class will examine and explore topics common to both traditions, such as traditional medicine, medical theories, the professionalization and “modernization” of medicine, irregular, or quack medicine, and gender in medicine. Activities include: Lecture, readings, online databases, and projects. Designated non-Western. Three credits.

HI-207 AMERICAN WOMEN, AMERICAN WARS

A study of the effects of warfare on the history of American women and of the ways that American women have influenced war. We will use class readings from both primary and secondary sources, discussion, and film analysis to study the lives and influences on women during the American Revolution, the Civil War, World Wars I and II, the Vietnam Conflict, and the modern Gulf Wars. Three credits.

HI-208 MODERN CHINA

This course focuses on late imperial and modern Chinese history from the 19th century to the present. It includes study of the Ming and Qing dynasties, as well as the Nationalist and Communist

governments of the 20th century. Periodically offered as an honors course. Three credits.

HI-209 ISSUES IN CONTEMPORARY EAST ASIA

This course examines some of the most important issues in the world today: environmental degradation, health and human rights, gender inequities, and international relations. We will explore each of these topics in depth, using historical and contemporary primary and secondary sources, in relation to the countries of East Asia. Three credits.

HI-211 SWORD AND SIEGE: WAR IN MEDIEVAL EUROPE

This course will examine selected aspects of European military history from the 5th through the 15th centuries. Students will study not only military campaigns and technology, but also the interplay between warfare and society during this fascinating period. Three credits.

HI-212 AMERICAN WOMEN'S HISTORY

Women's experience in the past helps us understand the history of the United States. This course will examine the themes that defined women and have helped to determine the shape of women's lives today. The lectures, readings, and films will focus on the ways that women's roles as they relate to family, work, politics, and culture have varied over time. We will consider carefully the ways that women have dealt with the definitions of the feminine that society enforced, and will look especially at how women have altered those norms. The course will emphasize the diverse understandings of those issues. Students can expect to do extensive reading and writing, participate in class discussions, and complete a substantial research project. Three credits.

HI-213 DAME AND DISTAFF: WOMEN IN MEDIEVAL EUROPE

This course examines, both collectively and individually, the lives, roles, and achievements of European women from the 5th through the 15th centuries. The goal is to understand better how medieval women fit into and often influenced the largely patriarchal society in which they lived. In particular, we will try to hear the "medieval female voice" through the writings they have left us. Topics include queens and noble ladies, monastic life, female mysticism, urban and rural women, sexuality, marriage and children, scholarship, and the practice of medicine. Three credits.

HI-214 MODERN IRELAND

This course will introduce the student to the social, political, economic, and religious dimensions of Ireland from the French Revolution to the Hunger Strikes at the Maze Prison. After brief remarks about the Ireland of Cromwell and William III, 19th-century Ireland will be presented within the framework of the British Empire. Some topics are: Catholic Emancipation, Daniel O'Connell, the Famine, the problem of the land and agrarian violence, William Gladstone and the crisis of Home Rule, and the career of Charles Stewart Parnell. The second half of the course will discuss the emergence of the Republic of Ireland and the province of Ulster. Lloyd George, Eamon de Valera, the Easter Rising, and the current problems concerning Ulster are the subjects of the lectures. Can Ireland ever become a united island? Three credits.

HI-216 AMERICAN COLONIAL HISTORY

This course is designed to give students an in-depth grounding in many of the major issues relating to the creation and development of colonial North America. Placed in an Atlantic

World context, we will study the social consequences of colonization, migration, and war in America from 1400-1775. Emphasis is placed on the interaction of British colonies with competing European cultures (French, Dutch, Portuguese, and Spanish) as well as with Native Americans, and with African American slaves. We will explore these interactions through lectures, readings, films, and discussions. Three credits.

HI-220 DEVIL AND THE PROBLEM OF EVIL

This course is an examination of the problem of evil in Western thought, with special attention to the personification of evil in the devil. We will examine the historical emergence of the devil as a being distinct from God in the ancient civilizations of the Middle East. The course will then consider in turn: The devil in the Old and New Testament; his treatment in the West from medieval Christianity to the Renaissance and Reformation; the impact of the Enlightenment on the problem of evil in western thought; and the modern psychological approach to evil and the question of possession. Prerequisite: TH-119. Three credits.

HI-223 REVOLUTIONARY AMERICA 1740-1820

This course will examine the social, political, economic, cultural, and religious ferment in Colonial America that led to the transition from colonies of the British Empire to the revolutionary republic of the United States. The role of women, minorities, and indigenous people, Enlightenment ideology, the Great Awakening, the American Revolution, and the struggle over the Constitution will be highlighted. Western Pennsylvania was the stage for many of these dramatic events and this course will utilize as fully as possible local public history resources having to do with the period from the French and Indian War to the Whiskey Rebellion of 1794. The course will spend several classes on 18th- and early 19th-century historical interpretation in museums and historic sites and museum methodology, and explore career possibilities in museums and public history. There will also be guest speakers from local historical sites. Three credits.

HI-224 NATIVE AMERICAN HISTORY/CULTURE

This course will examine the history and cultures of selected nations of indigenous people who inhabited the North American continent beginning as early as 40,000 B.C. We will look at the sociocultural/religious, political, and military history of each nation, the details of everyday life, gender relations and kinship systems, division of labor and economics. Areas of particular concern will be the relationship of indigenous nations to the European populations of America in the colonial period. We will then explore the relationship between the indigenous people of North America and the United States of America from the Revolution to the present. Designated non-Western. Three credits.

HI-226 SOCIETY AND THE ENVIRONMENT IN GLOBAL PERSPECTIVE

Students in this course will explore the way that humans have interacted with their environment in what is now the United States from pre-colonial contact to the present day. We will explore two great questions in a number of different times and places, seeking answers that should inform our interaction with the environment today. How and why has society shaped the American environment, and how and why has that environment shaped our social, cultural, economic, and political lives? Finally, we will look at ourselves looking at our interaction with the environment in our focus on the emerging environmental movement of the 20th century. Three credits.

HI-227 “BRING OUT YER DEAD!”

MEDIEVAL EUROPE ON FILM

This course uses movies as springboards for exploring selected aspects of medieval European society and outlooks. The focus is on the relationship between the ‘real’ Middle Ages, how historians have reconstructed the period using primary sources, and the ‘reel’ Middle Ages, how filmmakers have reconstructed the period for popular consumption. Although the films used may change, in the past they have included *Lion in Winter*, *Kingdom of Heaven*, *Excalibur*, *The Seventh Seal*, and, of course, *Monty Python and the Holy Grail*. Three credits.

HI-228 20TH-CENTURY AMERICA

Students will explore various developments in America from World War II until the present. The course will address different questions and topics in different semesters, but will focus on the ways that Americans strove to manifest the ideals of liberty, equality, justice, and community throughout the period. Three credits.

HI 231 GARTERS AND GREEN KNIGHTS: THE AGE OF THE HUNDRED YEARS WAR

Utilizing as a framework one of the longest military conflicts in history, this course explores various aspects of European civilization in what is known as the Late Medieval period, ca. 1300-1500, a time of tremendous upheaval and remarkable creativity. Topics include monarchy and nobility, war and chivalry; women and gender; faith and piety; art and scholarship; science and technology; class and conflict; disease and death. Three credits.

HI-232 RACE AND ETHNICITY HISTORICAL PERSPECTIVE

This course explores the role that the social phenomena of race and ethnicity have played in shaping Americans’ lives in the past 400 years. We will focus on the formal legal structures that Americans established to regulate racial and ethnic experiences (slavery, restrictive covenants, laws, etc.), the less formal but often equally powerful social customs that governed people’s opportunities, the experiences of those who had to navigate those formal and informal structures, as well as the efforts of those who have tried to create a society that lives out the ideals set out in the Declaration of Independence. Designated non-Western. Three credits.

HI-233 HISTORY OF LATIN AMERICA

This course will trace the history of Latin America from the major pre-Columbian civilizations through the early 19th century. The focus of the course will revolve around the conflict between cultures, their transformation, and creation of new cultures. Discussion topics include: the Maya, Inca, and Aztec civilizations, the discovery and founding of Spanish and Portuguese empires in the New World, development and integration of the empires into the world economy, the creation of new American cultures, the struggle for independence, and the problems of the new nations through the 19th century. Extensive use of maps, images, and primary source readings. Designated non-Western. Three credits.

HI-236 WORLD WAR II IN EUROPE

This is a general course in the history of the European theater of the Second World War. The war’s origins will be studied in some detail, beginning with the tenuous reconstruction of the European state system in the wake of World War I and the rise of the Fascist regimes that challenged this system. The historical, economic, social, and ideological determinants of German expansionism will then be discussed and related to the outbreak of war in Europe. Although much attention will be focused on the evolution of Allied and Axis strategy and the development of the military

struggle between 1939 and 1945, the war’s all-encompassing nature necessitates that such topics as propaganda, economic mobilization, occupation policies, and the Holocaust also be discussed. The course will conclude with an analysis of war-time diplomacy, the post-war settlement, and the onset of the Cold War. Class instruction will take the form of lectures, discussions, group activities, videos, and other instructional modalities deemed appropriate and effectual by the instructor. Three credits.

HI-242 ARTISTS, WRITERS, AND REBELS

This course will explore the development of the European Renaissance from the late Medieval period through the beginning of the Reformation. The course will explore the rebirth of European culture, Arts, Language, Religion, Architecture, Politics, and Literary movements throughout one of the richest historical periods in Western Civilization, the Renaissance. Three credits.

HI-245 COLONIES AND EMPIRE: EUROPE/WORLD

This course explores the dynamic of colonialism between the 18th and mid-20th centuries. We will use a global perspective to look at the relationship between European countries and their colonial possessions during and after the colonial era. In particular, we will consider the causes and justifications for colonialism and the acquisition of empire, as well as its economic, religious, social, ethnic, and political implications for both the European and colonial nations. Extensive use of images, films, and maps. Designated non-Western. Three credits.

HI-247 CATHOLIC AND PROTESTANT REFORM

The general themes of the course will be the continuities and discontinuities of the reform movements of the 16th century (Protestant and Catholic) with the late medieval period, and the relation, variety, and interchange between the various reform movements in different regional and social contexts. Emphasis will be placed on religion in the European context, but some attention will be paid to mission fields, and the impact of the “new world” discoveries on church and society. Three credits.

HI-248 HISTORY OF CHRISTIAN CHURCHES I

This course will explore the development of Christianity from the first century A.D. through the end of the Renaissance period. The course will highlight such historical epochs of Christianity as the Apostolic period, the age of the Fathers of the Church, the monastic movement, the men’s and women’s religious movements of the Middle Ages, the Schism between the Eastern and Western Churches, and the Church in the Renaissance period. Offered alternate years. Three credits.

HI-249 HISTORY OF CHRISTIAN CHURCHES II

The second part of the course will explore Christianity during the periods of the Protestant Reformation, The Catholic Reformation, religious pluralism, the Enlightenment and Age of Revolutions, 19th-century movements in Christianity, the Church and the World Wars, the Second Vatican Council, and Christianity in the post-modern world. Offered alternate years. Three credits.

HI-251 WAR AND ENLIGHTENMENT

This course deals with the so-called long 18th century, which lasted from 1688 (the year of the Glorious Revolution in England) to 1815, the year of Napoleon’s defeat at Waterloo. This was a crucial time, as it brought dramatic changes to the social fabric, political institutions, economies, and cultures of Western Europe. We will look at these developments in some detail, focusing on

the Enlightenment, 17th- and 18th-century political theories and institutions, the rise of the middling classes, and the evolution of modern warfare. Treatment will be both chronological and thematic, with ample use of films, maps, and images to help set the scene for historic events. Three credits.

HI-253 RELIGION AND SOCIETY

Opinion polls taken from the 1940s through today report annually that more than 90 percent of Americans believe in God. Our earliest institutions, when they were not churches themselves, reflected a strong religious influence. Americans have felt religious competition so keenly in various times in our history that they have rioted in support of one denomination over another. Why was (is) this so? How have Americans experienced, thought about, and manifested their various religious beliefs throughout our history, and how have Americans interacted with fellow citizens of differing beliefs? How has religion influenced the development of our current institutions, and why do Americans believe what they do? This course examines these and other issues connected to American religious development. Three credits.

HI-254 DOCUMENTARY HISTORY

This course explores the video documentary as a text that conveys history. Americans increasingly learn their history from video documentaries, but historians are just beginning to address these texts in a sophisticated manner. Students will analyze historical documentaries critically by viewing the videos, reading critical analyses of them, and participating in discussions of these texts. They will then write their own critical analyses of the documentaries. The documentaries that the course examines will vary from semester to semester, but they will mostly be texts designed to convey historical information. Students will also participate in the production of a documentary on a historical event or development. Three credits.

HI-255 AMERICAN ECONOMIC HISTORY

This course examines the development of the various forms our economy has taken over the past four centuries or so, as well as upon various developments within the economy in the form it takes currently. Though we will discuss the economy as a human social construction, we will also explore other perceptions of the economic organization (is it a natural phenomenon?) and pay special attention to developing Catholic perceptions of the economy and economic life. Three credits.

HI-257 MOVIES, SPORTS, AND TOYS

This course explores various American cultural manifestations in historical context. We experience our lives through cultural constructions that mediate our understanding of our world, and this course will target various forms each semester. The specific cultural forms may vary each time the course is taught, but will likely cover the broad categories of recreation (sports, games, television, movies, other leisure activities), work (factories, farms, markets, transportation), religion (liturgies, revivals, devotions, sects, holidays), home (family, architecture, neighborhood), art (literature, music, painting, and sculpture), and formal public expressions. Three credits.

HI-258 PENNSYLVANIA HISTORY

This course explores the development of Pennsylvania from the pre-European era to current times. The topics covered will include the diversity of the Commonwealth, Pennsylvania's key roles in the development of the United States, and the sources and methods that can be used to uncover the history of the state. Three credits.

HI-259 THE CIVIL WAR IN THE U.S.

Students in this course will study the period leading up to and away from the Civil War, focusing on those areas commonly known as the ante-bellum period, the Civil War, and Reconstruction. We will address slavery, culture, and social change in the nation in the early part of 19th century, explore the political efforts to deal with these contentious areas, and study the military manifestation of that political divide. Finally, we will explore the world the war made as we study the Reconstruction era. The course will require extensive reading, discussion, and much formal writing, culminating with a substantial research paper. Three credits.

HI-263 PLAY BALL

This course examines the history of sports in 20th-century America, with particular attention paid to the development transition from amateur to professional athletics, the emergence of women's participation in sports, and the fitness focus of the most recent three decades. Students will approach this study through class discussions based on readings and video documentaries. Three credits.

HI-264 HORSES, HARDTACK, AND HEROES

This course uses Hollywood films and literature to explore some of the major themes and events of the American Civil War. Film is a major influence in mass culture and has helped to create and disseminate messages about the past. We will examine the strengths and the limitations of film and popular literature as conveyors of the truth about the past. Three credits.

HI-266 FOOD IN U.S. HISTORY

The food that people eat and the methods used to procure and store that food can help to explain much about their cultures and their values. Taught through lecture, film, discussion, exploration of material culture, and through student research, this food history course will explore the evolution of the American diet and try to unravel the way that food choices influenced people's lives and the development of our nation from the colonial period until the present day. Three credits.

HI-267 HOUSES AND HIGHRISES

In 1913, Ezra Pound celebrated the Manhattan skyline: "Squares and squares of flame, set and cut into the ether. Here is our poetry, for we have pulled down the stars to our will." As Americans entered the 20th century, there was a growing gap between those who shared Pounds' outlook and those who were left in the dark. This course will use the built environment and material culture, in addition to traditional sources and digital history, to explore the decades leading up to Pound's observation. Students will uncover how and why America moved away from its agrarian past by analyzing different experiences of industrialization through major themes of the era, including business and labor, poverty, political corruption, Imperialism, and racism. Issues of modern-day interpretations of the era and relevance to current events also will be discussed. Three credits.

HI-268 BUILDING THE PAST: HISTORIC

How might Americans best study and preserve our past? This seminar explores the history, theory, and practice of historic preservation in the United States. Using directed readings, illustrated lectures, and case studies, the course will provide students with an understanding of the origin, development, and practice of the field of historic preservation; a basic knowledge of American architectural building styles; and an exploration of the workings of the National Register of Historic Places. Students will

confront the questions: What is preserved? Why is it preserved? For whom? Three credits.

HI-270 RISE OF CHINESE CIVILIZATION

This course offers an in-depth survey of China's history from the Neolithic age to 1600, and focuses on the political, social, and religious revolution of Chinese civilization and how it interacted with its neighbors over time. HI 108 recommended precursor. Three credits.

HI-274 CHINA AND JAPAN IN FICTION/FILM

This course examines political, social, and cultural changes in Japan and China through the lens of literature and film. The class will center on discussions of common themes in the texts and films, including gender ideals and ideologies, narratives of heroes and redemption, violence as an art form, production of national myths, and the role of historical forces in shaping past and contemporary national identities. Three credits.

HI-279 HISTORY OF AMERICAN CHILDHOOD

This course will focus on the history of American childhood from 1600 to the present day. It will address issues such as child rearing practices, childhood experiences, the emergence of the "teenager"

as a separate social category, and the ways that gender, race, ethnicity, class, and religion have shaped childhood across time. The course will necessarily focus on the ways that historians have studied childhood over time, and will ask students to utilize some of these approaches as they conduct their own research papers. Three credits.

HI-280 ISLAMIC CIVILIZATION I

Islamic Civilization will examine the religion, politics, and culture of the Islamic world from pre-Islamic Arabia, through the 13th-century Mongol invasions. Special attention will be paid to the life of the Prophet, beliefs, practices, and divisions within Islam, the Caliphate, the Umayyad, and Abbasid empires and successor states, historic areas of contact and conflict between Islam, Christianity, and Judaism. Treatment will be both chronological and thematic, with use of films, maps, and images to help set the scene for historic events. Designated non-Western. Three credits.

HI-281 ISLAMIC CIVILIZATION II

This course is designed as a stand-alone complement to HI 280. Islamic Civilization II will examine the religion, politics, and culture of the Islamic world from the Mongol invasion of the 13th century, the rise of the Turkic peoples, the development and decline



of the Ottoman Empire, through its fall at the end of WWI. Time permitting, the course will examine the independence of Middle Eastern territories, and the foundations of nationalism as a force in modern Islamic countries. Treatment will be both chronological and thematic, with use of films, maps, and images to help set the scene for historic events. Designated non-Western. Three credits.

HI-282 AMERICAN CHILDHOOD HISTORY

This course explores topics in the history of American childhood. Topics will vary from semester to semester, but may include such developments as the “invention” of childhood in America, the “discovery” of the teenager, children’s experiences in the home, the school, the workplace, the family, and society. It will inevitably focus on changes in childrearing patterns, the ways that society imagined and presented children through media, and children’s legal status. Three credits.

HI-283 HEALTH AND MEDICINE IN ASIA

This course explores the history of medicine, public health, and health care systems in Asia. We will examine paradigms of health and disease, as well as health care systems, over time and across cultures. Themes addressed include international development, women’s health, rural health, aging, and the health professions. Periodically offered as an honors course. Three credits.

HI-284 ROBBER BARONS AND SUFFRAGETTE

This class will analyze a variety of social movements from the 19th and 20th centuries and look at the underlying causes that inspired action among these benevolent organizations. The class will focus on how and why these movements have evolved over time through their composition, strategies, issues, and effectiveness. We will focus on the structure, gender, and class makeup of these movements. Reform-minded individuals banded together to combat poverty, slavery, drinking, prostitution, child labor, suffrage/anti-suffrage, civil rights, and combating the many other “evils” of society through political and social change. Three credits.

HI-285 OFF WITH THEIR HEADS!

This course examines the historical epoch of English history beginning in 1485 with the ascension of Henry VII as the first monarch of the Tudor dynasty through the death of the last Stuart monarch, Queen Anne, in 1714. During this important period of English history, England advanced from a small kingdom to a united kingdom and a major world power. The course pays special attention to that transformation of the small realm of England into a new entity: The Kingdom of Great Britain. The course will cover such major topics and themes as the reigns of Henry VIII, Mary I, and Elizabeth I, James I, James II, Charles I, and William and Mary; as well as the English Reformation, the rise of the Stuart Dynasty, the Union of Crowns, the growth of puritanism, the English Civil War, Oliver Cromwell and the Protectorate, and the Glorious Revolution of 1688. The course readings will be drawn from primary sources. Three credits.

HI-287 SACRE BLEU: FRENCH REVOLUTION

This course examines the history of France during the early modern period. The course traces French history beginning in 1589 with the ascension of the first Bourbon monarch, Henri IV, through the final defeat of Emperor Napoleon I at Waterloo in 1815. Special attention is paid to the topics of life, politics, gender, and education during the ancient régime, as well as absolutism, the French Enlightenment, Jansenism, the Huguenots, French peasant life, the French revolutions, and the First Empire. This course provides a careful study of the lives of prominent figures of early modern

France, including Henri IV, Richelieu, Voltaire, Louis XIV, Marie Antoinette, Madame de Staël, Vincent de Paul, Abbé Saint-Cyran, Robespierre, Danton, Napoleon I, and Joséphine de Beauharnais, among many others. The course readings will draw from primary source documents as well as particular scholarly studies. Three credits.

HI-288 HISTORY OF GLOBAL HEALTH

This course examines historical and current global health priorities, including emerging infectious diseases, poverty, conflicts and emergencies, health inequities, health systems reforms, and major global initiatives for disease prevention and health promotion. We will explore the importance of understanding and addressing global health through multidisciplinary frameworks of the natural sciences, social-behavioral sciences, and humanities. This course is required for the public health minor. Three credits.

HI-289H WOMEN’S VOICES GENDER HONORS COURSE

This course examines early modern European history through the lens of gender and the experiences of women, among which but not limited to, education, gender roles, sexuality, professions, religion, agency, and ritual. Through class lectures, frequent discussions, and writing assignments, students will be exposed to early modern gender history, and through primary sources and historical monographs, challenged to discover, discuss, and relate the experiences of early modern women within the broader context of European history. Three credits.

HI-290 PEACE AND JUSTICE/HISTORICAL PERSPECTIVE

This course introduces students to key concepts of peace and justice studies and ways that people have understood them over time. We will examine case studies taken primarily from American history, and these cases may vary from semester to semester. This is also a service-learning class that asks students to join a peace and justice organization to introduce them to the kind of efforts undertaken in today’s world. In addition, this course serves as one of two gateway courses to the Peace and Justice Studies minor program. Three credits.

HI-293 MUSEUM STUDIES: AN INTRODUCTION

This course introduces students to the professional world of museums, which are among the most significant institutions for preserving and interpreting historical, artistic, and scientific resources. Students will forge a deeper and more complex understanding of topics such as exhibit development, educational programming, collections management, archiving, ethics, and the history of museums. At the same time, these topics will raise important discussions about how museums of various types are sharing knowledge, encountering challenges, and creatively engaging the public in the 21st century. Students considering a career in museum work, who have a love for museums, or who would like to know more about these important institutions are encouraged to take the course. Three credits.

HI-294 HISTORY OF ENGLISH COMMON LAW, 600-1800

The Common Law of England was created over many centuries by kings and judges seeking to provide a uniform legal structure to adjudicate disputes, avoid feuds and reckless bloodshed, and raise revenues for royal coffers. This course surveys the evolution of this legal tradition in Britain, including its pre-Roman, classical, ecclesiastical, and Germanic antecedents, from King Aethelbert of Kent’s sixth century code, through to Sir William Blackstone’s Commentaries of the 18th century. We will chart the development

and growth of Common Law and Courts of Common Law within historic and especially political contexts using both primary sources and secondary analyses. While the course is explicitly about the legal history of Britain, by the end of the semester we will touch on the application and transfer of common law to Britain's empire, and through that, modern American jurisprudence, politics, and history. Three credits.

HI-300 THE HISTORIAN'S PROFESSION

History majors will take this introduction to the profession in the fall or spring semester of their sophomore year. In the course, students will become acquainted with varieties of internships and career paths available to history majors. Students will also receive intensive instruction in basic research methods for historians, including such things as developing a research plan, thoroughly learning the library's layout, becoming familiar with finding aids, using historical journals, understanding ILL, evaluating and using the internet as a research tool, proper use of primary and secondary sources, and mastering citation practices. Finally, students will become familiar with ethical issues and expectations related to historical writing and careers. Majors only. Three credits.

HI-301 JUNIOR RESEARCH SEMINAR

History majors will take this the spring semester of their junior year. The purpose of this seminar is two-fold. The primary goal will be for the student to prepare to write the senior thesis. Students will be asked to identify a research topic of interest, and then develop a viable thesis topic. Following that, students will complete preliminary source identification, write a literature review (historiographical essay), thesis outline, and bibliographies. By the end of the semester, students will be well-poised to complete the thesis in HI 302 the following fall term. The second goal of the Junior Research Seminar will be the mastery of types of writing typically encountered in the profession, as well as conventions and considerations that go along with historical scholarship and writing. Majors only. Three credits.

HI-302 SENIOR WRITING SEMINAR

History majors will take this course in the fall semester of their senior year. The purpose of this seminar is to produce a scholarly piece of research and writing. The senior project, or thesis, must be organized around a scholarly thesis statement or question, utilize appropriate primary and secondary sources, and adhere to the conventions of historical writing learned in HI 300 and HI 301. The thesis will be completed by the end of the fall semester. Students will have the opportunity to present a version of the final project at spring conferences or colloquia. Majors only. Three credits.

HI-303 HISTORICAL WRITING

The academic experience of the historian is often worked out within the realm of historical writing. Each history major at Saint Vincent College begins her/his practice of historical prose with the course, HI 303, *Historical Writing*. In this course, typically taken in the first semester of the sophomore year, the student is introduced to the building blocks that the instructor perceives are the basis of historical writing. The student will learn those narrative practices

that historians employ and will engage finely crafted historical monographs of the instructor's choosing. Each student will compose a variety of history-related writing assignments including, but not limited to précis, gists, book reviews, article reviews, essays, etc., culminating in a longer final written project which highlights her/his mastery of the craft of historical writing learned during the semester. Three credits.

HI-306 INTRODUCTION TO NONPROFIT

The purpose of the Introduction to Nonprofit Organizations course is to familiarize students with the structure, unique characteristics, and operating environment for non-profit organizations. The course will offer a broad overview of the non-profit sector, particularly the centrality of the mission statement in planning and decision-making, working with volunteer boards of directors, accountability and ethics, fundraising, and financial management. This course does not fulfill history core requirements, or history major 200-level requirements. This course does fulfill public history minor credit requirements and elective requirements. Three credits.

HI-307 INTRODUCTION TO NON-PROFIT FUNDING

An essential function for all non-profits is to strategically determine revenue sources and develop effective mechanisms to raise funds. The purpose of this course is to provide students with a brief history of philanthropy, familiarize them with the principles of fundraising, and to help them develop skills and competency in fundraising methods, special events, direct mail, major gifts, grant writing, capital campaigns, and planned giving within a competitive funding environment. It is appropriate for students who may work or volunteer with non-profits in the future as well as for those who are currently working with non-profit organizations in a staff or volunteer capacity. This course does not fulfill history core requirements, or history major 200-level requirements. This course does fulfill public history minor credit requirements and elective requirements. Three credits.

HI-350 INDEPENDENT STUDY—HISTORY

May be repeated. Course requirements to be developed in consultation with supervising faculty. Variable credit.

HI-550 HISTORY INTERNSHIP

Professional work experience in the community, which complements and strengthens academic in-class learning. Academic credit is variable depending on the nature and duration of the experience. Students may or may not be compensated depending on the company/agency. Students must receive departmental approval to participate. This course will additionally serve as the capstone course in the Public History Minor. May be repeated. Variable credit.

HI-555 PEACE AND JUSTICE INTERNSHIP

Students enrolling in this program will work with a program, organization, institution, company, or entity that advances the values of peace and/or justice in cooperation with a supervising faculty member. Variable credit.

INTEGRATED SCIENCE

Caryl L. Fish, *Chairperson*
Michael Sierk, Peter Smyntek

The major in integrated science provides students with options in the sciences that combine courses from multiple traditional disciplines. Students will develop basic skills by taking foundational courses in science, mathematics, and computing. They then focus on additional science content in advanced courses in a concentration. Students are able to choose a concentration that matches their goals. Concentrations in Allied Health, Chemical and Biological Analysis, Applied Physics, and Science, Technology, and Society are available. Two seminars in the first and fourth year will help students integrate the concepts from multiple disciplines to solve real-world problems through case studies and projects.

The goal of the B.S. degree in Integrated Science is to educate students so that they may use scientific principles from a multitude of scientific fields, mathematics, and computing in real-world applications, to train students to work in teams and to communicate with others in their field as well as society in general. Several concentrations are available which prepare students for a wide variety of careers and post-undergraduate pursuits.

INTEGRATED SCIENCE STUDENT LEARNING OUTCOMES

- **Interdisciplinary Integration.** Students will be able to analyze, connect, and integrate knowledge from two or more STEM disciplines to draw conclusions and/or solve complex problems.
- **Scientific Skills.** Students will be able to demonstrate a proficiency in laboratory skills, and technological competency from multiple disciplines.
- **Communication.** Students will be able to express themselves clearly in both written work and oral communication.
- **Data Analysis.** Students will be able to analyze scientific data and utilize that data as evidence for a conclusion.
- **Information literacy.** Students will be able to find, evaluate, and utilize sources of information appropriately and ethically.
- **Teamwork.** Students will be able to work effectively as part of a team to accomplish a complex project

INTEGRATED SCIENCE (B.S.)

REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE IN INTEGRATED SCIENCE

(See core curriculum requirements.)

Integrated Science Major Requirements (59-60 credits):

Foundations I (20 credits)

MA 109 or	Calculus with Applications I	
MA 111	Analytical Calculus I*	4
CH 101-103	General Chemistry I and Lab*	4
PH 109/113	College Physics I and Lab	4
BL 150-151	General Biology I and Lab*	4
CS 102	Fundamentals of IT and Computing	3
INTS 101	Introduction to Integrated Science	1

Foundations II (11 or 12 credits)

Choose three of the following:

CH 102-104	General Chemistry II and Lab	4
BL 152-153	General Biology II and Lab	4
PH 110/114	College Physics II and Lab	4
MA 110 or	Calculus with Applications II	
MA112	Analytical Calculus II	4
CS 110	C++ Programming I	3

Capstone Experience (4 credits)		
INTS 300	Integrated Science Seminar	3
INTS 550	Integrated Science Internship	1

Choose one of the following concentrations: Allied Health, Applied Physics, Chemical and Biological Analysis, or Science, Technology, and Society.

Concentration (24 credits)

Allied Health Concentration

Choose 24 credits from the following

(must include labs when available):

CH 221-223	Organic Chemistry I and Lab	4
CH 222-224	Organic Chemistry II and Lab	4
CH 251/253	Proteins and Metabolism and Lab	4
BL 208-209	Cell Biology and Lab	4
BL 212-213	Microbiology and Lab	4
BL 214-215	Molecular Genetics	4
BL 224-225	Physiology and Lab	4
BL 220-221	Comparative Vertebrate Anatomy and Lab	4
BL 260	Biostatistics	3
BL 245	Exercise Physiology	3
INTS 201	Medical Terminology	1
INTS 222/223	Human Anatomy and Physiology I and Lab	4
INTS 224/225	Human Anatomy and Physiology II and Lab	4
INTS 230	Fundamentals of Nutrition	3
PY 331	Biological Psychology	3
PY 332	Health Psychology	3
BIN 219	Biomedical Informatics	3

Chemical and Biological Analysis Concentration

Following four courses and labs are required:

CH 216-217	Quantitative Analysis and Lab	4
BL 212-213	Microbiology and Lab	4
BL 208-209	Cell Biology and Lab	4
CH 221-223	Organic Chemistry I and Lab	4

Choose at least eight credits (with labs when available) from the following:

CH 242	Instrumental Analysis	2
CH 277	Methods of Environmental Analysis	2
CH 245	Chemical and Forensic Analysis	2
BL 216-217	Biotechnology and Lab	4
BL 260	Biostatistics	3
PH 261-263	Electronics and Lab	4
BIN 218	Bioinformatics, Genomics, and Proteomics	3
BIN 219	Biomedical Informatics	3
CS 350	Database Concepts and Information Structures	3

Applied Physics Concentration

Following four courses are required (13 credits)

PH 211-213	Modern Physics and Lab	4
MA 211	Analytical Calculus III	4
CS 111	C++ Programming II	3
ENGR 100	Introduction to Engineering	2

Choose at least five credits from the following

(with labs when available)

PH 261-263	Electronics and Lab	4
PH 241-243	Optics and Lab	4
PH 244	Advanced Lab	1

Remaining credits total 24 in concentration from:

200 level or higher Physics courses

200 level or higher Engineering courses

ES 240	Geophysics and Lab	4
CS 270	Introduction to Numerical Computation	3
MA 212	Ordinary and Partial Differential Equations	4
CS 350	Database Concepts and Information Structure	3

Science, Technology, and Society Concentration

At least 12 credits from a natural science, computer science, or mathematics discipline to include one of the following sets of courses:

Set 1

CH 221-224	Organic Chemistry I and II and Labs	8
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Set 2

BL 208-209	Cell Biology and Lab	4
BL 212-213	Microbiology and Lab	4

Set 3

PH 211-213	Modern Physics I and Lab	4
PH311	Modern Physics II	3

Set 4

MA 211	Analytical Calculus III	4
MA 212	Ordinary and Partial Differential Equations	4

Set 5

CS 111	C++ Programming II	3
CS 205	Website Design and Programming	3
CS 321	Data Communications and Security	3

Six additional credits from the following science and society classes:

ENGR 220	Engineering and Computer Ethics	3
BL 214-215	Molecular Genetics and Lab	4
CH 228	Introduction to Biochemistry	3
ES 230	Energy and the Environment	4
ES 220	Introduction to GIS	3
BL 240	Conservation Biology and Lab	4
ENGR 100	Introduction to Engineering	2
CS 351	Systems Analysis and Design	3
CS 205	Website Design and Programming	3

Six credits from the following society and science courses*

PS 390 or		
BS 390	Environmental Law and Policy	3
SO 161	Environmental Sociology	3
SO 106	Sociology and Global Issues	3
PL 245	Philosophy of Science	3
PL 218	Bioethics	3
PL 217	Environmental Ethics	3
TH 280	Catholic Bioethics	3
HI 226	Society and the Environment	3
HI 206	From Acupuncture to Alchemy	3
EL 111	Green Writing: Literature and the Environment	3

*Fulfill core requirements

Electives 15-21 credits

Those students interested in pursuing graduate or professional degrees should carefully choose courses to meet basic requirements for their chosen program. Students should consult with their academic advisor early in their bachelor's program. Since the Integrated Science major is interdisciplinary in nature, there is significant overlap with other programs. To earn a minor in a related program, the student must complete the minor

requirements with at least two courses (and associated labs if applicable) in addition to the Integrated Science major requirements.

Typical First-Year Schedule, Allied Health and Chemical and Biological Analysis Concentrations

Fall Semester

CH 101	General Chemistry I	3
CH 103	General Chemistry I Lab	1
EL 102	Language and Rhetoric	3
	Modern Language	3
BL 150	General Biology I	3
BL 151	General Biology I Lab	1
FS	First-Year Seminar	1
INTS 101	Introduction to Integrated Science	1
		16

Spring Semester

CH 102	General Chemistry II	3
CH 104	General Chemistry II Lab	1
BL 152	General Biology II	3
BL 153	General Biology II Lab	1
TH 119	First Theology	3
	Modern Language II	3

Typical First-Year Schedule, Applied Physics and Science, Technology, and Society Concentrations

Fall Semester

CH 101	General Chemistry I	3
CH 103	General Chemistry I Lab	1
EL 100	Language and Rhetoric	3
	Modern Language	3
MA 109/111	Calculus with Application I	4
FS	First-Year Seminar	1
INTS 101	Introduction to Integrated Science	1
		16

Spring Semester

CH 102	General Chemistry II	3
CH 104	General Chemistry II Lab	1
MA 110/112	Calculus with Application II	4
TH 119	First Theology	3
	Modern Language II	3
		14

INTEGRATED SCIENCE COURSE DESCRIPTIONS

INTS-00X INTEGRATED SCIENCE EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. Zero credits. Pass/Fail.

INTS-101 INTRODUCTION TO INTEGRATED SCIENCE

This course will begin the academic program for Integrated Science majors. Students will participate in discussions, case studies, and collaborative projects to explore the integration of the science disciplines to tackle local and global problems. In addition, students will examine career options and develop an academic plan. Finally, students will begin developing a portfolio that showcases their own integration of science and technology. Offered fall semesters. One credit.

INTS-201 MEDICAL TERMINOLOGY

A hybrid course that introduces students to a variety of medical terms. Students will complete on-line assignments and tests. Prerequisite BL 152. Offered fall semesters. One credit.

INTS-222 HUMAN ANATOMY AND PHYSIOLOGY I

This course is an introduction to the structure and function of the human body. The focus will be on the skeletal, muscular, integumentary, and nervous systems. Students will examine the interrelationships between the anatomical structure and function of the body. Prerequisite: BL 152. Three credits.

INTS-223 HUMAN ANATOMY AND PHYSIOLOGY LAB I

This laboratory course investigates the structure and function of the human body. Students will utilize physical and computer models, dissections, and computer data acquisition software. The focus will be on the skeletal, muscular, integumentary, and nervous systems. Students will examine the interrelationships between the anatomical structure and function of the body. Must take with INTS 222. Prerequisite: BL 152. One credit.

INTS-224 HUMAN ANATOMY AND PHYSIOLOGY II

This laboratory course investigates the structure and function of the human body. The focus will be on the circulatory, respiratory, digestive, excretory, endocrine, and reproductive systems. Students will examine the interrelationships between the anatomical structure and function of the body. Prerequisite: INTS 222. Three credits.

INTS-225 HUMAN ANATOMY AND PHYSIOLOGY LAB II

This laboratory course investigates the structure and function of the human body. Students will utilize physical and computer models, dissections, and computer data acquisition software. The focus will be on the circulatory, respiratory, digestive, excretory, endocrine, and reproductive systems. Students will examine the interrelationships between the anatomical structure and function of the body. Prerequisite: INTS 222. One credit.

INTS-300 INTEGRATED SCIENCE SENIOR SEMINAR

The capstone course for all Integrated Science majors. Students in this course will write a cumulative paper that includes a literature review and analysis of a topic that emphasizes the integration of science disciplines. In addition, students will examine primary literature and case studies in collaborative groups. Finally, students will complete their personal portfolios that highlight their accomplishments and ability to understand and integrate scientific concepts. Prerequisite: At least 12 credits in concentration courses. Offered spring semesters. Three credits.

INTS-550 INTEGRATED SCIENCE INTERNSHIP

Students participate in a professional work experience in the community related to their concentration and career goals. Students must complete a weekly log of activities and observations as well as a short response paper that explores the integration of at least two disciplines. Offered both semesters. Can be repeated for up to 3 credits.

INTERNATIONAL STUDIES MINOR

Doreen Blandino, Tina Phillips Johnson, *Directors*

Minor in International Studies with an area concentration in French, German, Italian, Spanish, or Chinese: 24 credits.

The Department of Modern and Classical Languages sponsors the minor in International Studies. The minor consists of either a concentration for the Liberal Arts major or a minor with a language and culture area concentration. The primary purpose of the minor in International Studies is to give participants a global awareness and a broader perspective of the modern world. A secondary purpose is the development of skills and abilities in speaking, writing, and reading a second language in order to enhance cross-cultural understanding. We strongly encourage students who minor in International Studies to consider study abroad.

REQUIREMENTS FOR A MINOR IN INTERNATIONAL STUDIES (24 CREDITS):

Required courses (18 credits)

Two language courses at the 300 level or above for French, German, Italian, or Spanish. One course must be in either Culture and Civilization or Contemporary Cultures in relation to area of concentration.

For Chinese, six credits of language at the 200 level or above.	6
SO 106 Sociology and Global Issues	3
PS 242 International Relations	3
HI 123 or 124 Global History I or II	3

One history course from the following in relation to area of concentration (3 credits): (Only one 100-level HI course will count toward core requirements).

HI 102 or 103 Western Civilization I or II	3
HI 104 or 105 Contemporary Europe I or II	3
HI 108 or 109 Traditional or Modern East Asian Societies	3
HI 205 Medieval Thought and Culture	3
HI 208 Modern China	3
HI 209 Issues in Contemporary East Asia	3
HI 233 History of Latin America	3
HI 270 The Rise of Chinese Civilization	3
HI 274 China and Japan in Fiction and Film	3
HI 283 Health Medicine in East Asia	3
HI 288 History of Global Health	3
HI 280 Islamic Civilization I	3

Two courses from the following in relation to area of concentration (6 credits):

AN 222 Cultural Anthropology	3
AN 225 Anthropology and World Art	3
AN 242 Anthropology of Religion	3
AN 328 Linguistic Anthropology	3
AR 205 World Art History	3
BA 250 Global Business Management	3
BA 251 International Business	3
BA 395 Global Marketing	3
BA 470 International Accounting	3
EC 351 International Trade and Development	3
EC 353 International Finance	3
EL 122 African Studies	3
EL 145 Multi-Ethnic Literature of the United States	3

HI 211 Sword and Siege: War in Medieval Europe	3
HI 213 Mystics, Maids, and Monarchs: Women in Medieval Europe	3
HI 232 Race and Ethnicity in Historical Perspective	3
PL 303 Eastern Thought	3
PS 341 Global Terrorism	3
PS 343 Comparative Politics	3
SO 200 Race and Ethnicity	3
TH 380 World Religions	3
TH 385 Buddhism	3

Additions and substitutions may be made with consent of advisor.



LIBERAL ARTS

Marisa Carlson, *Director*

Doreen Blandino; Denise Hegemann; John Smetanka

The following faculty members have participated in the program as readers for recent Liberal Arts projects: Elaine Bennett; David Carlson, O.S.B.; Thomas Cline; Bettie Davis; Michelle Duennes; Devin Fava; Denise Hegemann; Jessica Harvey; William Hisker; Timothy Kelly; Jennifer Koehl; Michael Krom; James Kunkel; Richard Kunkle; Michael Rhodes; Anthony Serapiglia; Kristine Slank; John Smetanka; Cynthia Walter; Bradley C.S. Watson.

“A liberal education is the education which gives a man a clear, conscious view of his own opinions and judgment, a truth in developing them, an eloquence in expressing them, and a force in urging them. It teaches him to see things as they are, go right to the point, to disentangle a skein of thought, to detect what is sophisticated, and to disregard what is irrelevant. It prepared him to fill any post with credit, and to master any subject with facility.”

– John Henry Cardinal Newman

PROGRAM PHILOSOPHY

The Liberal Arts program offers the student the opportunity for a general education with enough specialization to provide a focus for individualized interests and development. The key operating principle throughout the program is self-design which means that the student together with a faculty advisor is able to develop a personalized course of studies. While a student chooses one area of specialization through a minor in a traditional department, the concentration is constructed from either an interdisciplinary specialization or from one academic field. The self-designed nature of the major allows the student to have a greater degree of engagement in and sense of responsibility for learning. Ultimately, the student will be able to satisfy personal and intellectual needs and achieve future career goals. The Liberal Arts student is also encouraged to participate in internship and study abroad experiences which complement the academic program.

The program fosters the idea that education is environmental rather than compartmental, general before it can be specific.

The faculty views the program to be an excellent preparation for further study in professional and graduate schools and for such areas as elementary and secondary education, and for careers in social services, the legal field, professional health, and business. The rationale for this: a person who learns how to discover, evaluate, and develop a problem, how to secure the information required by these processes, and why he or she does so at all is well-prepared to live in a humane and valuable way. Finally, the program is just as concerned that the plumber, the carpenter, or factory worker be poet, mathematician, or philosopher and be able to create with the help of these disciplines a more meaningful life.

LIBERAL ARTS STUDENT LEARNING OUTCOMES

Liberal Arts majors will have the opportunity to:

- Integrate the skills and knowledge acquired in the major; that is, the minor, the concentration, and required liberal arts courses.
- Develop public speaking skills.
- Demonstrate critical thinking and analysis in written communication.
- Demonstrate information literacy.

REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE IN LIBERAL ARTS

(See core curriculum requirements.)

Liberal Arts Major Requirements (58 credits):

NSCI 100/101	4
Fine Arts*	3
AN 101 Introduction to Anthropology	3 or
AN 222 Cultural Anthropology*	3
PY 100 Introduction to Psychological Science**	3
LA 200 Methods and Techniques of Research	3
LA 250 Seminar: Readings in Liberal Arts	3
LA 325 Senior Seminar for Liberal Arts majors	3
Concentration***	18
Minor***	18
Total	58

*These are specific requirements for the major and do not satisfy the core.

**A major requirement which will satisfy the core.

***A maximum of six (6) credits from the concentration and/or minor may be used to fulfill core curriculum requirements.

THE CONCENTRATION

In consultation with the faculty advisor, the Liberal Arts major will design a concentration. The 18-credit concentration may be achieved in one of two ways: vertical or horizontal. The vertical concentration is defined by an existing traditional academic discipline such as history, modern language, sociology, or biology. In selecting a vertical concentration, the student may include only one introductory or survey level course, i.e., SO 101 Introduction to Sociology. A horizontal concentration is interdisciplinary. As with the vertical concentration, the student may only include one introductory or survey level course in the horizontal concentration. The student, with the guidance of the faculty advisor, identifies the form of the concentration and the courses which will comprise it. The theme and form of the concentration is determined in the fall semester of the junior year.

Students have the option to complete two minors in lieu of a minor and concentration. In addition to the self-designed option, the student may choose to fulfill the requirement by completing one of the following suggested concentrations: Quantitative Studies, Media Studies, Business Studies, Cultural Studies, and American Studies.

CULTURAL STUDIES

Modern Language 300 level courses	6
History (200 level that corresponds to the language)	3
AN 328 Linguistic Anthropology	3
EL 138 Multi-Ethnic Literature of the U.S.	3
TH 380 World Religions	3
Total	18

AMERICAN STUDIES

HI 106 or 107 Topics in U.S. History	3
EL 131 American Literature: Exploration to Civil War	3 or
EL 132 American Literature: Civil War to Present	3
TH 362 Religion in America	3
SO 200 Race and Ethnicity	3
PS 290 Institutions	3
PL 216 Ethical Problems	3
Total	18

QUANTITATIVE STUDIES

MA 109 Calculus with Applications I	4
MA 110 Calculus with Applications II	4

PY 203 Statistics I	3
PY 204 Statistics II	3
Select one of the following: PH 112 and PH 114 General Physics II and Lab	4
BL 152 and BL 153 General Biology II and Lab	4
CH 102 and CH 104 General Chemistry II and Lab	4
Total	18

MEDIA STUDIES

CA 100 Introduction to Mass Media	3
CA 130 Introduction to Digital Media	3
CA 235 Introduction to Web Design	3
CA 285 Digital Layout and Design	3
CA 230 Writing for Media	3
EL 108 Technical Writing	3
Total	18

BUSINESS STUDIES

BA 100 Financial Accounting I	3
BA 101 Financial Accounting II	3
BA 170 Organizational Behavior	3
EC 101 Principles of Economics, Micro	3 or
EC 102 Principles of Economics, Macro	3
BA 305 Business Ethics	3
BA 320 Corporation Finance I	3
Total	18

PRE-HEALTH STUDIES

CH 101-104 General Chemistry I and II	8
MA 109 Calculus with Applications I	4
CH 221-224 Organic Chemistry I and II	8
PH 111-114 General Physics I and II	8
Total	28

Students who select this concentration must fulfill the requirements for a biology minor.

THE ACADEMIC PROJECT

In the final semester of study the student must present an academic project done in the field of his or her concentration and/or minor. Because it is the culminating activity for the Liberal Arts major, the ideal project combines the concentration and the minor. The project may take any number of forms: thesis, essay, intellectual journal, poetry, the short story, the novel, stage design, art exhibit, and physical or social science research. The sequence for the senior liberal arts projects is as follows:

Fall Semester, Junior Year

The work for the academic project begins in the first semester, junior year, when the Liberal Arts major is required to take LA 200 The Methods and Techniques of Research. The course begins the sequence of Liberal Arts courses that all majors will complete. Students are introduced to the techniques of research. Class work is directed toward the Liberal Arts project and provides the students with the opportunity to clarify their research project so that by the end of the course, they have identified a topic area for their project and have completed preliminary research for it. By the end of the semester, each student will have completed a preliminary annotated bibliography. The student will present for approval the plan of studies for the Liberal Arts major, that is, the courses included in the minor and the courses which comprise the concentration to the faculty during a formal presentation.

Spring Semester, Junior Year

The second semester junior enrolls in LA 250 Seminar: Readings for Liberal Arts Majors. The student will continue to work on the development of the topic and form of project. The student will select two readers for the project who may be members of the Liberal Arts faculty, the College faculty, or from the professional community at large. The first reader will focus on the academic content while the second reader will assist the student with style and mechanics. The student will work with first reader to identify additional sources for the project. Final approval for the academic project will be given by the Liberal Arts faculty following a formal presentation by the student. LA 250 will focus on the academic disciplines represented by the participants' minors and concentrations. In addition to proposal development, the course will focus on reading and analyzing representative reading selections.

Summer Following Junior Year

The student is expected to complete any necessary additional research and to begin the draft of the thesis. It is an expectation that the student will continue to communicate with both readers during the summer and forward to them finished sections of the project for review.

Fall Semester, Senior Year

The first semester senior will enroll in LA 325 Senior Seminar for Liberal Arts Majors. For LA 325, the student will make regular presentations of the work being completed on the project. The course will include writing workshops and peer review. The final draft of the project is due by 4 p.m. on the last class day of the fall semester. One copy of the project is submitted to the Director of the Liberal Arts Program and copies are also submitted to the first and second readers.

Spring Semester, Senior Year

Once the readers have reviewed the final draft of the project, both copies are returned to the student for final corrections and revisions. The approved bound thesis is due no later than March 1 of the senior year. The student will participate in the College's Annual Academic Conference in April. There are no exceptions to this due date. Anyone who does not meet the deadline will be ineligible for May graduation.

Typical First-Year Schedule

Fall

TH 119	First Theology	3
or		
EL 102	Language and Rhetoric	3
	Modern Language	3
PY 100	Introduction to Psychological Sciences	3
or		
	History (100-124)	3
	Natural Science	4
	Social Science	3
Total		16

All students will take one course designated as a First-Year Seminar which will satisfy a core curriculum requirement.

Spring

TH 119	First Theology	3
or		
EL 102	Language and Rhetoric	3
	Modern Language	3
MA 104	Elementary Functions	3
	History (100-124)	3
AN 101	Introduction to Anthropology	3
Total		15

LIBERAL ARTS COURSE DESCRIPTIONS

LA-00X LIBERAL ARTS EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. This course will be automatically added to the student's registration upon submission of the graduation application. Zero credits. Pass/Fail.

LA-200 METHODS AND TECHNIQUES OF RESEARCH

This course will introduce the student to techniques of research, investigation and writing, evaluation of sources, library use, and bibliography. The course will also focus on the Liberal Arts project: choice of subject, methodology, outline, and bibliography. Meetings with individual members of the Liberal Arts faculty will help the student define and clarify the project. Students will present their plan of studies for the major to the Liberal Arts faculty during a formal presentation. Fall semester. Three credits.

LA-250 SEMINAR: READINGS FOR LIBERAL ARTS

The seminar will focus on the development of the topic and form of the project and will culminate individual student presentations to the Liberal Arts Faculty who will approve their project proposals. Further, this reading seminar will focus on the academic disciplines represented by participants' minors and concentrations. Students will study and analyze representative reading selections in the framework of class presentations, class discussions, and written reports. Spring semester. Three credits.

LA-325 SENIOR SEMINAR LIBERAL ARTS

This course is designed for the student who is in the final stages of the Liberal Arts Project. The course will utilize a workshop format, and class meetings will focus on the stylistic and technical aspects of the senior project. Fall semester. Three credits.

LA-350 INDEPENDENT STUDY – LIBERAL ARTS

May be repeated. Variable credit.

LA-550 LIBERAL ARTS INTERNSHIP

Professional work experience in the community which complements and strengthens academic in-class learning. Academic credit is variable depending on the nature and duration of the experience. Students may or may not be compensated depending on the company/agency. Students must receive departmental approval to participate. May be repeated. Variable credit.

LEGAL STUDIES MINOR

The Criminology Department oversees the administration of this Minor.

The Legal Studies minor is meant to address the needs of students on many levels. It seeks to do so through a fundamentally liberal arts approach.

First, there is an upswing in student interest in attending law school, and effective preparation for the rigors of that curriculum will be served by a course of study directed to that purpose. The program will provide a good testing ground for future graduate study.

The study of the legal system, however, is of great importance for students who will pursue career paths other than formal legal training.

Those entering the world of business will soon appreciate that management decisions cannot be made effectively without an understanding of the legal environment of the time. Managers need to understand what lawyers can provide them as well as why the legal aspects of decisions are not always conclusive.

Those entering the government service at any level need to grasp that the infrastructure of government is cast in a legal framework. To deal within that infrastructure effectively, an appreciation of the legal elements of the system must be achieved.

And for those who seek to effect social change, an understanding of the structure of the legal system and the mechanisms of change within it are crucial to bringing about a more just process for all concerned.

PROGRAM OBJECTIVES AND ASSESSMENT PLAN

To prepare students in any of the contexts set forth above, it is critical that the minor embrace a true liberal arts approach to the subject. The context of the law, in its historical and philosophical bases, is as crucial to embrace as are the structural and more nuanced components of the legal system. The curriculum proposed is meant to enable the students who complete the minor to demonstrate that they are capable of: 1) understanding and analyzing legal issues; 2) hypothesizing and applying appropriate solutions to those issues; c) using the skills gleaned to enrich their communities and succeed in their endeavors; and d) appreciating the societal place of the legal system and the expectations the community has of it.

Students enrolled in the program will be assessed based on their performance in each of the courses that they take.

PROGRAM STRUCTURE

The Legal Studies minor requires the completion of 21 credits of coursework, 15 required course credits, and 6 elective credits. The minor can readily be achieved over the normal course of 8 semesters.

To avoid double-counting certain courses required by Criminology and Politics majors taking the minor, certain specific rules apply for the satisfaction of the minor.

These rules are set forth below.

COURSEWORK

Legal Studies minor students will complete the following courses (18 credits)

- PS 100 Principles in American Politics
- Humanities Courses:*
 - HI 294 History of Common Law, 600-1800
 - PL 272 Philosophy of Law
- One of the following:**
 - PS 339 Constitutional Law: National Powers
 - PS 369 Constitutional Law: Civil Rights and Liberties
- One of the following:***
 - CLS 227 Criminal Law and Process
 - CLS 230 Constitutional Criminal Procedure
- Choice of two electives****
 - BA 340 Business Law
 - CLS 205 Criminal Trial Evidence
 - CLS 210 Civil Rights Law
 - CLS 227 Criminal Law and Process
 - CLS 230 Constitutional Criminal Procedure
 - CLS 355 Sentencing
 - CLS 361 The Investigation and Prosecution of Urban Street Gangs
 - CLS 375 International Criminal Law
 - CLS 376 Federal Criminal Law
 - CLS 344 White Collar Crime
 - CLS 440 Constitutional Litigation and Analysis
 - PS 290 Institutions
 - PS 336 American Political Thought
 - PS 339 Constitutional Law: National Powers
 - PS 369 Constitutional Law: Civil Rights and Liberties
 - PS 345 Domestic Public Policy
 - PS 390 Environmental Law and Policy
 - PST 734 Intro to Canon Law

It is also strongly suggested that a student take EL 202 Intermediate Writing.

*These courses cannot count toward the minor if they are also being taken to satisfy core curriculum requirements.

**Politics majors must choose another Politics course at the 300 level or higher (to be approved by the director), but not a course that they are counting as a general elective in the Politics major.

***CLS majors must choose another CLS course at the 300 level or higher (to be approved by the director), but not a course that they are counting as a general elective in the CLS major.

****Students taking one of these elective courses for their major are required to take an additional course from this list.

MATHEMATICS

Daniele Arcara, *Chairperson*

Alexander Borselli; Sarah Dumnich; Norman W. Hipps, O.S.B.; Whitney Liske; Jennifer White

Adjunct Faculty: Donald Cole; David Cullen; Lauren Harter

Professor Emeritus: Michael W. Botsko; Richard A. Gosser

Mathematics, the study of numbers and shapes, and the language of the physical sciences, has emerged from its classical roots as the principal tool for the analysis and comprehension of many current problems. Chaos and fractals, cryptography, data compression algorithms, tomography, and turbulence are only a few of the many areas currently studied by mathematicians. In addition, promising research continues to be done in the fields of analysis, topology, algebra, and number theory. These exciting areas of study all utilize the fundamentals of mathematics within a rigorous logical structure.

The Department of Mathematics prepares the student by teaching the ability to comprehend and use the language of mathematics. Students will come to appreciate the logical structure and beauty of the mathematical development. The student will come to formulate the needed mathematical methods to analyze and solve real problems.

The courses offered prepare mathematics majors for graduate studies, research, engineering, teaching, and positions in industry and government. They also provide the necessary background for students in engineering and the social and physical sciences. Finally, the courses allow for the study of mathematics for its own sake.

As a culminating activity mathematics majors must take Abstract Algebra I or Real Analysis I during the first semester of their senior year.

MATHEMATICS STUDENT LEARNING OUTCOMES

Students earning a degree in mathematics will be able to:

- Use the definitions of fundamental concepts and the major theorems of analysis and algebra to solve problems.
- Construct a rigorous proof of various propositions.
- Demonstrate critical thinking by analyzing and solving problems.

TEACHER PREPARATION

All students who are interested in pursuing the teacher certification should contact the chairperson of the Education Department at their earliest possible convenience (see additional information under the Education Department). Students must also declare their Education minor in the Registrar's Office. The required Mathematics courses would be MA 111, MA 112, MA 211, MA 212, MA 251, MA 301, MA 311, MA 421, and MA 451. Other courses in other disciplines are also required.

REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE IN MATHEMATICS

Major Requirements (44 Credits)

MA 111	Analytical Calculus I*	4
MA 112	Analytical Calculus II	4
MA 211	Analytical Calculus III	4
MA 212	Ordinary and Partial Differential Equations	4

Three other MA courses at 200 or 300 levels (3 credits each)** 9

Two MA courses at 400 level (4 credits each) 8

One of these two CS courses: 3

CS 110	C++ Programming I
CS 270	Introduction to Numerical Computation

Two series (i.e., two courses with respective labs) out of these six series*** 8

BL 150 and 151	General Biology I and Lab
BL 152 and 153	General Biology II and Lab
CH 101 and 103	General Chemistry I and Lab
CH 102 and 104	General Chemistry II and Lab
PH 111 and 113	General Physics I and Lab
PH 112 and 114	General Physics II and Lab

* *Analytical Calculus I* is a four-credit course with three credits fulfilling the Mathematics core curriculum.

** *Independent Study* courses may not count.

*** *These eight credits are fulfilling the Science core curriculum requirement.*

REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE IN MATHEMATICS

Major Requirements (59 credits)

MA 111	Analytical Calculus I*	4
MA 112	Analytical Calculus II	4
MA 211	Analytical Calculus III	4
MA 212	Ordinary and Partial Differential Equations	4

Four other MA courses at 200 or 300 levels (3 credits each)** 12

Four MA courses at 400 level (4 credits each) 16



PH 111 and 113	General Physics I and Lab***	4
One of these two CS courses:		3
CS 110	C++ Programming I	
CS 270	Introduction to Numerical Computation	

Two series (i.e., two courses with respective labs)
out of these five series*** 8

BL 150 and 151	General Biology I and Lab
BL 152 and 153	General Biology II and Lab
CH 101 and 103	General Chemistry I and Lab
CH 102 and 104	General Chemistry II and Lab
PH 112 and 114	General Physics II and Lab

* *Analytical Calculus I is a four-credit course with three credits fulfilling the Mathematics core curriculum*

** *Independent Study courses may not count.*

*** *Eight of these 12 science credits are fulfilling the Science core curriculum requirement*

REQUIREMENTS FOR MINOR IN MATHEMATICS (AT LEAST 18 CREDITS)

MA 111	Analytical Calculus I	4
MA 112	Analytical Calculus II	4
MA 211	Analytical Calculus III	4

Two more courses at 200+ level (6-8 credits).

Typical First-Year Schedule

Fall Semester

MA 111	Analytical Calculus I	4
CH 101	General Chemistry I	3
CH 103	General Chemistry I Lab	1
EL 102	Language and Rhetoric	3

One or two other core classes (e.g. history, philosophy, or language)

All students are required to take a course designed as First-Year Seminar in the fall semester of their first year.

Spring Semester

MA 112	Analytical Calculus II	4
CH 102	General Chemistry II	3
CH 104	General Chemistry II Lab	1
TH 119	First Theology	3

One or two other core classes (e.g. history, philosophy, or language)

MATHEMATICS COURSE DESCRIPTIONS

MA-00X MATHEMATICS EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. This course will be automatically added to the student's registration upon submission of the graduation application. Zero credits. Pass/Fail.

MA-104 ELEMENTARY FUNCTIONS

This is a one-semester course whose main ideas are emphasized in the presentation of the polynomial, rational, trigonometric, exponential, and logarithmic functions. The core of the course is derived from materials best described as a compendium of college algebra, trigonometry, and analytic geometry, which would reinforce those skills essential to calculus. Periodically offered as a first-year seminar. Three credits.

MA-106 FUNDAMENTALS OF PROBLEM-SOLVING

This course was designed to satisfy the Core Requirement in Mathematics for all students who are not required to take another math course. The course analyzes various aspects of mathematics. Students will develop problem-solving skills while studying various topics like logic and critical thinking, number theory, percentages, interests, loans, linear models, and exponential models. Other possible topics are sets, geometry, probability, statistics, and graphs. Three credits.

MA-107 QUANTITATIVE REASONING

This course is designed to study the fundamental skills required to understand quantitative information in personal, societal, and career contexts and to use this information to effectively form conclusions, judgments, or inferences. These skills include the ability to consume quantitative information presented in many formats as well as the ability to articulate arguments using quantitative evidence to a variety of audiences. Topics include: critical thinking, number sense, statistical interpretation, basic probability, graphical representation, and analysis of data. Students will have the opportunity to consider the ethical issues surrounding the use of data as engaged citizens of the world. Three credits.

MA-108 PRECALCULUS

This is a one-semester course whose main ideas are emphasized as a prelude to calculus. We will review topics in algebra and trigonometry including rational and exponential expressions, functions and their graphs, exponential and logarithmic functions, and trigonometric functions and identities. Offered fall semester. Three credits.

MA-109 CALCULUS WITH APPLICATIONS I

The elementary functions, limits, the derivative and its applications, the definite integral, techniques of integration. Applications are presented from the areas of biology and the social sciences. Graphing calculators and the computer algebra system of Mathematica are used to help study various concepts of calculus. Periodically offered as a first-year seminar. Four credits.

MA-110 CALCULUS WITH APPLICATIONS II

Probability, vectors, partial differentiation, multiple integration, sequences, and series. Graphing calculators and the computer algebra system of Mathematica are used to help study various concepts of calculus. Offered spring semester. Prerequisite: MA 109. Four credits.

MA-111 ANALYTICAL CALCULUS I

The real number system. Limits and continuity. The concepts of differentiation and integration. Differentiation of algebraic and trigonometric functions and applications. The Mean Value Theorem. The definite integral and the Fundamental Theorem of Calculus. Applications of the definite integral. Graphing calculators and the computer algebra system of Mathematica are used to help study various concepts of calculus. Periodically offered as a first-year seminar. Four credits.

MA-112 ANALYTICAL CALCULUS II

Various techniques of integration: integration by substitution, integration by parts, trigonometric integrals, trigonometric substitution, partial fractions. Improper integrals. Approximations of definite integrals. Differential Equations: separation of variables, first order linear. Parametric functions. Polar coordinates. Sequences. Series. Geometric series. Telescoping series. Series tests for convergence. Taylor series. Maclaurin series. Offered spring semester. Prerequisite: MA 111. Four credits.

MA-121 BASIC APPLIED STATISTICS

The ideas and tools of practical statistics using data in context. Methods and strategies for exploring data graphically and quantitatively. Statistical reasoning and the tools of inference that go beyond the data to draw conclusions about a wider population with attention paid to the uncertainty of these conclusions. Students will conduct standard one- and two-sample statistical analyses. Offered spring semester. Three credits.

MA-211 ANALYTICAL CALCULUS III

Three-dimensional vectors and surfaces. Sequences and series. Multi-variable functions and partial differentiation. Double and triple integrals and applications. Offered fall semester. Prerequisite: MA 112. Four credits.

MA-212 ORDINARY AND PARTIAL DIFFERENTIAL EQUATIONS

First order equations and applications, classical and numerical methods; second order linear equations and applications; solution in series; Bessel's and Legendre's equations; Laplace transform solutions; higher order equations; introduction to partial differential equations, separation of variables and Fourier series. Offered spring semester. Prerequisite: MA 211. Four credits.

MA-231 METHODS OF PROOF

An introduction to the more rigorous and theoretical aspects of mathematics. The course will focus on the construction and analyzing of mathematical proofs, including direct proof, proof by contrapositive, proof by contradiction, and mathematical induction. The basics of some mathematical logic, sets, number theory, algebra, and calculus will be covered as subject matter for the proofs. Prerequisite: MA 110 or MA 112. Not offered on a regular basis. Three credits.

MA-251 LINEAR ALGEBRA

Matrices and systems of linear equations. Vector spaces and linear transformations. Determinants. Inner product spaces, eigenvalues and eigenvectors. Offered spring semester. Prerequisite: MA 112. Three credits.

MA-301 HISTORY OF MATHEMATICS

This course will be a survey of mathematics from ancient times to modern times. We will also look at the historical context and implications of various mathematical discoveries, in addition to exploring the lives of the mathematicians responsible for these breakthroughs. Topics may include ancient counting systems, Euclidean and non-Euclidean geometry, algebra, calculus, probability, number theory, logic, and set theory. Additional topics will be covered as time permits. Offered spring semester. Prerequisite: MA 112. Periodically offered as an honors course. Three credits.

MA-311 PROBABILITY AND STATISTICS

Discrete probability including such topics as independence, conditional probability, Bernoulli trials, and Bayes Theorem, Calculus of probabilities including random variables, discrete and continuous distributions, expectation, and variance. Prerequisite: MA 211. Offered fall semester. Three credits.

MA-312 PROBABILITY AND STATISTICS II

The second of a two-course sequence in mathematical probability and statistics. Focuses on continuous random variables. Offered spring semester. Prerequisite: MA 311. Three credits.

MA-321 COMPLEX VARIABLES

The complex number system the Cauchy-Riemann equations, contour integrals, the Cauchy integral theorem and formula, sequences, power series and Laurent series, residue theory, and conformal mapping. Prerequisite: MA 211. Offered fall semester of odd-numbered years. Three credits.

MA-341 GRAPH THEORY

Graph theory is the study of networks and their connections. Topics studied will include trees, matchings, connectivity and Hamiltonicity, coloring, planarity. Additional topics will be covered as time permits. Offered spring semester of even-numbered years. Prerequisite: MA 251. Three credits.

MA-350 INDEPENDENT STUDY — MATHEMATICS

May be repeated. Variable credit.

MA-421 REAL ANALYSIS I

A rigorous study of calculus. Sequences. Limits of sequences. Subsequences. Cauchy sequences. Functions. Limits of functions. Continuity. Uniform continuity. Absolute continuity. Convexity. Differentiation. Properties of differentiable functions. Integration. The Riemann integral. Lebesgue's Theorem. The Riemann-Stieltjes integral. The Lebesgue integral. Offered fall semester of even-numbered years. Prerequisite: MA-212. Four credits.

MA-422 REAL ANALYSIS II

Infinite series. Sequences of functions. Series of functions. Fourier series. Metric spaces. Topological spaces. Connectedness. Compactness. Fixed point theorems. Offered spring semester of odd-numbered years. Prerequisite: MA-421. Four credits.

MA-451 ABSTRACT ALGEBRA I

Integers, Euclidean algorithm, congruences, rings, ring homomorphisms, integral domains, fields, ideals, quotient rings, polynomial rings, basic properties of groups, cyclic groups. Prerequisite: MA 212. Offered fall semester of odd-numbered years. Four credits.

MA-452 ABSTRACT ALGEBRA II

Groups, cyclic groups, subgroups, normal subgroups, quotient groups, Lagrange's Theorem, isomorphism theorems, Cayley's Theorem, direct products, finite Abelian groups. Prerequisite: MA 451. Offered spring semester of even-numbered years. Four credits.

MA-550 MATHEMATICS INTERNSHIP

Work experience program extending the learning experience beyond the college into the world of work. Students are employed in an area related to their academic endeavor. Academic credits are P/F and are awarded according to the extent of the work experience. Students may or may not be paid depending on the site. The purpose of the program is to integrate academic studies and employment activities. May be repeated. Variable credit.

ACTUARIAL SCIENCE (MATHEMATICS, 3-2)

Daniele Arcara, *Chairperson*
Jennifer White

Saint Vincent College has an agreement with Robert Morris University for a 3-2 program in Actuarial Science. Students in the program spend three years at Saint Vincent College, and then, upon completion of all of the requirements, transfer to Robert Morris University, where they spend two more years studying actuarial science. The students receive two bachelor degrees: a B.A. in Mathematics from Saint Vincent College and a B.S. in Actuarial Science from Robert Morris University.

The Actuarial Science program at Robert Morris University is currently one of only 17 programs in the United States to earn the designation as a Center of Actuarial Science by the Society of Actuaries. As defined on their webpage, "Centers of Actuarial Excellence (CAE) are university/college actuarial programs that have met eight specific requirements related to degree, curriculum, graduate count, faculty composition, graduate quality, appropriate integration, connection to industry, and research/scholarship." Department of Mathematics prepares the student by teaching the ability to comprehend and use the language of mathematics. Students will come to appreciate the logical structure and beauty of the mathematical development. The student will come to formulate the needed mathematical methods to analyze and solve real problems.

Actuarial Science is a discipline that assesses financial risks in the insurance and finance fields using mathematical and statistical methods. It applies probability and statistics to study the financial implications of uncertain future events. In order to be an actuary one must pass a series of actuarial exams through the Society of Actuaries professional organization. Successful completion of the first actuarial exam is required before students transfer from Saint Vincent College to Robert Morris University.

In order to transfer, students in the program need to complete all of the required courses (see list below), maintain a GPA of 3.3/4.0, and successfully pass the first actuarial exam.

Students will receive their degree from Saint Vincent College upon successful completion of enough credits at Robert Morris University to bring their total number of credits to 124 (counting both the credits that were approved while at Saint Vincent and those completed at Robert Morris).

SAINT VINCENT'S REQUIREMENTS FOR THE 3/2 ACTUARIAL SCIENCE PROGRAM

Core Curriculum Requirements (33 Credits)

EL 102	Language and Rhetoric	3
EL	Literature course	3
HI	100-level History course	3
HI	200-level History course	3
PL 101	First Philosophy	3
PL	Philosophy course	3
TH 119	First Theology	3
TH	Theology course	3
AR or MU	Arts or Music course	3
Foreign Language		6

* There are actually other core curriculum requirements, but they are satisfied by some of the major requirements listed below.

Major Requirements (59 Credits)

MA 111	Analytical Calculus I*	4
MA 112	Analytical Calculus II	4
MA 211	Analytical Calculus III	4
MA 212	Ordinary and Partial Differential Equations	4
MA 251	Linear Algebra	3
MA 311	Probability and Statistics I	3
MA 312	Probability and Statistics II	3

Two MA courses at 400 level (4 credits each)		8
BA 100	Financial Accounting I**	3
BA 101	Financial Accounting II**	3
BA 320	Corporate Finance I	
BA 350	Business Statistics	
CA 120	Public Presentation	
CS 102	Fundamentals of IT and Computing	

Two series (i.e., two courses with respective labs) out of these six series***		8
BL 150 and 151	General Biology I and Lab	
BL 152 and 153	General Biology II and Lab	
CH 101 and 103	General Chemistry I and Lab	
CH 102 and 104	General Chemistry II and Lab	
PH 111 and 113	General Physics I and Lab	
PH 112 and 114	General Physics II and Lab	

* *Analytical Calculus I is a four-credit course with three credits fulfilling the Mathematics core curriculum.*

** *These two courses fulfill the social science core curriculum.*

*** *These eight credits are fulfilling the natural science core curriculum.*

MEDIEVAL STUDIES MINOR

Contact: Gilbert M. Bogner

PROGRAM PHILOSOPHY AND DESCRIPTION

Medieval Studies is an interdisciplinary minor consisting of a wide range of courses that focus in significant ways on the civilization of the West in the medieval period, also known as the 'Middle Ages,' ca. AD 500-1500. Arising out of the unique blending of Classical, Christian, and Germanic elements beginning in late antiquity, medieval culture became a vital and formative part of the Western heritage. Medieval people created sophisticated philosophical systems; beautiful forms of art and music; innovative styles of architecture; new expressions of piety and varieties of religious life; lively and imaginative poetry; the first universities; and the earliest forms of French, German, English, and other languages so commonplace today. The Middle Ages also saw the origin and early evolution of most European countries, as well as the first contacts and conflicts between Christians and Muslims. It is thus certainly a culture and era worthy of our attention. The purpose of the minor in Medieval Studies is to give students a broad understanding of medieval Western civilization by approaching it from a variety of perspectives. Courses are offered in literature, art, history, languages, philosophy, and theology.

REQUIREMENTS FOR A MINOR IN MEDIEVAL STUDIES (18 CREDITS)

The Medieval Studies minor consists of six courses in at least three disciplines, although students are encouraged to take courses from as many disciplines as possible.

Required course (3 credits):

HI 103	Medieval and Renaissance Europe
Five courses from the following list (15 credits):	
EL 114	British Literature: Middle Ages to Restoration
EL 147	Arthurian Literature
EL 211	Medieval Studies
EL 212	Chaucer
AR 101	Art History I: Ancient through Renaissance
HI 110	English History to 1485
HI 205	Chivalry and Chastity: Life and Thought in Medieval Europe
HI 211	Sword and Siege: War in Medieval Europe
HI 213	Dame and Distaff: Women in Medieval Europe
HI 227	"Bring Out Yer Dead!" The Middle Ages on Film
HI 231	Garters and Green Knights: the Age of the Hundred Years War
HI 248	The History of the Christian Churches I: to 1500
HI 268	Benedictine Europe
FR 321	Survey of French Literature I
GE 321	German Literature of the Middle Ages
LT 321	Latin Hymns of the Roman Church
PL 202	Medieval Philosophy
PL 240	The Influence of Philosophy on Theology, Then and Now
PL 280	Thomistic Philosophy
TH 320	Theology of Medieval Christianity

Non-Required Courses

For a richer experience, students are strongly encouraged to use courses from the above list beyond those they use for the Medieval Studies minor to fulfill requirements for the core curriculum, majors, or other minors when possible. In addition, the College offers a number of courses that relate in less direct ways to the culture of the medieval West. Such courses would illuminate further a student's understanding of the Middle Ages while perhaps also fulfilling other requirements. The following is a list of some

good suggestions, though there are many others. Please see the program contact or department chairpersons for more advice.

EL 149	J.R.R. Tolkien
AR 234	Introduction to Stained Glass
HI 220	The Devil and the Problem of Evil in Western Thought
HI 280, 281	Islamic Civilization I and II
SP 321	Panorama of Spanish Literature
LT 101, 102	Elementary Latin I and II
LT 203, 204	Intermediate Latin I and II
MU 104	Monasticism and the Arts
TH 204	Psalms and Wisdom Literature
TH 218	Apocalyptic Literature



MODERN AND CLASSICAL LANGUAGES

Doreen Blandino, *Chairperson*

Che Chunhui; Thomas Ernst; Juan Carlos Rivas;
Paul-Alexander Shutt, O.S.B.

Adjunct Faculty: Robert Bufalini; Jerome DiBernardo; Juan-Pedro Reyna; Maria A. Rivas; Judith Washburn, Zhu Binzhong

The Department offers the Bachelor of Arts degree in French and Spanish as well as minors in Chinese, French, German, Italian, Latin, and Spanish. The Department also sponsors the minor in International Studies. The minor in International Studies fulfills requirements for the minor or concentration for the Liberal Arts major. The curriculum in the Department allows students to develop skills in a second language as part of the College's mission to produce a well-rounded graduate who is prepared for life and citizenship as well as for a career. Because today's world is enriched by diversity, faculty strive to cultivate in each student an understanding and appreciation of other cultures. Respect for self and others must be at the basis of any worthwhile communication. It is in this sense that the Department considers the study of other languages integral to a liberal arts education.

All classes foster the skills of communication and understanding in a second language. Listening, speaking, reading, and writing are integrated at each level of study. The program also provides students with the opportunity to develop insights into other cultures through the study of foreign literatures, art, and film.

The Department's offerings are of interest to students preparing for careers in business, education, government, history, law, journalism, and public services. Faculty members in the Department of Modern Languages encourage students to enrich their undergraduate studies through participation in study abroad or internship programs. Information on international studies programs is discussed in this *Bulletin* under Special Programs.

MODERN AND CLASSICAL LANGUAGES STUDENT LEARNING OUTCOMES

- Demonstrate skills in speaking and writing the target language in a culturally appropriate manner.
- Demonstrate understanding of spoken and written discourse from a variety of sources.
- Link to other disciplines by analyzing how texts and other cultural artifacts reflect cultural values and religious, historic, political, geographical, and economic elements.
- Compare world cultures through analytical reflection of the connection between cultural perspectives, products, and practices.

FRENCH

Major Requirements (36 credits)

(See core curriculum requirements.)

A major in French requires 12 courses. French 203 and French 204 fulfill the core requirements as well as six credits for the major. In addition, a major in French requires 10 courses above 204. The following courses are required:

Three required courses (9 credits):

FR 315	Advanced French Grammar and Composition	3
FR 316	Reading French	3
FR 320	Developing Oral Proficiency and Phonetics	3

One course from the following 3 credits:

FR 343	Contemporary France	3
FR 444	French Culture and Civilization	3
FR 445	France through the Centuries	3
Electives: Any four (4) courses above FR 204		12

Two (2) courses must be in literature 6
Credits earned in approved study abroad programs fulfill requirements for the major. Prior approval of study abroad programs is required from the department chairperson.

Required Core Courses:

One course from the following 3 credits:

AR 100	Art and Music of Western Culture	3
AR 101	Caves to Cathedrals	3
AR 102	Art History II: Baroque to the Present	3

One course from the following 3 credits:

AN 222	Cultural Anthropology	3
AN 328	Linguistic Anthropology	3

One course from the following 3 credits:

EL 147	Arthurian Literature	3
EL 224	The Romantic Age	3
EL 236	Modern European Literature	3
EL 250	Global Literatures in Translation	3
EL 252	Literary Translation Workshop	3

One course from the following 3 credits:

HI 103	Medieval and Renaissance Europe	3
HI 104	Contemporary Europe I	3
HI 105	Contemporary Europe II	3
HI 205	Chivalry and Chastity: Life and Thought in Medieval Europe	3

French majors are required to pursue a second major or a minor. French majors are also required to develop a portfolio and undergo annual assessments of their oral skills. French majors are required to study in a French-speaking country. Students who are not able to study abroad may substitute language study in an immersion setting. All programs must be approved by the department chair.

TEACHER PREPARATION

Students seeking French certification, grades K-12, will take a minor in Education. Students are directed to read about the teacher certification requirements in the Education section of this *Bulletin*. They are also advised to contact the chairperson of the Education Department for additional guidance.

Requirements for French Minor (18 credits):

A minor in French requires six (6) courses above FR203. The following three (3) courses are required (12 credits):

FR 315	Advanced French Grammar and Composition	3
FR 320	Developing Oral Proficiency in French	3
Any 300-level course in literature		3

One course from the following three (3) credits:

FR 343	Contemporary France	3
FR 444	French Culture and Civilization	3
FR 445	France through the Centuries	3
Electives: Any two (2) courses above FR203		6

Typical First-Year Schedule

Fall Semester

EL 102	Language and Rhetoric	3
or		
TH 119	First Theology	3
	Natural Science	4
	Social Science	3
	History (100-124)	3
	French	3
Total		16

All students will take one course designated as a First-Year Seminar which will satisfy a core curriculum requirement.

Spring Semester

EL 102	Language and Rhetoric	3
or		
TH 119	First Theology	3
	Social Science	3
	History (100-124)	3
	English	3
	French	3
Total		15

SPANISH

Requirements for a Bachelor of Arts Degree in Spanish

(See core curriculum requirements.)

Major Requirements (36 credits):

A major in Spanish requires 12 courses. Spanish 203 and Spanish 204 fulfill the core requirement as well as six (6) credits for the major. In addition, a major in Spanish requires 10 courses above Spanish 204.

The following courses are required:

The following 15 credits are required:

SP 315	Advanced Spanish Grammar and Composition	3
SP 317	Introduction to Spanish Literary Analysis	3
SP 320	Developing Oral Proficiency and Phonetics	3
SP 444	Peninsular Culture and Civilization	3
SP 445	Spanish American Culture and Civilization	3
	Electives: Any 300 or 400 level	3
Any 300- or 400- level Spanish American Literature class		3
	Electives: Any three (3) courses above SP 204	9

Credits earned in approved study abroad programs fulfill requirements for the major. Prior approval of study abroad programs is required from the department chairperson.

Required Core Courses:

HI 233	History of Latin America	3
One course from the following 3 credits:		
AR 100	Art and Music of Western Culture	3
AR 101	Caves to Cathedrals	3
AR 102	Art History II: Baroque to the Present	3

One course from the following 3 credits:

EL 138	Multi-Ethnic Literature of the United States	3
EL 250	Global Literatures in Translation	3
EL 252	Literary Translation Workshop	3

One course from the following 3 credits:

AN 222	Cultural Anthropology	3
AN 328	Linguistic Anthropology	3
SP 550	(highly recommended)	

Spanish majors are required to pursue a second major or a minor. Spanish majors are also required to develop a portfolio and undergo annual assessments of their oral skills. Spanish majors are required to study in a Spanish-speaking country.

Students are encouraged to participate in the College's program at Universal Language Center in Cuernavaca, Mexico (9-credit maximum). Students who are not able to study abroad may substitute language study in an immersion setting. All programs must be approved by the department chairperson.

TEACHER PREPARATION

Students seeking Spanish certification, grades K-12, will take a minor in Education. Students are directed to read about teacher certification requirements in the Education section of this *Bulletin*. They are also advised to contact the Chairperson of the Education Department for additional guidance. A student should declare an education minor in the Registrar's office.

Minor Requirements (18 credits):

A minor in Spanish requires six (6) courses above SP 203. The following four (4) courses are required (12 credits):

SP 315	Advanced Spanish Grammar and Composition	3
SP 320	Developing Oral Proficiency and Phonetics	3
	Any 300-level course in literature	3
	Any course in culture and civilization	3
	Elective: Any two (2) courses above SP 203	6

Typical First-Year Schedule

Fall Semester

EL 102	Language and Rhetoric	3
or		
TH 119	First Theology	3
	Mathematics	3
	Social Science	3
	History (100-124)	3
	Spanish	3
Total		15*

*All students will take one four-credit course designated as a First-Year Seminar which will satisfy a core curriculum requirement.

Spring Semester

EL 102	Language and Rhetoric	3
or		
TH 119	First Theology	3
	Social Science	3
	Fine Arts	3
	Spanish	3
	History (100-104) or First Philosophy	3
Total		15

CHINESE

Requirements for a Minor in Chinese Language and Culture (21 credits):

Required Language Courses (9 credits):

CHI 204	Intermediate Chinese II	3
Choose 2 from the following courses (6 credits):		
CHI 305	Advanced Chinese Conversation I	3
CHI 306	Reading Chinese	3
CHI 307	Advanced Chinese Conversation II	3
CHI 320	Topics in Chinese Language, Civilization or Literature (taught in Chinese)	3

Traditional Chinese History (3 credits):

Choose one from the following courses:

HI 108	Traditional East Asian Societies	3
HI 270	The Rise of Chinese Civilization	3

Modern Chinese History (3 credits):

Choose one from the following courses:

HI 109	Modern East Asian Societies	3
HI 208	Modern China	3
HI 209	Issues in Contemporary East Asia	3
HI 274	China and Japan in Fiction and Film	3

Elective Courses (6 credits):

Maximum of three (3) credits from one Department.

Choose two (2) from the following courses:

CHI 310	Chinese Literature in Translation	3
CHI 311	Selected Readings in Chinese	3
HI 232	Race and Ethnicity in Historical Perspective	3
PL 303	Eastern Thought	3
TH 385	Buddhism	3
TH 380	World Religions	3

GERMAN

Requirements for German Minor (18 credits):

A minor in German requires six (6) courses above GE 203.

The following four (4) courses are required (12 credits):

GE 305	Conversational German	3
GE 315	Advanced German Grammar and Composition	3
	Any 300-level course in literature	3
	Any course in culture and civilization	3

Elective: Any two (2) courses above GE 203



ITALIAN

Requirements for Italian Minor (18 credits):

A minor in Italian requires six (6) courses above IT 203.

The following four (4) courses are required (12 credits):

IT 305	Developing Oral Proficiency in Italian	3
IT 315	Stylistics: Techniques of Composition and Interpretation	3
	Any 300-level course in literature	3
	Any 300-level course in culture and civilization	3

Elective: Any two courses above IT 203

LATIN

Requirements for Minor in Classical Latin (18 credits)

A minor in Latin requires six courses above LT 203 both in the target language as well as non-language courses that are offered by other departments of the college. The following language courses are required (12 credits):

LT 204	Intermediate Latin II	3
	Any 300-level course(s) and above in literature	6
	Any 300-level course(s) and above in culture/civilization	3

Select any two non-language courses from the following (6 credits):

EL 210	Classical Greek Poetry and Drama	3
HI 102	Ancient Greece and Rome	3
AR 101	Art History: Ancient through Renaissance	3
AN 230	Archaeology	3

STUDY ABROAD

Participation in an approved program, either self-designed or in conjunction with a SVC-approved third party program or exchange university. Students studying Chinese are encouraged to study at our sister college, Fu Jen Catholic University in Taiwan. Student must have the approval of the department before commencing any studies abroad. Variable credit.

INTERNATIONAL STUDIES MINOR

Minor in International Studies with an area concentration in French, German, Italian, Spanish, or Chinese: 24 credits

The Department of Modern and Classical Languages sponsors the minor in International Studies. The minor consists of either a concentration for the Liberal Arts major or a minor with language and culture area concentration. The primary purpose of the minor in International Studies is to give participants a global awareness and a broader perspective of the modern world. A secondary purpose is the development of skills and abilities in speaking, writing, and reading a second language in order to enhance cross-cultural understanding. We strongly encourage students who minor in International Studies to consider study abroad.

Requirements for a minor in International Studies (24 credits):

Required courses (18 credits)

Two language courses at the 300 level or above for French, German, Italian, or Spanish. One course must be in either Culture and Civilization or Contemporary Cultures in relation to area of concentration.

For Chinese, 6 credits of language at the 200 level or above.	6
SO 106	Sociology and Global Issues 3
PS 242	International Politics 3
HI 123 or 124	Global History I or II 3
One history course from the following in relation to area of concentration (3 credits): (Only one 100-level HI course will count toward core requirements).	
HI 102 or 103	Ancient Greece and Rome, Medieval Renaissance Europe 3
HI 104 or 105	Contemporary Europe I or II 3
HI 108 or 109	Traditional or Modern East Asian Societies 3
HI 205	Chivalry and Chastity: Life and Thought in Medieval Europe 3
HI 209	Issues in Contemporary East Asia 3
HI 233	History of Latin America 3
HI 270	The Rise of Chinese Civilization 3
HI 280	Islamic Civilization I 3
Two courses from the following in relation to area of concentration (6 credits):	
AN 222	Cultural Anthropology 3
AN 225	Anthropology and World Art 3
AN 242	Anthropology of Religion 3
AN 328	Linguistic Anthropology 3
AR 370	Avante-Garde Art: 19th and 20th Century 3
AR 205	World Art History 3
BA 250	Global Business Management 3
BA 251	International Business 3
BA 395	Global Marketing 3
BA 470	International Accounting 3
EC 351	International Trade and Development 3
EC 353	International Finance 3
EL 250	Global Literatures in Translation 3
EL 145	Multi-Ethnic Literature of the United States 3
HI 211	Sword and Siege: War in Medieval Europe 3
HI 213	Dame and Distaff: Women in Medieval Europe 3
HI 232	Race and Ethnicity in Historical Perspective 3
HI 290	Peace and Justice in Historical Perspective 3
PL 303	Eastern Thought 3
PS 341	Global Terrorism 3
PS 343	Comparative Politics 3
SO 200	Race and Ethnicity 3
SO 235	Inequalities and Social Problems 3
TH 380	World Religions 3
TH 385	Buddhism 3
Additions and substitutions may be made with consent of advisor.	

MODERN AND CLASSICAL LANGUAGES COURSE DESCRIPTIONS

CHI-101 ELEMENTARY CHINESE I

For beginners in the language. The two courses form a sequence and are normally completed as a unit. No prerequisite for CHI 101. Satisfactory completion of CHI 101 is a prerequisite for CHI 102. The entire two-semester course aims at acquisition of the usual basic language skills of listening, speaking, reading, and writing. Presentation of basic grammar and an introduction to Chinese culture. Pinyin (the most-widely used Chinese phonetic system) will be taught as a tool to learn the spoken language. Students will also learn Chinese characters in order to be able to communicate effectively in real Chinese situations. Approximately 200 words and

expressions in both Pinyin and character forms will be taught. CHI 101, 102 do not fulfill the graduation requirement. Each semester comprises three hours classroom work and one hour practice in the language lab under instructor's supervision, along with individual lab practice. CHI 101 offered fall semester; CHI 102 offered spring semester. Four credits each semester.

CHI-102 ELEMENTARY CHINESE II

For beginners in the language. The two courses form a sequence, and are normally completed as a unit. Satisfactory completion of CHI 101 is a prerequisite for CHI 102. The entire two-semester course aims at acquisition of the usual basic language skills of listening, speaking, reading, and writing. Presentation of basic grammar and an introduction to Chinese culture. Pinyin (the most-widely used Chinese phonetic system) will be taught as a tool to learn the spoken language. Students will also learn Chinese characters in order to be able to communicate effectively in real Chinese situations. Approximately 200 words and expressions in both Pinyin and character forms will be taught. CHI 101, 102 do not fulfill the graduation requirement. Each semester comprises three hours classroom work and one hour practice in the language lab under instructor's supervision, along with individual lab practice. CHI 101 offered fall semester; CHI 102 offered spring semester. Four credits each semester.

CHI-203 INTERMEDIATE CHINESE I

This course is designed for students with prior experience on listening, speaking, reading, and writing Chinese at the elementary level. While students will be trained in all four skills, more emphasis will be given to reading and writing Chinese characters, expanding vocabulary, understanding Chinese culture. To facilitate the study of the language, different aspects of Chinese culture and society will be introduced through group activities, multimedia programs, and research project throughout the course. Offered fall semester. Three credits.

CHI-204 INTERMEDIATE CHINESE II

This course offers Chinese for daily communication through intensive study and practice in written and spoken Chinese. Students will carry on conversations and participate in classroom discussions in Mandarin Chinese on various topics associated with daily life and learn to write short passages in Chinese characters. This course also explores definitions of culture and analyzes the dynamic role of language in culture and culture in language, with an aim to foster cross-cultural awareness and self-realization while developing proficiency in Chinese. Offered spring semester. Three credits.

CHI-305 ADVANCED CHINESE CONVERSATION I

This course aims to improve the ability to speak and understand Chinese, emphasizing correct pronunciation and intonation. Active participation from the students is required. Students will have the opportunity to converse on a variety of topics. Prerequisite: CHI 204. Three credits.

CHI-306 READING CHINESE

This course provides an introduction to reading Chinese. Reading materials include newspaper articles, poetry, and short stories. Students are required to complete written assignments and discuss the readings. Cultural awareness, reading, writing, and speaking skills will be enhanced. Three credits.

CHI-307 ADVANCED CHINESE CONVERSATION II

This course continues to develop students' conversational abilities through daily use of the target language. Students will engage in real-life situational role plays and engage in discussions of and

make formal oral presentations of cultural and literary readings. This course promotes cultural awareness and communicative proficiency. Three credits.

CHI-310 CHINESE LITERATURE IN TRANSLATION

This course introduces students to the classical literature and culture of the Tang, Song, Yuan, Ming, and Qing Dynasties. Readings will include poetry, prose, dramas, and novels. All readings, papers, and class discussions are in English. Three credits.

CHI-311 SELECTED READINGS IN CHINESE

This course explores the major literary works of modern Chinese literature and the significant historical events during this period. Students will gain insights to Chinese culture through a variety of readings. The short story is emphasized along with selected poems and plays of the 20th century. All readings, papers, and class discussions are in English. Three credits.



CHI-320 TOPICS IN CHINESE LANGUAGE

The contents of this course will vary from an emphasis on difficult aspects of Chinese language and conversation practice, to reading a variety of genres which include essays, poems, short stories, and plays. Historical and political developments will be discussed. Students will enhance their understanding and appreciation of cultural beliefs, attitudes, and practices. Three credits.

CHI-321 INTRODUCTION TO CHINESE MOUNTAIN CULTURE

In this course, students will discuss several important mountains, each with particular political and religious significance. Students will gain a better understanding of Chinese values and ways of thinking as they explore the significant role that mountains hold in Chinese culture. This course is designed for students at the advanced level with a basic vocabulary of 400 or more Chinese characters. Three credits.

CHI-350 INDEPENDENT STUDY – CHINESE

May be repeated. Variable credit.

FR-00X FRENCH EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. Zero credits. Pass/Fail. This course will be

automatically added to the student's registration upon submission of the graduation application.

FR-101 ELEMENTARY FRENCH I

For beginners in the language. The two courses form a sequence, and are normally completed as a unit. Satisfactory completion of FR 101 is a prerequisite for FR 102. The entire two-semester course aims at acquisition of the usual basic language skills of listening, speaking, reading, and writing. Presentation of basic grammar and an introduction to the culture of French-speaking peoples. FR 101, 102 do not fulfill the graduation requirement. Each semester comprises three hours classroom work and one hour practice in the language lab under instructor's supervision, along with individual lab practice. FR 101 offered fall semester; FR 102 offered spring semester. Four credits each semester.

FR-102 ELEMENTARY FRENCH II

For beginners in the language. The two courses form a sequence, and are normally completed as a unit. Satisfactory completion of FR 101 is a prerequisite for FR 102. The entire two-semester course aims at acquisition of the usual basic language skills of listening, speaking, reading, and writing. Presentation of basic grammar and an introduction to the culture of French-speaking peoples. FR 101, 102 do not fulfill the graduation requirement. Each semester comprises three hours classroom work and one hour practice in the language lab under instructor's supervision, along with individual lab practice. FR 101 offered fall semester; FR 102 offered spring semester. Four credits each semester.

FR-203 INTERMEDIATE FRENCH I

Systematic grammar review and vocabulary building, with stress on nouns, adjectives, pronouns, and on the common tenses of regular and irregular verbs. Introduction to reading techniques suitable to college-level study. Prerequisite: appropriate score on the College's language placement examination, or six (6) to eight (8) credits of college elementary French. Offered fall semester. Three credits.

FR-204 INTERMEDIATE FRENCH II

Understanding and use of the literary tenses, emphasis on the subjunctive, complex grammatical structures, and idiomatic usages. Reading, compositions, and oral exercises. Both courses build an awareness of French-speaking cultures. Prerequisite: satisfactory completion of FR 203, or appropriate score on the College's language placement examination. Offered spring semester. Three credits.

FR-305 CONVERSATIONAL FRENCH

Development of speaking and listening skills beyond intermediate level. Fosters the ability to participate in daily life situations, social interchange, and discussion of topics read in newspapers or magazines and heard from audio sources. Phonetic, grammatical, and cultural components. Three credits.

FR-310 FRENCH FOR BUSINESS

Development of oral and written skills. This course presents the essentials of modern commercial French through the medium of situations commonly found in the business world. Practical themes include currency exchange, travel, job interviews, telephone etiquette, and cultural expectations. Three credits.

FR-315 ADVANCED FRENCH GRAMMAR AND COMPOSITION

This course provides students with a solid foundation in French syntax. It is a writing-intensive course directed toward improvement of stylistic skills. Thorough review of tenses, complex

grammatical structures, and idiomatic expressions. Writing assignments progress in difficulty and will include journals, compositions, and critical essays. Three credits.

FR-316 READING FRENCH

This course provides students with an introduction to reading a variety of French texts. Students have the opportunity to develop their reading, speaking, and writing skills through several assignments that progress in difficulty. Three credits.

FR-320 DEVELOPING ORAL PROFICIENCY AND PHONETICS IN FRENCH

This course is designed to help students develop their oral proficiency, pronunciation, and intonation in French. Course activities focus on a variety of discourse strategies and encompass real-life linguistic situations and tasks. Pronunciation skills will be enhanced through the study of phonetics. Oral proficiency will be developed through role-play, presentation, debate, and collaborative language use in a variety of content areas. Three credits.

FR-321 SURVEY EARLY FRENCH LITERATURE I

Survey of literary movements from the Middle Ages through the 17th century, with selections from the major writers. Grammar review, oral presentations, and compositions in French. Three credits.

FR-322 SURVEY OF FRENCH LITERATURE II

Survey of literary movements from the 18th century to the present, with selections from the major writers. Grammar review, oral presentations, and compositions in French. Three credits.

FR-330 READINGS IN 19TH-CENTURY AUTHORS

Selected readings from Chateaubriand, Balzac, Hugo, Baudelaire, Flaubert, Stendhal, Zola, and others will be covered. Emphasis will be placed on turbulent political and social movements of the century and their reflection in literature of this period. Three credits.

FR-332 READINGS IN 20TH-CENTURY AUTHORS

Study of selected works by modern French authors with attention to social and historical settings and content. Readings from Camus, Colette, Gide, Green, Fournier, Mauriac, Proust, and others. Three credits.

FR-343 CONTEMPORARY FRANCE

A study of contemporary France, presenting an overview of the social and political issues. Students will expand their reading, writing, and conversational skills through course readings and assignments. Three credits.

FR-350 INDEPENDENT STUDY - FRENCH

May be repeated. Variable credit.

FR-444 FRENCH CULTURE AND CIVILIZATION

A survey of French history from the 16th century to the present. The course will look at political and social movements, reform, and revolution as well as the influence of religion, culture, science, and literature. Three credits.

FR-445 FRANCE THROUGH THE CENTURIES

French politics, history, economics, and aspects of daily life will be discussed through the use of selected readings and authentic documents. Students will further develop their reading, writing, and speaking skills through the study of French culture. Three credits.

FR-550 FRENCH INTERNSHIP

Professional work experience in the community which complements and strengthens academic in-class learning. Academic credit is variable depending on the nature and duration of the experience. Students may or may not be compensated depending on the company/agency/education setting. Students must receive departmental approval to participate. May be repeated. Variable credit.

GE-101 ELEMENTARY GERMAN I

For beginners in the language. The two courses form a sequence, and are normally completed as a unit. No prerequisite for GE 101. Satisfactory completion of GE 101 is a prerequisite for GE 102. The entire two-semester course aims at acquisition of the usual basic language skills of listening, speaking, reading, and writing. Presentation of basic grammar and an introduction to the culture of German speaking peoples. GE 101, 102 do not fulfill the graduation requirement. Each semester comprises three hours of classroom work and one hour of practice in the language lab under instructor's supervision, along with individual lab practice. GE101 offered fall semester; GE 102 offered spring semester. Four credits each semester.

GE-102 ELEMENTARY GERMAN II

For beginners in the language. The two courses form a sequence, and are normally completed as a unit. No prerequisite for GE 101. Satisfactory completion of GE 101 is a prerequisite for GE 102. The entire two-semester course aims at acquisition of the usual basic language skills of listening, speaking, reading, and writing. Presentation of basic grammar and an introduction to the culture of German speaking peoples. GE 101, 102 do not fulfill the graduation requirement. Each semester comprises three hours of classroom work and one hour of practice in the language lab under instructor's supervision, along with individual lab practice. GE101 offered fall semester; GE 102 offered spring semester. Four credits each semester.

GE-203 INTERMEDIATE GERMAN I

Thorough grammar review, development of speaking, listening, reading, writing, and enhancement of cultural understanding. Prerequisite: appropriate score on the College's language placement examination, or six (6) to eight (8) credits of college elementary German. Offered fall semester. Periodically offered as a first-year seminar. Three credits.

GE-204 INTERMEDIATE GERMAN II

Emphasis on development of reading and discussion skills, with material dealing with German culture. Written exercises, translation, and discussion. Prerequisite: satisfactory completion of GE 203 or appropriate score on the College's language placement examination. Offered spring semester. Three credits.

GE-305 CONVERSATIONAL GERMAN

This course aims at improving the ability to speak and understand German, with the main emphasis on the pronunciation and intonation of German, and the expansion of active and passive vocabulary. Class sessions will revolve around conversations on a variety of topics based on personal interest, supplemented by material from the web, videos, films, short stories, and magazine articles, as well as vocabulary and grammar quizzes, dictations, and oral presentations. Each student will give a mid-term and final presentation on a German-related topic. Three credits.

GE-307 GERMAN FOR READING KNOWLEDGE

This course is designed for students required to prove a reading knowledge of German for graduate school. Focus on the

pronunciation and intonation of German will be limited to the reading environment, with the main emphasis on the acquisition of German grammar, syntax, and vocabulary. Three credits.

GE-308 GERMAN PHONETICS

This course is designed to help students develop their oral proficiency, achieve correct word intonation, and develop a sense for various sentence rhythms. Three credits.

GE-309 HISTORY OF THE GERMAN LANGUAGE

This course will present an overview of the history of the German language, from the Indoeuropean origins to Old High German, Middle High German, Early New High German, and High German. The focus will be on linguistic, geographical, and historical developments, conveyed through close readings of unedited texts representative for each period. An excellent foundation course for all the other period courses. Three credits.

GE-315 ADVANCED GERMAN GRAMMAR AND COMPOSITION

This course provides students with a solid foundation in German syntax. It is a writing-intensive course directed toward improvement of stylistic skills. Thorough review of tenses, complex grammatical structures and idiomatic expressions. Writing assignments progress in difficulty and will include journals, compositions, and critical essays. Three credits.

GE-321 GERMAN CULTURE AND LITERATURE OF THE MIDDLE AGES

This course gives an overview of the earliest literary documents of the late 8th century, texts of the Carolingian Renaissance, as well as the courtly poetry and epics of the early 13th century, against the backdrop of linguistic and historical developments. Three credits.

GE-322 GERMAN BAROQUE LITERATURE AND CIVILIZATION

This course will focus on literary developments of the German Baroque (Language Societies, Opitz, Gryphius, Grimmelshausen), its music (Froberger, Reincken), and art (the Dutch School), against the backdrop of conceptual and historical developments, such as the Thirty Years' War. Three credits.

GE-332 EARLY 20TH-CENTURY GERMAN LITERATURE

An introduction to German and Austrian literature and art from approximately 1900 - 1950. Texts under consideration will include unedited prose and poetry by authors George, Hofmannsthal, Heym, Benn, Brecht, Joseph Roth, in addition to memoirs, interviews, letters, and films. Focus on stylistical, contextual, and historical analyses. Three credits.

GE-333 GERMAN CULTURE AND CIVILIZATION/18TH CENTURY

This course will focus on the (re)discovery of classicism in German thought and literature, the standardization of the German language, "Sturm und Drang" in music and literature, against the backdrop of significant historical developments (Friedrich's Prussia, French Revolution). Three credits.

GE-340 CULTURE AND CIVILIZATION/ ROMANTIC PERIOD

This course will focus on literary developments during the Romantic period (Novalis, Eichendorff, Holderlin, Heine), the renewed focus on German philology and mythology (Grimm, Schlegel), and also gloss the music and art of the time, against the backdrop of historical developments. Three credits.



GE-342 GERMAN PROSE OF LATER 19TH CENTURY

An introduction to German and Swiss novels and novellas by, among others, Fontane, Storm, Keller, Mörike. Texts will be unedited; with focus on stylistical, comparative and historical analyses. Three credits.

GE-343 GERMAN SPECIAL TOPICS

The contents of this course will vary, as it will examine in greater detail one particular author (for example, Goethe), or one particular period (for example, Sturm und Drang), or one particular work (for example, Fontane's *Effi Briest*), or one particular topic (for example, the University system, or the spelling reform). Discussion of selected readings; written exams, oral presentations. Three credits.

GE-350 INDEPENDENT STUDY – GERMAN

May be repeated. Variable credit.

GE-550 GERMAN INTERNSHIP

Professional work experience in the community which complements and strengthens academic in-class learning. Academic credit is variable depending on the nature and duration of the experience. Students may or may not be compensated depending on the company/agency/educational setting. Students must receive departmental approval to participate. May be repeated. Variable credit.

IT-101 ELEMENTARY ITALIAN I

For beginners in the language. The two courses form a sequence, and are normally completed as a unit. No prerequisite for IT 101. Satisfactory completion of IT 101 is a prerequisite for IT 102. The entire two-semester course aims at acquisition of the usual basic language skills of listening, speaking, reading, and writing. Presentation of basic grammar and an introduction to the culture of Italian-speaking peoples. IT 101, 102 do not fulfill the graduation requirement. Each semester comprises four hours of classroom work under the instructor's supervision. IT 101 offered fall semester; IT 102 offered spring semester. Four credits each semester.

IT-102 ELEMENTARY ITALIAN II

For beginners in the language. The two courses form a sequence, and are normally completed as a unit. No prerequisite for IT 101. Satisfactory completion of IT 101 is a prerequisite for IT 102. The entire two-semester course aims at acquisition of the usual basic language skills of listening, speaking, reading, and writing. Presentation of basic grammar and an introduction to the culture of Italian-speaking peoples. IT 101, 102 do not fulfill the graduation requirement. Each semester comprises four hours classroom work under the instructor's supervision. IT 101 offered fall semester; IT 102 offered spring semester. Four credits each semester.

IT-203 INTERMEDIATE ITALIAN I

Systematic grammar review and vocabulary building, emphasizing the major components of grammatical forms and syntax, always within the context of the spoken and written forms of the language. Prerequisite for IT 203: appropriate score on the College's language placement examination, or six (6) to eight (8) credits of college elementary Italian. Offered fall semester. Three credits.

IT-204 INTERMEDIATE ITALIAN II

Understanding and use of all the tenses with emphasis on the subjunctive mood in both the spoken and written language. Readings, written and oral exercises, discussion. Prerequisite for 204: satisfactory completion of IT 203 or appropriate score on the College's language placement examination. Offered spring semester. Three credits.

IT-305 DEVELOPING ORAL PROFICIENCY IN ITALIAN

This course is designed to help students develop their oral proficiency. The activities will focus on a variety of discourse strategies, will encompass real-life linguistic situations and tasks, and will be developed through role play, presentation, debate, and collaborative language use in a variety of content areas. Three credits.

IT-315 STYLISTICS TECHNOLOGY COMPOSITION/ INTERPRETATION

This course is designed to improve the student's ability to write Italian correctly and with a certain elegance of style. Selections from modern authors will be analyzed for their effectiveness and manner of expression. Sensitivity to appropriate register of language will be stressed, as well as distinctions between the written and spoken language. Written assignments will include linguistic exercises, short translations, from English to Italian, summaries, compositions, comments, and interpretations of a variety of texts. Three credits.

IT-321 INTRODUCTION TO ITALIAN LITERATURE

An introduction to writing and reading in Italian that will prepare the student for a more systematic introduction to literary analysis in later courses. Basic inquisitive reading skills and clarity of written expression are stressed in this course. Students will study texts so that they will be able to reconstruct the process of literary creation as well as be introduced to some of the general vocabulary of poetics, genre, and literary criticism. Some of the authors to be studied are: Ungaretti, Ginzburg, Petracca, Eco, Primo Levi, Deledda, et al. Three credits.

IT-330 L'ITALIA AL CINEMA

Film is a legitimate means for discovering the language and culture of any country, and Italy is no exception. This course will look at some of the classic as well as contemporary films of Italy in order to improve oral/aural skills as well as expand the student's understanding of certain cultural or linguistic aspects of Italian through cinema. Three credits.

IT-343 INTRODUCTION TO CONTEMPORARY ITALY

This course will afford the opportunity to expand conversation, writing, and reading skills while consolidating knowledge of the more difficult points of grammar. The contextual focus of the course is contemporary Italian culture, including contemporary history and politics, the economy, the division between North and South, immigration from developing countries, environmental issues, and popular music, among others. Italian films, music, and articles from newspapers, newsmagazines, and short stories, will enhance and complete the learning experience. Three credits.

IT-350 INDEPENDENT STUDY – ITALIAN

May be repeated. Variable credit.

LT-101 ELEMENTARY LATIN

For beginners in the language. The two courses form a sequence and are normally completed as a unit. No prerequisite for LT 101. Satisfactory completion of LT 101 is a prerequisite for LT 102. The entire two-semester course aims at the acquisition of the basic language skills of a highly inflected language such as Latin. Emphasis will thus be placed on morphology, syntax, vocabulary culture, and the unique sentence structure that is so characteristic and inherent in Latin. LT 101, 102 do not fulfill the graduation requirement. Each semester comprises four hours of classroom work under the instructor's supervision. LT 101 offered fall semester; LT 102 offered spring semester. Four credits each semester.

LT-102 ELEMENTARY LATIN II

For beginners in the language. The two courses form a sequence and are normally completed as a unit. Satisfactory completion of LT 101 is a prerequisite for LT 102. The entire two-semester course aims at the acquisition of the basic language skills of a highly inflected language such as Latin. Emphasis will thus be placed on morphology, syntax, vocabulary culture, and the unique sentence structure that is so characteristic and inherent in Latin. LT 101, 102 do not fulfill the graduation requirement. Each semester comprises four hours of classroom work under the instructor's supervision. LT 101 offered fall semester; LT 102 offered spring semester. Four credits each semester.

LT-203 INTERMEDIATE LATIN I

Systematic review of basic morphology, syntax, and vocabulary is presented. The indicative and imperative moods are presented in their entirety. There are also presentations on cultural elements and vocabulary expansion. Reading passages reflect Græco- Roman culture and mythology as well as passages from Christian literature. Prerequisite for LT 203: appropriate score on the College's language placement examination. Three credits.

LT-204 INTERMEDIATE LATIN II

Building on material covered in LT 203, more complex grammatical structures will be covered with special emphasis on the use of participles, e.g., ablative absolutes, periphrastics, etc. Reading passages will reflect material covered and be taken from both classical and Christian literature, the latter through the medium of Gregorian chant. Prerequisite: satisfactory completion of LT 203. Exceptions may be made by the Modern Language Department and a qualifying exam may be required. Offered spring semester. Three credits.

LT-315 ADVANCED LATIN GRAMMAR

This course provides students with a comprehensive review of basic Latin syntax through a review of tenses and moods, idiomatic expressions, complex grammatical structures, and stylistic devices so that the student will be able to more easily read extant passages of classical Latin prose and poetry. Three credits.

LT-321 LATIN HYMNS OF THE ROMAN CHURCH

The Good News of the Incarnation began with a hymn when the angels sang Gloria in excelsis Deo. Hymns are at the center of Jewish and Christian worship. This course will look at some of the most famous biblical hymns of both testaments as well as those written by some of the greatest Latin poets of the Roman Church: Saint Ambrose, Prudentius, Pope Saint Gregory the Great, Venantius Fortunatus, et alii. These hymns will be studied at two levels: textual and musical. The basics of Gregorian chant will also be presented. Three credits.

LT-335 CICERO I

This course focuses on the four Catilinarian orations delivered in 63 B.C. before the Senate and the People of Rome during the turbulent final years of the Republic. Due consideration will be given to the historical, political, and social environment as well as the literary style of this great Roman orator. Three credits.

LT-337 CICERO II

Students will read the Pro Archia poeta oratio in which Cicero gives a brilliant defense of the role of literature and the humanities in society. His perspective will be compared to those of Cardinal Newman and Alexander Solzhenitsyn. Three credits.

LT-340 ROMAN POETRY I

A study of style and theory in late Republican poetry. Selections to be read are taken from the major Republican and Augustan poets Catullus and Ovid and will investigate the role of intertextuality in the reading of Roman poetry. Three credits.

LT-350 INDEPENDENT STUDY – LATIN

May be repeated. Variable credit.

LT-443 AENEID I

Books I-VI of the great Roman epic will be studied. Students will review dactylic hexameter and develop their metrical skills so as to be able to read aloud this masterpiece of Roman literature. Three credits.

SP-00X SPANISH EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. This course will be automatically added to the student's registration upon submission of the graduation application. Zero credits. Pass/Fail.

SP-105 REVIEW SPANISH

Prerequisite: Appropriate score on the College's language placement examination or permission of instructor. A one-semester course which emphasizes vocabulary, grammar, and cultural awareness. This course assumes little or no prior knowledge of Spanish. It is normally followed by the two-semester sequence of SP 203 and 204. SP 105 does not count for the fulfillment of the graduation requirement. Offered spring semester. Three credits.

SP-203 INTERMEDIATE SPANISH I

Systematic grammar review and vocabulary building, with stress on nouns, adjectives, pronouns, and on the common tenses of regular and irregular verbs. Introduction to reading techniques suitable to college-level study. Prerequisites: Six (6) to eight (8) credits of college Elementary Spanish, SP 105 or appropriate score on the College's language placement examination. Offered fall semester. Periodically offered as a first-year seminar. Three credits.

SP-204 INTERMEDIATE SPANISH II

Further understanding of Spanish syntax with emphasis on the subjunctive, complex grammatical structures, and idiomatic usages. Reading, compositions, and oral exercises. Both courses build an awareness and appreciation of the variety of Spanish cultures. Prerequisite: satisfactory completion of SP 203 or appropriate score on the College's language placement examination. Offered spring semester. Three credits.

SP-208 SPANISH FOR HEALTH CARE

This course continues to develop listening, speaking, reading, and writing skills in Spanish. Emphasis is on vocabulary building and

developing appropriate strategies to communicate in a variety of health care settings. Students will have the opportunity to engage in role-play scenarios that are common to the health care field. Offered spring semester. Does not fulfill minor or major requirements if SP315 has been completed. Prerequisite: SP203 or approval of department chair. Three credits.

SP-310 SPANISH FOR BUSINESS

Development of oral and written skills. This course presents the essentials of modern commercial Spanish through the medium of situations commonly found in the business world. Practical themes include currency exchange, travel, job interviews, telephone etiquette, and common types of written business correspondence. Emphasis on cross-cultural understanding and exploration of business practices in Hispanic countries and the United States. Prerequisite: SP 315 or approval of department chair. Three credits.

SP-315 ADVANCED SPANISH GRAMMAR AND COMPOSITION

This course provides students with a solid foundation in Spanish syntax. It is a writing-intensive course directed toward improvement of stylistic skills. Thorough review of tenses, complex grammatical structures, and idiomatic expressions. Writing assignments progress in difficulty and will include journals, compositions, and critical essays. Offered fall semester. Three credits.

SP-317 INTRODUCTION TO SPANISH LITERARY ANALYSIS

This class is an introduction to the literary analysis of the four major genres in Peninsular and Spanish American literature: narrative (prose), poetry, drama, and essay. Different texts will be discussed and analyzed in conjunction with their respective sociocultural contexts. Students will acquire the necessary terminology and tools for a formal literary analysis in Spanish. They will be able to recognize the major Peninsular and Spanish American writers and literary movements, discuss and analyze the different genres, and present their findings in written and oral form. Prerequisite: SP-315 or approval of department chair. Offered spring semester. Three credits.

SP-320 DEVELOPING ORAL PROFICIENCY AND PHONETICS IN SPANISH

Development of listening, speaking, and pronunciation skills through the study of phonetics. Familiarity with dialectal variations. Advanced practice in oral expression. Topics may include current events, films, and daily situations. Prerequisite: SP 315 or prior approval of department chair. Three credits.

SP-321 PANAROMA OF PENINSULAR LITERATURE

Survey of literary movements in Spain from the Middle Ages through the 19th century, with reading and discussion of selections from the major writers. Grammar review, oral presentations, and composition in Spanish. Prerequisite: SP 317 or approval of department chair. Three credits.

SP-322 PANORAMA OF SPANISH AMERICAN LITERATURE I

Survey of Spanish American literary movements starting in the Pre-Columbian era and continuing in the Colonial period through the 19th century, with reading and discussion of selections from the major writers. Grammar review, oral presentations, and compositions in Spanish. Prerequisites: SP 317 or approval of department chair. Three credits.

SP-326 PANORAMA OF PENINSULAR LITERATURE II

Survey of literary movements in Spain in the 20th century, with reading and discussion of selections from the major writers. Grammar review, oral presentations, and composition in Spanish. Prerequisite: SP317 or approval of department chair. Three credits.

SP-327 PANORAMA OF SPANISH AMERICAN LITERATURE II

Survey of Spanish American literary movements of the 20th century, with reading and discussion of selections from the major writers. Grammar review, oral presentations, and compositions in Spanish. Three credits.

SP-350 INDEPENDENT STUDY - SPANISH

May be repeated. Variable credit.

SP-410 SPANISH GOLDEN AGE DRAMA

This class focuses on the reading and analysis of the canonical texts of Golden Age Drama. We will examine the most representative texts of 17th-century Spanish Comedia along with their historical, cultural, religious, and philosophical contexts. Students will acquire a thorough understanding of this unique genre and its influence on the literature and tradition of many different countries. Prerequisite: SP 317 or approval of department chair. Three credits.

SP-415 COLONIAL SPANISH AMERICAN LITERATURE

This course explores some of the most important and provocative texts written in the Spanish American Colonial period. The first part of the course focuses on texts that offer different historical accounts of the "Conquista" of the so-called "New World." The second part presents texts from the perspective of native and mestizo writers, as well as texts from significant "criollo" authors. Students will acquire a more complete understanding and appreciation of this essential period in history, its cultural and religious repercussions, and its connection to the identity of Latin American people. Prerequisite: SP 317 or approval of department chair. Three credits.

SP-420 SPANISH GOLDEN AGE HYBRID MASTERPIECES

This class studies Spanish Renaissance and Baroque masterpieces, and focuses on issues related to hybrid genres in the different texts. Among the books students will read are the well-known "Tragicomedia," *La Celestina*, and the founder of the Spanish Picaresque Novel, *El Lazarillo de Tormes*. All the texts are studied in relation to their historical, cultural, religious, and philosophical contexts. Students will get an appreciation for the texts responsible for some of the most transcendent archetypes in Hispanic literature and culture. Prerequisite: SP 317 or approval of department chair. Three credits.

SP-425 SPANISH AMERICAN SHORT STORY

This class focuses on some of the short stories that were written by several well-respected writers in this genre in the 20th century. Students will develop an awareness of the various writers' significant contributions to the literature from Latin America through an overview of the canonical texts and figures in this genre. Prerequisites: SP 317 or approval of department chair. Three credits.

SP-426 PENINSULAR SHORT STORY

This class focuses on some of the short stories that were written by several well-respected writers in this genre in the 19th and 20th century. Students will discuss issues related to this genre in Peninsular Literature. Students will develop an awareness of the various writers' significant contributions to the literature from Spain through an overview of the canonical texts and figures in this genre. Prerequisite: SP 317 or approval of department chair. Three credits.

SP-427 SPANISH AMERICAN POETRY

This class focuses on some of the poems that were written by several well-respected authors in this genre in the 19th and 20th centuries. Students will discuss issues related to this genre in Spanish American Literature. Students will develop an awareness of the various writers' significant contributions to the literature from Latin America through an overview of the canonical texts and figures in this genre. Prerequisite: SP317 or approval of department chair. Three credits.

SP-428 PENINSULAR POETRY

This class focuses on some of the short stories that were written by several well-respected authors in this genre in the 19th and 20th centuries. Students will discuss issues related to this genre in Peninsular Literature. Students will develop an awareness of the various writers' significant contributions to the literature from Spain through an overview of the canonical texts and figures in this genre. Prerequisite: SP317 or approval of department chair. Three credits.

SP-430 CERVANTES' NOVELAS EJEMPLARES

In this course, we will study a very significant part of Cervantes prose, his *Novelas Ejemplares*. Cervantes is well-known for his masterpiece *Don Quixote*, but his importance in the development of this genre is considerable since he is the first one to write such innovative literature in Spanish. Students will analyze the different texts and its diverse characters, along with their historical, cultural, religious, and philosophical contexts. They will learn to appreciate this genre and its importance in the development of the short story. Prerequisite: SP 317 or approval of department chair. Three credits.

SP-435 SPANISH AMERICAN DRAMA

This class focuses on the reading and analysis of important dramatic plays written by several well-respected authors in this genre in the 19th and 20th centuries. Students will discuss issues related to this genre in Spanish American Literature. Students will develop an awareness of the various writers' significant contributions to the literature from Latin America through an overview of the canonical texts and figures in this genre. Prerequisite: SP317 or approval of department chair. Three credits.

SP-444 PENINSULAR CULTURE AND CIVILIZATION

This course is a survey of the major historic events that shaped Spain. It includes discussions of different historic periods and cultural influences and movements. Prerequisite: SP 315 or approval of department chair. Three credits.

SP-445 SPANISH AMERICAN CULTURE AND CIVILIZATION

This course is a survey of the major historic events that shaped Spanish America. It includes discussions of different historic periods and cultural influences and movements. Prerequisite: SP-315 or approval of department chair. Three credits.

SP-450 STUDY SPANISH IN MEXICO I

A foreign language and cultural experience open to beginners or students at any level. There are no prerequisites. Students choose a designed or flexible program of small-group study, at each one's level of proficiency and live with local families in Cuernavaca, Mexico. Saint Vincent offers equivalency credits for study at the UNIVAC Language Center. Programs are available at all times of the year. Course content varies according to choice. Variable credit.

SP-451 STUDY SPANISH IN MEXICO II

A foreign language and cultural experience open to beginners or students at any level. There are no prerequisites. Students choose a designed or flexible program of small-group study, at each one's level of proficiency and live with local families in Cuernavaca, Mexico. Saint Vincent offers equivalency credits for study at the UNIVAC Language Center. Programs are available at all times of the year. Course content varies according to choice. Variable credit.

SP-550 SPANISH INTERNSHIP

Professional work experience in the community which complements and strengthens academic in-class learning. Academic credit is variable depending on the nature and duration of the experience. Students may or may not be compensated depending on the company/agency/educational setting. Students must receive departmental approval to participate. May be repeated. Variable credit.

NATURAL SCIENCES

NATURAL SCIENCE CORE:

One 100-level NSCI course with lab and one 200-level NSCI course with lab or two 100-level natural science (BL, CH, PH, or ES) courses with labs (primarily for students in natural science majors and minors)

or

One 100-level Natural Science with lab and one NSCI course with lab (primarily for students who may have started out in a natural science major and then changed to another discipline).

Distinguishing 100- and 200-level NSCI courses:

100 – These would be the introductory courses that focus on Parts A and B in the core goal:

- a) Describe the nature of scientific knowledge, use the scientific method, and comprehend, present, and critique scientific work.
- b) Explain the most fundamental observations and models developed in the process of scientific inquiry.

200 – These courses would be the application courses that focus on Parts A and C of the core goal:

- a) Describe the nature of scientific knowledge, use the scientific method, and comprehend, present, and critique scientific work.
- c) Evaluate the impact science has had on the human condition.

NATURAL SCIENCES COURSE DESCRIPTIONS

NSCI-100 ASTRONOMY

This course provides an introduction to the study of astronomy focusing on the development of our understanding of the universe. Subjects of emphasis include the development of classical mechanics as an explanation of the motion of the planets; the structure, formation, and evolution of the sun and other stars; and our modern understanding of cosmology. This course provides a more advanced application of the scientific process. Formerly PH 151. Prerequisite: MA 104. Three credits.

NSCI-101 ASTRONOMY LABORATORY

This course consists of hands-on laboratory exercises chosen to illustrate topics in modern astronomy. Topics of the exercises may include stellar photometry, observation and measurement of star clusters and galaxies, and observation of the moon and planets. Offered in conjunction with NSCI 100 Astronomy. Formerly PH 153. One credit.

NSCI-103 THE BIOLOGY IN ART

This course will provide the students with a scientific understanding of the properties of the materials used in the creative arts and the relationship to the biological processes involved in the synthesis of these materials. The course will focus on properties of the fibers used in the arts and allow the students to understand how this relates to their proper use of the materials. In the laboratory portion of the course, the students will be instructed in the scientific method and use this to investigate the properties of the fibers and compare the uses of the fibers with differing biological origin. Students are expected to have a better appreciation of the features of the fibers and how this affects their use in the creative arts. Four credits.

NSCI-105 ANIMAL BEHAVIOR

This course will introduce students to the study of animal behavior. The course will provide an overview of the mechanisms that animals use to sense and interact with the environment and with each other. There will be extensive examination of the various behaviors that animals have evolved as means for survival in a

challenging world. The course will discuss how these behaviors give insight into human behavior and psychology. Additionally, there will be a component of the course that involves the discussion of the sociobiology debate and the ethical issues that accompany the study of animal behavior. Formerly BL 117. Four credits.

NSCI-107 THE BIOLOGY OF BIRDS

This course provides an introduction to ornithology, the study of birds. Lecture topics include the evolutionary history of birds from dinosaur ancestors; avian anatomy and physiology; the physics of bird flight; patterns of migration; reproductive cycles and behavior; and how birds set up territories, find food, and avoid predators. Each class will obviously be filled with avian examples, but the general concepts learned may be applied to other animals, as well. Lab sessions include dissection of preserved specimens, capture and release of live birds, bird feeder observations, bird song experiments, and bird identification skills. Student learning will be assessed through tests, reading assignments, lab reports, and a class presentation. Offered even-numbered years, spring semester. Four credits.

NSCI-110 BACTERIA, FRIENDS OR FOES?

This course will include discussions, lectures, and laboratories to study the tiny creatures that surround us known as microorganisms, particularly bacteria and viruses. The course will study the two-sided relationship between microorganisms and man. Most people think of bacteria and viruses as harmful because they cause disease. On the other hand, these tiny entities have many positive roles in our society including advancing biotechnology, food and beverage production, and roles in the environment including degrading of materials and cycling of nutrients. These and other topics will be discussed. No prerequisite. Formerly BL 116. Four credits.

NSCI-120 INTRODUCTION TO BIOLOGY

This course provides insight into the organization of living systems at the molecular, cellular, organismal, and population levels. Emphasized are the structural and functional characteristics common to most organisms, organismal diversity, biological evolution, and interactions between organisms and their environment. The laboratory is designed to introduce the process of science and the characteristics of scientific knowledge. Students learn to formulate questions and hypotheses, design simple experiments, interpret results, draw conclusions, and present their work in scientific formats. No prerequisite. Formerly BL 100. Four credits.

NSCI-125 INTRODUCTION TO ENVIRONMENTAL SCIENCE

This course is designed to introduce non-science majors to the physical processes and interrelationships between air, water, soil, and biota. Issues such as overpopulation, pollution, and risk assessment will be covered. Offered fall semester. Formerly ES 115. Periodically offered as a first-year seminar. Three credits.

NSCI-126 INTRODUCTION TO ENVIRONMENTAL SCIENCE LABORATORY

Laboratory exercises are designed to physically illustrate the principles discussed in NSCI 125. Must be taken simultaneously with, or after successful completion of NSCI 125. Offered fall semester. Formerly ES 117. One credit.

NSCI-130 INTRODUCTION TO PHYSICS

This course introduces students to the methods and techniques used to scientifically describe the world around us. Special emphasis is placed on the field of mechanics – the study of motion.

Students become comfortable solving general problems such as projectile motion, energy, and momentum. These problems are solved using only algebra – neither trigonometry nor calculus is a prerequisite. Other topics may include modern physics, optics, electricity and magnetism, and fluid motion. Formerly PH 103. Three credits.

NSCI-131 INTRODUCTION TO PHYSICS LABORATORY

This course consists of hands-on laboratory exercises chosen to illustrate concepts of classical and modern physics. Topics may include falling objects, the motion of a pendulum, collisions, projectile motion, the physics of flight, and simple optics. Offered in conjunction with NSCI 130 Introduction to Physics. Formerly PH 104. One credit.

NSCI-135 PHYSICAL GEOLOGY

An introduction to the study of the Earth focusing on the physical processes that determine the internal structure of the Earth and the formation and evolution of the Earth's landscapes. Subjects of emphasis include the various types of rocks and minerals, weathering and the hydrological cycle, plate tectonics, and the earth's place in the solar system. Formerly ES 106. Offered fall semester. Three credits.

NSCI-136 PHYSICAL GEOLOGY LABORATORY

This course consists of hands-on laboratory exercises chosen to illustrate and reinforce the topics presented in NSCI 135 Physical Geology. Topics of the exercises may include crystal growth, rock and mineral identifications both in the laboratory and in the field, mapping and remote sensing techniques, planetary geology, and plate tectonics. Some laboratory exercises may include field trips to off-campus locations. Offered in conjunction with NSCI 135 Physical Geology. Formerly ES 107. One credit.

NSCI-140 SCIENCE AND GLOBAL SUSTAINABILITY

This course will examine key scientific concepts related to three major aspects of the broader issue of global sustainability - global climate change, feeding the world's population, and threats to world health. Each of these aspects will serve as the focal point for several weeks of the course. Basic concepts of biology, chemistry, and physics will be introduced as appropriate within the context of each aspect. No prerequisites. Formerly CH 121. Offered fall semester. Three credits.

NSCI-141 SCIENCE AND GLOBAL SUSTAINABILITY LABORATORY

The laboratory exercises are designed to physically illustrate the principles discussed in NSCI 140 and to provide students with experience in the process of doing science - asking questions, forming hypotheses, and data analysis. Must be taken simultaneously with, or after successful completion of NSCI 140. Formerly CH 123. Offered fall semester. One credit.

NSCI-200 ALL ABOUT DRUGS

Almost all of us use drugs, whether over-the-counter drugs, prescription drugs, or recreational drugs. Drugs impact our lives, as well as the lives of our family and friends. In this course, the pharmacology of drugs, including their mechanisms of action, side effects, and therapeutic uses will be discussed. The abuse potential of recreational drugs, tolerance and addiction, and the ethical issues surrounding modern drug discovery also will be discussed. The laboratory component is designed to reinforce lecture concepts. Formerly BL 113. Four credits.

NSCI-201 CHEMISTRY OF ART

The students in Chemistry of Art will learn about the chemistry underlying two- and three-dimensional artworks. Topics in this course include the various ways that color is achieved through chemistry; the many types of chemical processes that are used to make visual artwork; and the ways that chemical analysis can be used to authenticate art. The chemical concepts addressed in this course include atomic and molecular structure, bonding of chemicals and materials, and reactions in liquids, solids, and mixtures. This course has an integrated laboratory that explores these concepts through hands-on activities. This course does not require math skills beyond pre-algebra. Offered fall semester of odd years. Four credits.

NSCI-205 CHEMISTRY OF COOKING

Chemistry of Cooking focuses on the chemistry involved in the structure, preparation, color, flavor, aroma, and texture of the foods we eat every day. NSCI 205 is designed for the non-science major who is looking to fulfill the science core requirements. The emphasis in this course will be understanding chemical concepts such as physical and chemical changes, chemical bonding, solubility, energy, acids and bases, and an introduction to the structure and function of organic molecules. Students will also be introduced to laboratory methods dealing with measurement, the chemical analysis of foods, classification of physical and chemical changes, and the synthesis and reactions of organic molecules specific to food chemistry. This course does not require math skills beyond pre-algebra. Formerly CH 110 and 112. Offered spring semester odd-numbered years. Four credits.

NSCI-207 ENERGY AND CLIMATE CHANGE

Global climate change is an interdisciplinary field of science that can and should be understood by the non-scientist. In this integrated lecture/laboratory course, students will explore how energy drives the Earth's climate and how humankind's use of energy contributes to climate change. Students will explore the data and models that have contributed to scientists' current understanding of global climate change. Students will also explore the range of alternative energy sources that reduce emissions that contribute to climate change. No prerequisites. Offered fall semesters of odd-numbered years. Four credits.

NSCI-210 CHEMISTRY AND CRIME

This is a non-major science course which will focus on the chemistry concepts of forensic science. These concepts will help explain how various forms of evidence can be left at the scene of a crime, how the evidence is found, and how the laboratory can determine the relevancy of that evidence. We will be studying basic chemical principles such as chemical bonding, solubility, and the structure and function of organic molecules. This course does not require math skills beyond pre-algebra. Formerly CH 118. Offered spring semester. Three credits.

NSCI-211 CHEMISTRY AND CRIME LABORATORY

This lab provides the student basic methods dealing with evidence collection and analysis. We will look at the chemical analysis of fingerprints, paints, fluids, and many other types of evidence which can be collected and analyzed. Must be taken simultaneously with, or after successful completion of NSCI 210. Formerly CH 119. Offered spring semester. One credit.

NSCI-215 CHEMISTRY OF DAILY LIFE

This course is designed for the non-science major and is an introductory study of the structure and function of organic molecules, including examples from biochemistry and everyday

life. Topics include: basic hydrocarbons, functional group chemistry, proteins, carbohydrates, and lipids. Selected topics in biochemistry and how drugs work are presented as well as chemical aspects of current issues such as nutrition and diabetes. This course does not require math skills beyond pre-algebra. Formerly CH 107. Offered spring semester. Three credits.

NSCI-216 CHEMISTRY OF DAILY LIFE LABORATORY

This lab provides non-science majors with an introduction to some elementary methods dealing with the synthesis and reactions of organic molecules, pharmaceutical synthesis, chemical analysis of foods, and characterization of biochemical compounds. Must be taken simultaneously with, or after successful completion of NSCI 215. Formerly CH 108. Offered spring semester. One credit.

NSCI-220 ENDANGERED SPECIES CONSERVATION

The rate of global species extinctions today is comparable to that experienced in the Cretaceous when the dinosaurs fell from prominence. This course will examine the modern causes of extinction as well as the techniques in biology used to monitor and sometimes reverse declining populations of endangered animals and plants. Conservation biology is interdisciplinary and uses existing scientific theory to manage animal and plant populations. Thus, the course will feature discussions of ethics and public policy as well as more traditional biological topics such as genetics and ecological interactions. A significant portion of the course grade will be based on a comprehensive term paper and oral presentation. Laboratory sessions will include numerous computer simulations and occasional outdoor activities. Formerly BL 119. Four credits.

NSCI-225 FIELD BIOLOGY

This combined lecture/laboratory course is designed to introduce non-science majors to the study of living organisms through direct observations in streams, pastures, lakes, and forests. We will follow examples of ancient and modern field biologists as we develop background knowledge and skills in natural history, field collection methods, and modern analysis of field data. Be prepared to work outside during each class, wearing old shoes, hip boots, or a life vest. For non-science majors. No prerequisite. Formerly BL 104. Four credits.

NSCI-230 GENES, CELLS, AND COMPUTERS

This course provides an introduction to the intersection of biology and computers that is reshaping the arenas of biology, biotechnology, and medicine. Topics covered include cellular structure and function, gene structure and function, genetics, molecular evolution, and quantitative and computational approaches to biology. In addition ethical and social issues presented by new technologies such as genetic engineering and personalized genomic sequencing will be discussed. No prior college-level biology or computing experience is assumed. Formerly BIN 110. Offered spring semester. Three credits.

NSCI-231 GENES, CELLS, AND COMPUTERS LABORATORY

This course is the companion laboratory course to NSCI 230. The labs will consist of both "wet lab" experiments and computational labs. In the wet labs, students will carry out basic molecular biology techniques such as purifying their own DNA, PCR analysis, and molecular cloning, while in the computational labs they will use software to analyze DNA sequences. No prior college-level biology or computing experience is assumed. Must be taken concurrently with NSCI 230. Formerly BIN 111. Offered spring semester. One credit.

NSCI-235 HUMAN BIOLOGY AND LABORATORY

The human body is remarkable in many ways. We will explore its inner workings by addressing how we are constructed, what we eat, how we burn calories, how exercise modifies our muscles and bones, and how we repair injuries and fight off diseases.

Other topics include the cardiovascular, nervous, endocrine, and reproductive systems. In lab, students will study respiration, heart function, bacterial infection, and digestion. Along with individual homework assignments student groups will design and conduct their own experiment and present the results to their peers.

Formerly BL 114. Four credits.

NSCI-240 IT'S NOT ROCKET SCIENCE

This course introduces the physical principles involved in the design and flight of rocket-propelled vehicles with hands-on experience building and flying model rockets. The course covers Newton's description of motion, aerodynamics, the operating principles of rocket motors, the history of space flight, and the legal issues surrounding hobby rocketry. Must be taken in conjunction with NSCI 135. Formerly PH 171. Three credits.

NSCI-241 IT'S NOT ROCKET SCIENCE LABORATORY

Laboratory course to accompany NSCI 240. Students develop a working knowledge of the measurement techniques and design strategies necessary to test, launch, and recover model rockets. Students work in groups to design, build, and test a model rocket to meet a challenge goal similar to the Team America Rocketry Challenge. Formerly PH 173. One credit.

NSCI-242 SCIENCE OF HUMAN STRENGTH

This multidisciplinary science course introduces the practical acquisition and application of human strength. Students will demonstrate basic understanding of the musculoskeletal system, basic physiology, and fuel metabolism and an understanding of the physics of human movement. Students will learn about the theory and benefits of strength accumulation and will demonstrate competency in the methods for acquiring force production. This course is intended for the novice lifter with little to no strength training experience; current athletes should refrain from scheduling due to training conflicts. Four credits.

NSCI-245 KILLER GERMS

This course will include discussions, lectures, and laboratories to study past, present, and potential future diseases caused by microorganisms. The course will focus on the bacterial microorganisms and viruses, how they cause disease, treatments, and their impact on society. Topics will include tuberculosis, HIV/AIDS, antibiotic-resistance, and other significant topics. Formerly BL 118. Four credits.

NSCI-247 LIFE AND THE UNIVERSE

Are we alone in the universe, or is the universe teeming with life? This course will explore the unknown but possible answers to that question from a variety of perspectives. The physical, astronomical, chemical, and geological conditions necessary for life on a planet will be investigated. We will examine historical and modern searches for life outside of Earth, including the search for extraterrestrial intelligence. We will also consider some of the social, philosophical, and religious implications of the possibility of life elsewhere. Classes will utilize the Taiani Planetarium to enhance our exploration of this subject. Formerly PH 131. Three credits.

NSCI-248 LIFE AND THE UNIVERSE LABORATORY

The origins of life on this planet and the possibility of life elsewhere will be explored with a variety of experiments and observations.

Labs will include topics in astronomy, biology, physics, and geology, that are related to the search for extraterrestrial life. Some of the labs will utilize the Taiani Planetarium and the Physics Department telescopes. This laboratory course accompanies NSCI 247. Formerly PH 133. One credit.

NSCI-250 SCIENCE OF ABANDONED MINE DRAINAGE

In this integrated lecture-laboratory course, we will explore the science of coal mining and its aftermath: mine drainage. The course will use field trips (museums, mines, streams, treatment sites), video, class discussions, computer models, internet explorations, and recent publications to understand coal mine drainage. We will see firsthand how new technologies have been developed to treat mine drainage. Lab explorations will include computer modeling, stream sampling, experiments on formation of mine drainage, its impacts on streams, and the efficiency of treatment methods. A final group project will examine a mine drainage site and develop a plan for remediation. Through the study of abandoned mine drainage we will examine the interrelationships in nature and see that by working together we can make a difference in our environment. Formerly ES 111. Offered fall semester. Four credits.

NSCI-252 SCIENCE OF SUSTAINABLE LIVING

In Science of Sustainable Living, students will examine individual, community, and global solutions to living more lightly on the planet by exploring a variety of sustainable living practices, theories, technologies, and programs. Within the framework of environmental science, students will be able to understand ecological processes that are the basis for common sustainable practices, such as composting, green energy, recycling, and gardening. Students will be able to evaluate the impact of their own consumption of natural resources in relationship to ecological processes and human need for material goods and services. No prerequisites. Offered spring semester. Three credits.

NSCI-253 SCIENCE OF SUSTAINABLE LIVING LABORATORY

This laboratory course will explore scientific questions related to sustainable living. Students will examine topics such as recycling, composting, green energy, and organic gardening. Some labs will require outside work and/or field trips to local sites. Must be taken simultaneously with NSCI 253. Offered spring semester. One credit.

NSCI-255 SCIENCE OF COMPUTING

This course establishes computing as a science and affirms the connection between computing and the sciences. Topics include the scientific method, methodologies used in computer science for evaluating hypotheses, as well as how computing is used as a tool in other fields of science. The course includes a laboratory component in which students will get hands-on experience investigating computer science problems. Programs will be set up for students to run so they can test different hypotheses. It will be possible to configure the programs with different parameters to see the impact of running over more data sets, running different algorithms, running in different environments, etc. The experiments involve generating and collecting data that can be analyzed to determine whether preliminary hypotheses are true or false. The data, analysis, and conclusions will be written up as lab reports. Formerly CS 104. Four credits.

NSCI-260 BIOTECH: HOW DO THEY DO IT?

This integrated lecture-laboratory course is focused on the ways in which our understanding of biological systems is applied for practical purposes. The lecture portion addresses the basic biology and theory behind topics such as genetic engineering of microbes, plants, and animals for agricultural, industrial, and medical

purposes; cloning of genes, plants, and animals; as well as, DNA analysis in forensic science and medicine. Special consideration is given to the ethical issues raised by the application of these technologies. The laboratory component is designed to reinforce the scientific method while providing hands-on experience with DNA technologies and forensics analyses. No prerequisite. Formerly BL 112. Four credits.

NSCI-265 SCIENCE FOR INTERNATIONAL DEVELOPMENT

This course focuses on how scientific technologies are employed in humanitarian and environmental service to address both acute (disaster-related) and chronic problems, particularly in areas affected by poverty and lacking key infrastructure. A series of case studies is used to examine appropriate and unsuitable approaches to address these types of problems. Laboratory sessions offer opportunities to design, implement, and assess potential solutions. Topics include acceptance of technology, sanitation, shelter, agricultural development, and water access and treatment. Four credits.

NSCI-270 GEOLOGY/ASTROPHYSICS: ICELAND

This course will introduce a variety of scientific topics in geology, environmental science, and astrophysics and apply those topics to Iceland. Iceland's unique position on the globe allows a number of important geologic, environmental, and astrophysical processes to be observed. Forces that shape and sustain the earth are visibly at work on this island in the North Atlantic. Students in the course will learn fundamentals of plate tectonics, landform formation and evolution, the magnetic properties of the earth, and climate modeling to appreciate and understand what they will also see firsthand. Laboratory experiments will be conducted prior to, during, and after a trip to Iceland over spring break. This course fulfills one of the two core curriculum courses required for the natural sciences. Students in the course must be registered for the spring break trip to Iceland. This course is hybrid/online with flexible evening meeting times for weekly laboratories. Four credits.

NSCI-300 CRIMINALISTICS

Criminalistics is the collection and examination of evidence of crime and is an application of many scientific disciplines. This course provides an introduction to the methodologies and applications used in the forensic context. Topics discussed include organic and inorganic chemical analyses of physical evidence, principles of serology and DNA analysis, identification of fresh and decomposed human remains, ballistics, fingerprint analysis, facial reconstruction, drug analysis, and forensic entomology. Three credits.

NURSING

Janice Nash, *Director BSN Program*

Carla Tomas, *Coordinator Saint Vincent Carlow BSN Program*

OVERVIEW OF UNDERGRADUATE NURSING PROGRAM

Across the undergraduate programs, students will be involved in the process of becoming more fully aware of self as a person and learner who is free to think clearly and creatively, actively pursue intellectual endeavors, respond ethically in a spirit of cultural competence and social justice, serves as the basis for graduate study, and provides a foundation for lifelong learning.

BSN PROGRAM

Upon graduation, a BSN student is eligible to take the State Board Examination in Nursing (NCLEX-RN) and is prepared to practice as a generalist who is able to utilize the nursing process in a variety of health care settings. Clinical nursing experience is an integral part of the program and is provided at Excelsa Health and Children's Hospital in Pittsburgh. Students must provide their own transportation.

PURPOSE

The purpose of the Carlow BSN program on the Saint Vincent College campus is to facilitate students' ability to recognize the integrity and value of each person and to achieve the knowledge, skills, and attitudes necessary to promote patient-centered care through professional nursing practice. The program prepares the baccalaureate student to practice as a generalist who is able to utilize evidence-based practice, informatics, and collaborative communication for the delivery of safe, quality care.

ACCREDITATION

The Carlow undergraduate Nursing program leads to a BSN and is accredited by the Commission on Collegiate Nursing Education, and the Bachelor of Science in Nursing is approved by the Pennsylvania State Board of Nursing.

ADMISSION

Prospective nursing candidates must possess a minimum 3.00 cumulative high school GPA, scored 1060 or higher on the SAT (taken after March 2016) or 21 or higher on the ACT, and have completed strong science and math courses (preferably with a grade of B or better in each). The Pennsylvania State Board of Nursing requires that applicants accepted into professional nursing programs must have completed, as a minimum, four units of English, three units of social sciences, two units of mathematics (one must be algebra), and two units of lab science, including chemistry.

ADMISSIONS DEADLINES

Due to space limitations in some programs, such as nursing, students are strongly encouraged to complete the application process as soon as possible during their senior year to ensure maximum consideration for admission and scholarships/financial aid.

INTERNSHIPS AND FIELD PLACEMENT

Off-campus fieldwork is a regular part of the curriculum. Students in nursing are required to do discipline-specific professional work experiences as an integral part of their program. Other departments and interdisciplinary programs also offer internship experience.

SPECIFIC PROGRAM REQUIREMENTS:

Students in the nursing program must attain a 3.0 GPA to enter the sophomore year and maintain a 3.0 each semester thereafter.

CLINICAL CREDIT HOUR REQUIREMENTS

1 credit per 60 hours of clinical contact.

NURSING POLICIES

Nursing policies are explained fully in the Carlow Nursing Undergraduate Student Handbook. Refer to it for specific, complete information. The Nursing program reserves the right to make policy changes in the curriculum outline to address ongoing accreditation standards and/or professional regulations.

The following are some selected summaries:

- BSN students must earn a minimum grade of C (2.0) in each of the prerequisite and corequisite support courses for the major and all major courses within the timeframe designated in the curriculum guide. A “pass” must be achieved in each clinical component. A cumulative test average grade of 79.00% is required to successfully complete all nursing courses.
- BSN students must attain a cumulative minimum GPA of 3.0 prior to enrolling in the first clinical nursing course.
- Students must maintain a cumulative GPA of 3.0 each semester.
- A student who falls below a 3.0 GPA will be placed on probation in the next semester. Students may progress within the same level (i.e., sophomore). If the student returns to a cumulative GPA of 3.0 by the end of the probationary semester, the student progresses. If the student fails to achieve a cumulative GPA of 3.0 during the probationary semester, the student’s nursing progression is halted until the cumulative GPA returns to a minimum of 3.0. The sophomore, junior, or senior student whose GPA is below 3.0 is provided three (3) probationary semesters, excluding summers, to return to a 3.0 cumulative GPA. Failure to return to a cumulative 3.0 GPA by the end of the third probationary semester will result in dismissal from the program. A student may only be on probation two times throughout the entire program.

Please see the Nursing Program Handbook for further details regarding academic probation and progression.

- A person convicted of any felony may be prohibited from licensure by the state at any time.
- If the program of studies is interrupted, re-entry at a later time is dependent upon the curriculum, availability of class space, and completion of required re-entry procedures.
- Statute of Limitations: Students must successfully complete all requirements for the baccalaureate degree in nursing (BSN) within a period of eight academic years excluding an approved leave of absence, from the time of initial matriculation at Carlow University; and six academic years in the BSN, excluding an approved leave of absence, from the time of taking the first nursing (NUR) course.
- In compliance with the State Board of Nursing regulations and policies of clinical agencies, students are required to pass a physical exam yearly. They must maintain professional liability insurance, immunizations, CPR certification, background checks, fingerprints, and other requirements as described in the Nursing program Undergraduate Student handbook. The Nursing program reserves the right to make changes in policies and/or the curriculum outline.

PROGRAM STUDENT LEARNER OUTCOMES

Throughout the undergraduate program, the student will be involved in the process of becoming more fully aware of self as a person and learner who is free to think clearly and creatively, actively pursue intellectual endeavors, respond ethically in a spirit of cultural competence and social justice, and ready to participate in opportunities for long-term learning.

The BSN graduate is expected to:

1. Integrate theories and concepts of human experience from the humanities and social/natural sciences into professional practice.
2. Transition into the professional nursing role: demonstrating critical reasoning, providing respectful, compassionate care, valuing lifelong learning, and practicing within professional, legal, and ethical frameworks.
3. Demonstrate leadership and interprofessional collaborative communication to achieve patient safety, quality improvement, and patient advocacy in health care delivery systems.
4. Integrate evidence; clinical experience; interprofessional perspectives; and patient-centered (or individual, family, and community) preferences into the plan of care.
5. Implement information technology knowledge, skills, and attitude in the delivery of patient-centered care in diverse settings.
6. Apply basic knowledge of the impact of political, financial, and regulatory systems on the rapidly changing health care environment.
7. Demonstrate effective written and verbal communication skills for respectful interprofessional collaboration.
8. Collaborate with individuals, the interprofessional team, and the community to promote positive health outcomes and decrease health disparities.
9. Incorporate professional nursing standards and accountability into safe and competent individual and system-level practice.

**The program outcomes are based upon: The Sisters of Mercy Core Values (Carlow University Mission Statement, 2009), AACN BSN Essentials (2008) and the QSEN Pre-licensure Competencies (2012).*

BSN PROGRAM REQUIREMENTS:

The Saint Vincent – Carlow BSN nursing major requires 124 credits for graduation. These credits are in courses in the nursing major, general education, support, and the liberal arts, including Saint Vincent courses approved as satisfying Carlow University core requirements. Students enroll in the first clinical nursing course the first semester of the sophomore year in the program following successful completion of required support courses for the major.

PREREQUISITES AND COREQUISITES TO NURSING:

NATURAL SCIENCES:

BL 150 and BL 151 General Biology I and Laboratory (4); CH 101 and CH 103 General Chemistry I and Laboratory (4); INTS 222, INTS 223 Human Anatomy and Physiology I and Laboratory (4); INTS 224, INTS 225 Human Anatomy and Physiology II and Laboratory (4); BL 295, 296 Fundamentals of Microbiology and Laboratory (4); BL 297 Pathophysiology I (2); BL 298 Pathophysiology II(2); MA 107 Quantitative Reasoning (3)

SOCIAL AND BEHAVIORAL SCIENCES:

PY 218 Life Span Development (3); CA 120 Public Presentation (3); SO 101 Introduction to Sociology (3); MA 121 Basic Applied Statistics (3); PL 101 First Philosophy (3). Other requirements and courses to satisfy core requirements:

First Year Seminar (1); EL 102 Language and Rhetoric (3)
 EL (additional approved English course) (3); Breadth Experience I
 (AR 100, AR 155, AR 212, AR 125, MU 101, or EL 154) (3)
 Breadth Experience II (AR 100, AR 155, AR 125, MU 101, or EL
 154) (3); TH 119 First Theology (3)

Major Requirements:

- NUR 102 Professional Issues in Nursing (1)
- NUR 106 Nutrition (3)
- NUR 110 Wellness (3)
- NUR 2161/2162 Health Assessment & Fundamentals (3+1)
- NUR 2171/2172 Health Prom (3+1)
- NUR 223 Pharmacology I (1)
- NUR 224 Pharmacology II (3)
- NUR 320 Nursing Research (3)
- NUR 3121/3122 Neuropsychiatric & Mental Health Nursing (3+1)
- NUR 3161/3162 Nursing Care of Adults I (3+1)
- NUR 3171/3172 Nursing Care of Mothers, Newborns, Family (3+1)
- NUR 3181/3182 Nursing Care of Adults I (3+1)
- NUR 3191/3192 Nursing Care of Adults II (3+1)
- NUR 4211/4212 (Complex Problems I)
- NUR 4181SL/4182 Community Health Nursing (3+1)
- NUR 4111/4112 Leadership in Professional Nursing (2+2)
- NUR 420 Legal, Ethical, Political Issues (2)
- NUR 422 Complex Problems II (2)
- NUR 451 Introduction to Epidemiology (3)
- NUR 4151 and 4152 NCLEX Seminar I and II (3)
- and
- NUR 463 Evidence Based Capstone (1)

BSN courses begin in the first or second semester of the first year and are arranged in a sequential manner, with learning experiences increasing in complexity. Courses beginning with the number 1 are first-year courses, courses beginning with 2 are sophomore-level courses, and so on.

Typical First-Year Schedule

Fall

First-Year Seminar	1
EL 102 Language and Rhetoric	3
BL 150	
and	
BL 151 Gen Bio I and Lab	4
PY 218 Life Span Development	3
CA 120 Public Presentation	3
NUR 102 Professional Issues	1
Total	15

Spring

NUR 110 Wellness	3
NUR 106 Nutrition	3
CH 101	
and	
CH 103 Gen Chem I and Lab	4
MA 107 Quantitative Reasoning	3
TH 119 First Theology	3
Total	16

COURSE DESCRIPTIONS

BSN PROGRAM

NUR 102 PROFESSIONAL ISSUES IN NURSING

This course will focus on the very rudiments of the nursing profession. The student will be introduced to the history, philosophy, processes, and the multiple roles involved in nursing practice. The student will be asked to provide assignments that are introspective and start the foundation on which to assess personal values and understand professional responsibilities in nursing. Discussions will involve current issues related to health care: socioeconomics, environments, politics, and known risk behaviors/modifications (QSEN) in theory before clinical experience. 1 credit (1 theory, 0 clinical) PREREQUISITE: NURSING MAJORS ONLY

NUR 106 NUTRITION

Nutrition and the nursing role in health promotion and disease prevention for individuals, families, and groups throughout the life span are emphasized. Food needs for energy (protein, fat, carbohydrate, vitamins, and minerals) will be considered in relation to maintaining nutritional status in wellness and disease states. Nutritional assessments and patient care interventions related to nutrition will be emphasized. Three credits (3 theory, 0 clinical) PREREQUISITE: NURSING MAJORS ONLY

NUR 110 WELLNESS ACROSS THE ADULT LIFESPAN

This required freshman-level theory course concentrates on the promotion of health and prevention of disease with individuals, families, groups, and communities across the adult lifespan. The primary focus of this course is the adult population in community settings. The emphasis is on nursing care that addresses the impact of personal, environmental, behavioral, financial, and cultural influences on health outcomes. Current issues, trends, and research relevant to professional nursing practice roles, ethical issues, and health advocacy/policy issues are addressed. Three credits (3 theory, 0 clinical) PREREQUISITES: NURSING MAJORS ONLY.

NUR 223 PHARMACOLOGY IN NURSING I

This is an introduction to nursing pharmacology that integrates the concepts of basic pharmacodynamics. A focus is on medication history taking techniques, routes of administration, and legal regulations. 1 credit (1 theory, 0 clinical) PRE-REQUISITES: NURSING MAJORS ONLY, CHM 101,103; COREQUISITES:INTS 222,223, BL 212, 213, AND NU 2161/2162.

NUR 224 PHARMACOLOGY IN NURSING II

A presentation of key content areas to conceptualize the important components of nursing pharmacology related to pharmacokinetics, pharmacogenomics, and physiology. The focus is on the major drug groups in terms of: indications, mechanisms of action, drug effects, and contraindications. The principles of altered pharmacodynamics relative to age and ethnicity are included. Specific nursing responsibilities related to drug administration are emphasized, including medication calculations. Three credits (3 theory, 0 clinical) PREREQUISITES: COMPLETION OF ALL FIRST-YEAR NURSING COURSES, INTS 222,223, BL 295,296, NUR 2161/2162, AND NUR 223; COREQUISITES: INTS 224, 225, NU 2171/2172

NUR 2161/2162 HEALTH ASSESSMENT AND FUNDAMENTALS

This theory/ clinical course introduces the student to the process of health assessment based on the principles of anatomy and physiology necessary to meet the needs of individuals throughout the lifespan. The fundamentals of direct patient-centered care using the nursing process to guide safe, competent, legal, ethical, and professional nursing practice will be introduced. Students will

examine individual and family roles across diverse populations. Students are afforded opportunities in simulation and clinical settings to apply assessment and communication skills while beginning to implement basic nursing care interventions. Four credits (3 theory, 1 clinical) PREREQUISITES: COMPLETION OF ALL FIRST-YEAR LEVEL NURSING COURSES; COREQUISITES: INTS 222, 223, BL 295, 296, AND NUR 223.

NUR 2171/2172 HEALTH PROMOTION AND DISEASE PREVENTION

Health promotion and disease prevention are emphasized in this theory/clinical course. Students will have opportunities to provide beginning level direct, holistic patient-centered care utilizing the framework of the nursing process to guide safe, competent, and professional nursing practice. This care is directed toward providing health promotion, disease prevention, and therapeutic and restorative care to adults. Students will have opportunities to expand upon their knowledge and skills related to therapeutic communication skills and basic nursing care interventions with diverse populations. Four credits (3 theory, 1 clinical) PREREQUISITES: COMPLETION OF ALL FIRST-YEAR NURSING AND SUPPORT COURSES, INTS 222,223, BL 296,296, NUR 2161/2162, NUR 223; COREQUISITES: INTS 224, 225 AND NUR 224.

NUR 320 NURSING RESEARCH

This course is an introduction to the principles of nursing research. The process of scientific inquiry and an appreciation of the usefulness of the scientific method of problem-solving and decision-making in nursing practice are discussed. The application of quantitative and qualitative research processes is explored. The course assists students in becoming intelligent consumers of research. Beginning skills to critique current research related to the delivery of nursing care are presented. Three credits (3 theory, 0 clinical) PREREQUISITE: COMPLETION OF ALL SOPHOMORE-LEVEL NURSING COURSES, MA 121.

NUR 3121/3122 NEUROPSYCHIATRIC AND MENTAL HEALTH NURSING

This required junior-level theory/clinical course is concerned with the provision of safe, quality, patient-centered mental health care with individuals, families, groups, and communities in a variety of health care settings. One focus is on nursing care that promotes optimal mental health functioning. A second is on nursing care that assists persons experiencing neuropsychiatric disturbances that negatively impact social and occupational functioning. The third focus is on nursing care that eases the impact of chronically ineffective behaviors. Current issues, trends, and research relevant to professional psychiatric nursing practice roles, ethical issues, and mental health advocacy/policy issues are addressed. Four credits (3 theory, 1 clinical) PREREQUISITE: COMPLETION OF ALL SOPHOMORE-LEVEL COURSES.

NUR 3161/3162 NURSING CARE OF CHILDREN AND ADOLESCENTS

This junior-level theory/clinical course focus is on the bio-psychosocial needs of infants, children, and adolescents using a family-centered care approach. The emphasis is on the nurse's role in health promotion, prevention, therapeutic, and restorative care to children and adolescents from diverse cultures in a variety of settings, based on nursing theories and evidence-based data. Four credits (3 theory, 1 clinical) PREREQUISITE: COMPLETION OF ALL SOPHOMORE-LEVEL NURSING COURSES.

NUR 3171/3172 WOMEN'S HEALTH AND NEONATAL NURSING

This junior-level theory/clinical course focuses on the nursing care needs of women across the lifespan and care of the mother/neonate dyad in clinical and community settings. Emphasis is placed on patient-centered care of women from adolescence through older adulthood. The impact of pregnancy and childbirth is highlighted. Health promotion of the mother/neonate dyad and the developing family is emphasized. Gynecologic topics and the impact of gender on select disorders are discussed. Safe, competent, and quality nursing care; and political, financial, and regulatory systems that impact the health of women and neonates are examined. Four credits (3 theory, 1 clinical) PREREQUISITE: COMPLETION OF ALL SOPHOMORE-LEVEL NURSING COURSES.

NUR 3181/3182 NURSING CARE OF ADULTS I

This junior-level theory/clinical course is an examination of the professional nursing care of adults experiencing acute and chronic health alterations specific to the cardiovascular, respiratory, neurological, and renal systems. Emphasis is placed on the use of the nursing process to prioritize, implement, and evaluate nursing care based on the physiologic, psychosocial, educational, and cultural needs of this population. Additional foci include advocating for individuals to promote positive health outcomes, collaborating with interdisciplinary health professionals, practicing within legal and ethical frameworks, and identifying current health policies that relate to each unit of study. Four credits (3 theory, 1 clinical) PREREQUISITES: COMPLETION OF ALL SOPHOMORE-LEVEL NURSING COURSES; COREQUISITE: BL 297

NUR 3191/3192 NURSING CARE OF ADULTS II

This junior-level theory/clinical course is an examination of the professional nursing care of adults experiencing acute and chronic health alterations specific to the gastrointestinal, immunological, endocrine, and musculoskeletal systems. Emphasis is placed on the use of the nursing process to prioritize, implement, and evaluate nursing care based on the physiologic, psychosocial, educational, and cultural needs of this population. Additional foci include advocating for individuals to promote positive health outcomes, collaborating with interdisciplinary health professionals, practicing within legal and ethical frameworks, and identifying current health policies that relate to each unit of study. Four credits (3 theory, 1 clinical) PREREQUISITE: COMPLETION OF ALL SOPHOMORE-LEVEL NURSING COURSES; COREQUISITE: BL 298.

NUR 400 INDEPENDENT STUDY

An exploration of an area of study in nursing that is not already offered as a course. Students design the course with the consent of a faculty member. Credits vary

NUR 420 LEGAL, ETHICAL, AND POLITICAL ISSUES IN HEALTH CARE

The focus is on legal, ethical, and political issues in health care. Legal and ethical principles that guide health care practice are discussed. The student explores the means of delivering care that falls within legal, ethical, and culturally competent frameworks. Political forces that influence change in contemporary health care are examined. Global differences and their relationship to American health care practices are explored. 2 credits (2 theory, 0 clinical) PREREQUISITE: COMPLETION OF ALL JUNIOR-LEVEL NURSING COURSES.

NUR 451 INTRODUCTION TO EPIDEMIOLOGY

This course provides an introduction to the basic principles, terms, and concepts of epidemiology. Concepts of risk, risk assessment models, disease distribution in populations, and causality are explored. Measures of disease states and risks (e.g., mortality, morbidity, attributable risk, and relative risk ratio) are presented. Applications of epidemiological data are explored in relation to health promotion and disease prevention. The students will gain an understanding of the interaction of personal, biological, behavioral, genetic, and environmental factors in the development of disease. Concepts include both a description and application of epidemiology. Three credits (3 theory, 0 clinical) PREREQUISITE: COMPLETION OF ALL JUNIOR-LEVEL NURSING COURSES.

NUR 4111/4112 LEADERSHIP INTO PROFESSIONAL NURSING

This course synthesizes theory and practical nursing experience into nursing practice that is safe, evidence-based, and reflective of a broad-based liberal arts education. It is the merging of knowledge and experience, evaluation of self, and the ability to provide safe and effective patient-centered care. A capstone project (NU 463 Evidence-Based Practice Capstone) will be incorporated into the practicum experience that focuses on development of an evidence-based practice change proposal arising from/within the practicum setting. Also addressed are the issues that affect current nursing care. This course provides an insightful and evaluative transition to professional practice. Four credits (2 theory, 2 clinical) PREREQUISITE: NU 4211/4212; COREQUISITES: NU 422 AND NU 463.

NUR 4181SL/4182 COMMUNITY HEALTH NURSING

This required senior-level nursing course focuses on the health of the community and various community health nursing roles through which the health care needs of the individual, family, aggregate, and community can be met. Both community-based and community-focused approaches are included. The levels of prevention, health promotion, epidemiological processes, health education, evidence-based practice, fiscal responsibility, and public health issues and practices are discussed so that the student can apply the nursing process in distributive health care settings. Four credits (3 theory, 1 clinical) PREREQUISITE: COMPLETION OF ALL JUNIOR-LEVEL NURSING COURSES.

NUR 4211/4212 COMPLEX PROBLEMS I

This senior-level theory/clinical course focuses on the professional nursing care and management of adults experiencing acute, complex, multisystem health alterations specific to cardiovascular, respiratory, neurological, and renal systems. This course builds on previous knowledge and experiences learned in Nursing Care of Adults I and II. Emphasis is placed on the expansion of both critical thinking and clinical reasoning utilizing the nursing process in the patient-centered care of adults experiencing high-risk and/or complex health problems. The clinical practice component of this course occurs in high-acuity care environments. Five credits (3 theory, 2 clinical) PREREQUISITE: COMPLETION OF ALL JUNIOR-LEVEL NURSING COURSES.

NUR 422 COMPLEX PROBLEMS II

This senior-level theory course focuses on the professional nursing care and management of adults experiencing acute, complex, multisystem health alterations specific to gastrointestinal, immunological, hematological, integumentary, musculoskeletal systems, and end-of-life care. This course builds on previous knowledge and experiences learned in Nursing Care of Adults I and II. Emphasis is placed on the expansion of both critical thinking and clinical reasoning utilizing the nursing process. Two credits (2 theory, 0 clinical) PREREQUISITE: NUR 4211/4212.

NUR 463 EVIDENCE-BASED CAPSTONE

This capstone project course is a culmination of the learning experiences of the senior student in the baccalaureate Nursing program. The course focuses on the Quality and Safety Education for Nurses (QSEN) Competencies Knowledge, Skills, and Attitudes and the Hospital Consumer Assessment Health Care Providers and Systems (HCAHPS) frameworks. The student will develop a written proposal for a quality improvement project derived from evidence-based practice (EBP) that will enhance patient-centered outcomes. The proposal focuses on a potential resolution of an issue/problem identified during the Leadership Practicum Experience in NU 4112 that is significant to professional nursing and links daily nursing practice to research. The proposal includes a problem description, resolution, implementation plan, evaluation plan, and dissemination plan. The capstone project proposal will reflect synthesis and integration of course content, informatics, and professional practice. The capstone project is guided by the baccalaureate program student learner outcomes. One credit (0 theory, 1 clinical) PREREQUISITES: NUR 4211/NUR4212 COREQUISITE: NUR 4111/4112 AND NUR 422.

PEACE AND JUSTICE STUDIES MINOR

Timothy Kelly, *Program Director*

Elaine Bennett; Lauren Churilla; Thaddeus Coreno; Jerome Foss; Steven Gravelle; Christopher McMahon; Dana Winters

PROGRAM PHILOSOPHY

The Peace and Justice program at Saint Vincent College prepares students to build a more just and peaceful world. It accomplishes this by providing students with theoretical knowledge, the capacity for critical reflection, and the skills of practical application. Grounded in the college's Benedictine heritage and liberal arts mission, the program explores the ways societies have comprehended human nature and their successes and failures protecting human dignity.

PEACE AND JUSTICE STUDENT LEARNING OUTCOMES

Students who complete the Peace and Justice program will be able to:

- employ theoretical knowledge, critical thinking, communication, and information literacy skills in the study of peace and justice
- convey familiarity with the Catholic peace and social justice tradition
- approach an understanding of peace and justice concepts and issues through the lens of multiple disciplines
- identify concrete means of working to support peace and justice in their lives and their communities

Requirements for a minor in Peace and Justice Studies Introductory Classes (required)

HI 290	Peace and Justice in Historical Perspective (History)	3
or		
TH 252	Peace, Justice, and Forgiveness (Theology)	3

Take five courses from the list below, three of which must be from different Schools. Students must take either two Service Learning-designated courses from among the courses listed below or one Service Learning-designated course from among the courses listed below and a PJS internship.

ALEX G. MCKENNA SCHOOL OF BUSINESS, ECONOMICS AND GOVERNMENT

PS 205	Classical Political Thought	3
PS 210	Modern Political Thought	3

SCHOOL OF ARTS, HUMANITIES AND SOCIAL SCIENCES

AN 222	Cultural Anthropology	3
AN 280	Medical Anthropology	3
CLS 210	Civil Rights Law	3
CLS 220	The Criminology of Race	3
CLS 266	The Death Penalty	3
CLS 367	Gender and Crime	3
CLS 420	Criminology of Hate	3
EL 111	Green Writing: Literature and the Environment	3
EL 113	Women's Literature	3
EL 139	African American Literature	3
EL 179	The Literature of Social Protest	3
EL 256	Sentimental Fictions: American Women Writers in the 19th Century	3
FRC 373	What Would Fred Rogers Do? – An Interdisciplinary Seminar on Creating Positive Social Change for Children	3

HI 226	Society and the Environment: The American Experience	3
HI 232	Race and Ethnicity in Historical Perspective	3
HI 290	Peace and Justice in Historical Perspective	3
PL 215	Ethics	3
PL 217	Environmental Ethics	3
SO 200	Race and Ethnicity	3
SO 235	Inequality and Social Problems	3
TH 250	Introduction to Moral Theology	3
TH 252	Peace, Justice, and Forgiveness	3
TH 255	Religion and Politics	3
TH 265	God, Work, and Money	3
TH 350	Holocaust Questions	3

HERBERT W. BOYER SCHOOL OF NATURAL SCIENCES, MATHEMATICS AND COMPUTING

NSCI 140	Science and Global Sustainability and Lab	4
NSCI 210/211	Chemistry and Crime + lab	4
	Peace and Justice Studies Internship	1
	Peace and Justice minor Exit Interview	0
NSCI 252/253	Science of Sustainable Living + lab	4
	Total	18/19/20¹

¹Students who take two service learning courses and no science will complete the minor with 18 credits. Students who take one service learning course, one internship, and no science will complete the minor with 19 credits. Students who take one service learning course, an internship, and a science course (plus lab) will complete the minor with 20 credits.

PHILOSOPHY

Michael P. Krom, *Chairperson*

George H. Leiner; Eric Mohr; Mary Veronica Sabelli, R.S.M.; Eugene V. Torisky; Margaret Watkins

In the broadest sense of the word, philosophy is simply the human attempt to understand one's life and place within the cosmos. Key to this enterprise is gaining deeper insight into the cumulative intellectual history of humanity. To philosophize means to clarify one's experience through reflection and then to act with resolution. In order to grow in human stature, one must become thoughtful, and must possess a more-than-everyday understanding of one's world, a more-than-mechanical image of oneself, and a more-than-routine familiarity with the moral realm.

Considered from this point of view, philosophy is both easy and difficult; easy, as at the outset it only asks that we think; difficult, as sustained, efficacious thinking demands courage, patience, and an almost unlimited degree of openness.

In preparing its majors to receive the Bachelor of Arts Degree, the Department of Philosophy serves a variety of students. Those who earn degrees from our department acquire a strong historical, thematic and methodological foundation in philosophy, a preparation which equips those who pursue graduate study in philosophy with the skills to excel. However, our horizon is expansive — it further embraces those who seek what the American Philosophical Association calls "a valuable and indeed paradigmatic 'liberal education' major." Our students develop not only sound historical knowledge of the field but are challenged to critically engage their world with solid analytic abilities and imaginative, synthetic solutions to problems which present themselves. They will be prepared to offer both abstract analyses as well as concrete proposals. Our students are well-equipped to go into life as independent learners, as contributors to a wide variety of fields, and to commence graduate studies in the humanities, social sciences, and the law.

While we provide our majors with a rigorous and stimulating undergraduate experience, this is but part of our task. Philosophy plays an integral role in the education of all undergraduates at a Benedictine college. We gladly work with each student in their core courses in philosophy to develop deeper insights into their personal lives and the cumulative history of humankind. When these initial encounters spur further interest, we invite students to join us in either the major or minor degree program.

PHILOSOPHY STUDENT LEARNING OUTCOMES

Upon completion of the philosophy major, students will be able to:

- Explain, accurately and charitably, significant philosophical ideas and arguments of particular ancient, medieval, modern, and contemporary philosophers.
- Use logic and critical reasoning to analyze and evaluate arguments as well as positions.
- Explain ethical theories and apply them to problems of ethical significance.
- Integrate philosophical ideas from diverse sources, including other disciplines and their own experience, into original philosophical work; and
- Complete independent philosophical scholarship and present this work in writing and in oral presentation.

REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE IN PHILOSOPHY

(See core curriculum requirements.)

Requirements for the major: (33 credits)

33 credits in Philosophy, structured in the following way* (These are in addition to the core requirement of First Philosophy PL 101):

PL 120	Logic	3
PL 201	Ancient Philosophy	3
PL 202	Medieval Philosophy	3
PL 203	Modern Philosophy	3
PL 204	Kant and His Successors	3
or		
PL 206	19th- and 20th-Century Philosophy	3
PL 215	Ethics	3
PL 440 or 450	Senior Capstone Exam or Thesis	3

*Those applying for graduate studies in philosophy are also required to complete *Symbolic Logic*, PL 250. All other majors are strongly encouraged to complete this course.

In addition to the 21 credits in these seven courses, 12 credits of work in four further courses, chosen in consultation with the student's advisor from the course offerings of the Philosophy Department.

Typically, this would include PL 220 Theories of Knowledge, and PL 230 Metaphysics. Students would also generally choose at least two courses from the following: PL 210 Philosophical Anthropology, PL 280 Thomistic Philosophy, PL 235 Philosophy of God, PL 245 Philosophy of Science. Students wishing to extend their study of ethics are encouraged to enroll in PL 216 Ethical Problems, PL 217 Environmental Ethics, or PL 218 Bioethics.

PHILOSOPHY AND POLITICS STUDENT LEARNING OUTCOMES

- Explain, accurately and charitably, significant philosophical ideas and arguments of particular ancient, medieval, modern, and contemporary philosophers.
- Use logic and critical reasoning to analyze and evaluate arguments as well as positions.
- Explain ethical theories and apply them to problems of ethical significance.
- Integrate philosophical ideas from diverse sources, including other disciplines and their own experience, into original philosophical work.
- Complete independent philosophical scholarship and present this work in writing and in oral presentation.
- Apply principles of political theory to political practice.

REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE IN PHILOSOPHY AND POLITICS

The joint major in Philosophy and Politics allows students with interest in both disciplines to pursue focused study of each, as well as integrate these studies throughout their time at the College. Philosophy and politics share a common history and pursuit of many of the same profound questions. Studying them together, therefore, can enrich the student's understanding and appreciation of both.

Students in the joint major take all of the courses specifically required by the separate majors but have fewer required electives. They will be assigned an advisor in each of the two departments.

Joint Major in Philosophy and Politics Requirements:

Total credits: 54

21 credits in Philosophy, structured in the following way* (These are in addition to the core requirement of First Philosophy PL 101):

PL 120	Logic	3
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PL 201	Ancient Philosophy	3
PL 202	Medieval Philosophy	3
PL 200	Modern Philosophy	3
PL 204	Kant and His Successors	3
or		
PL 206	19th- and 20th-Century Philosophy	3
PL 215	Ethics	3
PL 440	Senior Capstone Exam	3
or		
PL 450	Senior Thesis	3

**Those applying for graduate studies in philosophy are also required to complete Symbolic Logic, PL 250. All other majors are strongly encouraged to complete this course.*

27 credits in Politics, structured in the following way:

PS 100	Principles of American Politics	3
PS 135	Classical Political Thought	3
PS 136	Modern Political Thought	3
PS 242	International Politics	3
or		
PS 343	Comparative Politics	3
PS 290	Institutions	3
PS 336	American Political Thought	3
PS 339	Constitutional Law: National Powers	3
or		
PS 369	Constitutional Law: Civil Rights and Liberties	3
PS 345	Domestic Public Policy	3
PS 480	Senior Thesis	3

In addition, 6 credits of electives from either Philosophy or Politics, chosen in consultation with the student's advisors.

PHILOSOPHY AND THEOLOGY STUDENT LEARNING OUTCOMES

- Explain, accurately and charitably, significant philosophical ideas and arguments of particular ancient, medieval, modern, and contemporary philosophers.
- Use logic and critical reasoning to analyze and evaluate arguments as well as positions.
- Explain ethical theories and apply them to problems of ethical significance.
- Integrate philosophical ideas from diverse sources, including other disciplines and their own experience, into original philosophical work.
- Complete independent philosophical scholarship and present this work in writing and in oral presentation.
- Articulate the relationship between philosophy and theology.

REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE IN PHILOSOPHY AND THEOLOGY: (57 CREDITS)

The joint major in Philosophy and Theology was specifically designed for students who are interested in pursuing studies in both disciplines; the major will help such students to appreciate the similarities, differences, and relationship between philosophy and theology.

From Philosophy:

PL 120	Logic	3
PL 201	Ancient Philosophy	3
PL 202	Medieval Philosophy	3
PL 203	Modern Philosophy	3
PL 204	Kant and His Successors	3

or		
PL 206	19th- and 20th-Century Philosophy	3
PL 215	Ethics	3
PL 240	The Influence of Philosophy on Theology, Then and Now	3
PL 440		
or 450	Senior Capstone Exam or Thesis	3
Six credits in Philosophy Electives		

From Theology:

TH 119	First Theology	3
TH 300	Systematic Theology	3
TH 301	Systematic Theology II	3
TH 499	Theology Capstone	3
One course in scripture (TH 201-249)		
One course in moral theology (TH 250-299)		
One course in doctrines (TH 300-349)		
One course in religious traditions (TH 350-399)		
One Theology Elective		
(TH 250, 255, 275, 280, 315, 320, 335, 344, 348, 365, 385)		

Requirements for the minor:

18 credits, structured in the following way (These are in addition to the core requirement of First Philosophy PL 101):

PL 201	Ancient Philosophy	3
PL 202, 203, 204, or 206	(History sequence)	3
PL 215, 216, 217, or 218	(in Ethics curriculum)	3

Plus nine additional credits chosen in consultation with the student's advisor from the regular course offerings of the Philosophy Department.

YEARLY REVIEW

Having chosen philosophy as a major, each student will meet with his or her advisor to review the work of the previous academic year. This is done during the first week of classes in the fall semester.

As a part of this review, the student will evaluate his or her own performance in a guided, written statement. This statement functions primarily as a résumé of work in the major, but extracurricular work may also be assessed. During the review, the student presents two pieces of written work from the previous academic year, at least one of which will be from a philosophy course.

SENIOR CAPSTONE PROJECT

Each major is required to complete a senior thesis or examination. All philosophy majors will complete a capstone project during their junior and senior years at the college. There are two options for the project: a senior thesis or a senior capstone examination. The student and her or his faculty advisor will decide which of these two options is appropriate, based on each student's aims, interests, and plans for after graduation. Students who intend to pursue graduate study in philosophy or some related field should plan to write the thesis, which will both significantly improve their applications to graduate schools and help to prepare them for the work of a graduate program. Students who do not intend to pursue such study in the future may reasonably choose either option.

During the third semester before graduation, each student works with his or her faculty advisor to form a Senior Thesis or Examination Committee and choose a topic for the project. Senior thesis students complete the thesis planning packet by the end of the semester; senior examination students submit a reading list. The student, with the guidance of the committee, plans the project and carries out the basic research over the break between the third and second semester before graduation. During the second semester

before graduation the student enrolls in either PL440 (Senior Capstone Exam) or PL 450 (Senior Thesis). Students submit their research journal at the first meeting for this class.

Students who choose the capstone exam will take the exam at the end of the semester in which they are enrolled in PL 440. A passing grade completes this project; a failing grade requires the student to retake the course and the exam the following semester. A passing grade on the oral exam will be ranked as “passed,” “passed with distinction,” or “passed with highest distinction.”

Students who choose the senior thesis will complete a polished draft of the thesis, to be submitted to the Committee for comments, during the semester in which they are enrolled in PL 450. During the student’s final semester any remaining work is completed, with the final draft completed by the ninth week of the semester in which the student expects to graduate. The finished Senior Thesis is evaluated by the Thesis Committee. By the last week of classes before graduation, each student will give an oral presentation of the project to departmental faculty and students, responding to questions and comments. The committee will assess the written thesis and presentation together as having “passed,” “passed with distinction,” or “passed with highest distinction.”

Electives:

An appropriate choice of electives in fields outside of philosophy can add considerable focus to the study of philosophy. For this reason the Department requires the choice of electives to be done in close consultation with the student’s advisor. Language studies and accompanying foreign study are especially encouraged.

Suggested Minor in Philosophy for Students Majoring in the Department of Theology

Philosophy and Theology have for many centuries been friendly collaborators in the search for meaning and truth. As such, many students majoring in one of these fields have fruitfully studied in the other as well. Students in the Department of Theology have frequently found a minor in Philosophy to be of great support to their present and future work in their chosen field. Below is a suggested pattern of courses designed to be helpful to those students. The specific selection of courses is worked out in consultation with the student’s advisor. In addition to the required courses for the minor, these students are encouraged to take:

PL 240	Influence of Philosophy on Theology	3
PL 280	Thomistic Philosophy	3

One course chosen from the following:

PL 230	Metaphysics	3
PL 220	Theories of Knowledge	3
PL 210	Philosophical Anthropology	3

Typical First-Year Schedule

Fall/Spring

PL 101	First Philosophy	3
PL 120	Logic	3
	Foreign Language	
	(intermediate or advanced)	3
	EL 102/TH 119	3
	History/Social Sciences	3
	Social Sciences/Theology/English	3
	Mathematics/Fine Arts	3

All students will take one course designed as a First-Year Seminar which will satisfy a core curriculum requirement. PL 101 First Philosophy is a required course for the core curriculum and is additionally a prerequisite for any Philosophy course other than PL 120 Logic.

PHILOSOPHY COURSE DESCRIPTIONS

PL-00X PHILOSOPHY EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. This course will be automatically added to the student’s registration upon submission of the graduation application. Zero credits. Pass/Fail.

PL-101 FIRST PHILOSOPHY

This course is intended to introduce philosophy to students unfamiliar with the field. Its intent is to provide a coherent sense of the important issues and approaches embraced by philosophy and to do so by setting these in a vital, historical context. Important ideas from the ancient, medieval, modern, and contemporary periods will be explored both in their abstract setting as well as in terms of the ways in which they have affected the development of our cultural, scientific, and spiritual lives. Periodically offered as a first-year seminar or honors course. Three credits.

PL-120 LOGIC

This introductory course seeks to formalize the everyday use of logic to distinguish correct and incorrect forms of reasoning. After setting general terms for argument analysis, the distinguishing features of deductive and inductive arguments are noted. Language as the vehicle of logic is considered, including the purposes and types of definition and recognition of common informal fallacies. The balance of the course is devoted to deduction, with special consideration given to Venn diagrams as a mechanical test of the validity of categorical syllogisms. Periodically offered as an honors course. Three credits.

PL-121 LOGIC/PHILOSOPHY OF KNOWLEDGE

This course introduces well-prepared and -motivated students to classical logical reasoning using the following questions: What can be known by humans? How do we come to know those things? Are other sorts of knowledge possible, by other sorts of beings or by ourselves? Compared to PL 120, Logic, this course is devoted to formal logical analysis and writing rather than informal logic. It is intended for those with strong interest in philosophy or related disciplines. Three credits.

PL-201 ANCIENT PHILOSOPHY

Ancient philosophy begins in the sixth century BC with Thales’ attempt to discover the first principle(s) of the universe, and ends in the third century AD with the Neoplatonists’ pursuit of the One. This course explores this birth of philosophy in the West, focusing on the major movements and figures that characterize this period. Attention will be given to the Presocratics, Plato, Aristotle, the Hellenistics (such as Stoicism, Scepticism, and Epicureanism), and Neoplatonism. The course serves both as a freestanding consideration of this important period of thought as well as the introduction to the history sequence offered by the philosophy department. Prerequisite: PL 101. Three credits.

PL-202 MEDIEVAL PHILOSOPHY

While it is difficult to provide specific dates for the beginning and ending of Medieval Philosophy (roughly 4th century AD to 15th century AD), this period is characterized by attempts to bring Abrahamic religions (Judaism, Christianity, and Islam) into dialogue with the Greco-Roman philosophical tradition. Such thinkers as St. Augustine, Moses Maimonides, Averroes, St. Anselm, St. Thomas Aquinas, and Duns Scotus were noted for their systematic attempts to use both revelation and reason in the pursuit of Wisdom. This course explores this period in the history of philosophy. Prerequisite: PL 101. Three credits.

PL-203 MODERN PHILOSOPHY

This course considers philosophical thought from the late 16th century to the end of the 18th century – a period marked by profound intellectual, religious, and political revolutions. Through a radical critique of late medieval philosophy, modern philosophers created the new science that evolved into the natural sciences that we know today. And through a complex rethinking of the relationship between freedom, community, and law, they contributed to the political, moral, and religious transformations that set the stage for our contemporary culture. At the discretion of the instructor, this course will consider thinkers such as Montaigne, Bacon, Galileo, Descartes, Spinoza, Leibniz, Locke, Berkeley, Rousseau, Hume, and/or Kant. Prerequisite: PL 101. Three credits.

PL-204 KANT AND HIS SUCCESSORS

This course begins with a study of the monumental work of the 18th-century philosopher, Immanuel Kant, and then proceeds to consider the various reactions to this work in the following century. It is difficult to overestimate the influence of Kant, who not only set the terms for the debates that followed him, but provided a narrative of modern philosophy that continues to dominate discussions of the thought that preceded him. Although best known for his revolutionary critique of reason, which radically limits the access that the human subject has to the world-in-itself, Kant himself was equally concerned with questions about the moral, political, and aesthetic experience of the human subject. He insisted that human beings are agents with equal and inviolable dignity, and he reconceived of history as humanity's self-education in freedom. In so doing, he initiated a philosophical discussion emphasizing human subjectivity, individual freedom and self-expression, and a philosophy of history itself. This discussion was carried forward by numerous 19th-century thinkers, including Fichte, Schelling, Hegel, Schopenhauer, Marx, and Nietzsche. The course will consider some of these thinkers (and possibly others), at the discretion of the instructor. Prerequisite: PL101. Three credits.

PL-205 CONTEMPORARY PHILOSOPHY

This course examines the philosophical thought of the 19th and 20th centuries. It takes as its starting point the rebellion against the Kantian world view, and focuses on the increasingly important roles played by history and human individuality in philosophical reflection. In pursuing this theme, the approaches of positivism, existential phenomenology, and the Anglo-American analytic movement will be examined. The course considers, among others, such thinkers as Hegel, Marx, Nietzsche, Russell, and Heidegger. Prerequisite: PL 101. Three credits.

PL-206 19TH - AND 20TH-CENTURY PHILOSOPHY

In the 19th and 20th century, western philosophy underwent a marked fragmentation of both theme and approach. The common divide between “continental” and “analytic” philosophy only partially captures the complexity of the philosophical landscape during this period. It is a period coming to grips with the aftermath of Kant's revolutionary thought, increased recognition of the historicity of humanity, the rise of political nationalism, economic revolutions, and scientific advancements on a grand scale. The responses to this situation include (but are not limited to) the strong emphasis on historicity and subjectivity that we find in existentialism and phenomenology, the grappling with the philosophy of history in such thinkers as Marx, Hegel, and Collingwood, and the scientific and “linguistic turn” that characterizes much of both early and late analytic philosophy. This course will focus on some portion of this varied landscape, in

accordance with themes chosen by the instructor. Prerequisite: PL 101. Three credits.

PL-210 PHILOSOPHICAL ANTHROPOLOGY

The attention of this course is directed at the question: What does it mean to be a human being? The course will systematically examine some of the leading views of human existence set forth over the last 24 centuries. The guiding perspective for the investigation will come from contemporary suggestions. Thinkers of this century have urged that we must pay close attention to the fact that while humans do have the capacity to act independently of the constraints of instinctual and biologically determined behavior, we are embodied, and thus must acknowledge the historical, linguistic, and cultural elements of our being. Within this context, the course will reflect on the objective, subjective, or ultimately fluid character of human nature. It will examine the variously suggested rational, passionate, playful, moral, religious, or gender-based character of humanity. Prerequisite: PL 101. Three credits.

PL-215 ETHICS

Ethics is practical philosophy indicating, in general, what humans ought to do in the light of appropriate rules of conduct and suitable ends. Some fundamental views of right and good are considered in their classical formulations by such thinkers as Plato, Aristotle, Aquinas, Hume, Kant, and Mill. Problems and examples are used to illustrate these views and to provoke judgments regarding concrete issues. Prerequisite: PL 101. Periodically offered as an honors course. Three credits.

PL-215BLS ETHICS

Ethics is a reflective attempt to answer the question ‘How should I live?’ By grounding ourselves in an analysis of some of the most important philosophical thinkers of the Western tradition, we will inquire into the nature of the ethical life. This requires considering our own desire to live rightly in relation to others, and thus it is imperative that we reflect upon the theories we read in light of our own experiences. Further, it should be especially clear to us that leadership must be built upon the solid foundation of good character. As Benedictine leaders, this means connecting the teachings of the Church and Benedictine spirituality with our own ethical formation. In this class we will focus on the virtue theory that the Church inherited from ancient philosophy (especially the four cardinal virtues), and which she subsequently developed to harmonize with the theological virtues of faith, hope, and charity. We will then be in a position to analyze the ten Benedictine hallmarks in terms of the virtues they are built upon. Finally, since ethics is an attempt to determine how we should live, we need to consider how our inquiry engages us as moral members of a community. To this end, we will spend some time this semester contributing to the well-being of our community. Three credits.

PL-216 ETHICAL PROBLEMS

This course will consider opposing viewpoints on contemporary issues such as abortion, racism, sexual morality, the environment, capital punishment, hunger, legislation, and public policy. Students will also be asked to review concepts such as subjectivism, psychological and ethical egoism, the relationship between morality and religion, and the possibility of objectivity in ethics. Prerequisite: PL 101. Three credits.

PL-217 ENVIRONMENTAL ETHICS

This course investigates the different ways that human beings think of the environment and the influence that these various conceptions have upon defining what, if any, responsibility

human beings have to the natural world. Special attention will be given to the source and meaning of the term “value” as well as to the specifications that are used to assign or distribute this term. The principal environmental theories that indicate the origin and range of value that will be examined include: anthropocentrism, individualism, holism, biocentrism, ecocentrism, speciesism, and ecofeminism. Some practical concerns that will be examined in order to consider the implications of the various value theories are urban growth, poverty, use of natural resources, energy production, food production and distribution, pollution, and population control. Prerequisite: PL 101. Three credits.

PL-218 BIOETHICS

This course will examine the ethical issues surrounding such postmodern technologies as genetic manipulation, human and animal cloning, and the “creation” of transgenic organisms, as well as the moral dilemmas that result from gene therapy, contraception, stem cell and fetal tissue research, and the use of animals and humans as test subjects. Prerequisite: PL 101. Three credits.

PL-220 THEORIES OF KNOWLEDGE

This course explores, both topically and historically, the various avenues which philosophical thought has followed in its attempts to understand how humans gain knowledge of themselves and the world in which they are situated. Representative views of classical thought, continental rationalism, British empiricism, transcendental idealism, 20th-century realism, and phenomenology will be examined. In each case, the structure of consciousness and the relation of consciousness to objects known will be explored. Flowing from this will be a consideration of their respective accounts of perception, conception, memory, judgment, and truth. Throughout the course, each of the views will be critically evaluated as to its adequacy of the human experience. This course provides serious and advanced study in the discipline. Prerequisite: PL 101. Three credits.

PL-226 PHILOSOPHY OF EMOTION

This course will examine the history, nature, and importance of the emotions from various philosophical perspectives. Topics to be addressed include: What are the emotions, and how, if at all, do they differ from the passions? What theories (past and present) of emotions are available and viable? How do our emotions relate to our reason? Why are emotions so important to us? What is the relationship between the emotions and morality, and emotions and art? We will also discuss specific emotions, such as joy, grief, pride, and humiliation. The course is an appropriate second course in philosophy but also should be of interest to more advanced students. Three credits.

PL-227 PHILOSOPHY OF LOVE

In this course participants will seek to explore the puzzling relationship between Eros and philia. We will lay down a foundation by seeking traditional philosophical answers as to how to embrace the paradoxical aspects of love, looking for advice from such diverse thinkers as Plato, Augustine, Rousseau, Hegel, Nietzsche, and Freud. After establishing this footing we will extend our investigation by listening to the counsel of psychologists, psychoanalysts, artists, and poets. Finally, we will look to contemporary contributions made by those employing the tools of feminism and poststructural analysis. Interspersed throughout the course we will concretize our theoretical reflections with examinations of specific issues such as the dialectic between the erotic and the pornographic and the multivalenced direction of sexuality. Prerequisite: PL 101. Periodically offered as an honors course. Three credits.

PL-230 METAPHYSICS

This course is designed to introduce the student to some of the basic metaphysical themes. It will be concerned with various areas of

theoretical philosophy, considering questions regarding: the nature of the world, knowledge and truth, freedom, the mind/body view of man, and various conceptions of God. The approach of the course will be problem-oriented, and the medium will be the views of various major thinkers in Western Philosophy. This course provides serious and advanced study in the discipline. Prerequisite: PL 101, though at least six credits in philosophy are strongly recommended. Three credits.

PL-232 AESTHETICS

In this course students will consider major theories in the philosophy of art, working to gain a pluralistic understanding of aesthetics. These concepts, from classical, contemporary, and post-modern sources, will be applied to works of art from a variety of media. Prerequisite: PL 101. Periodically offered as an honors course. Three credits.

PL-235 PHILOSOPHY OF GOD

This course discusses the term “god” as used among different peoples and cultures, with special emphasis, of course, on the Judeo-Christian understanding of it. Distinct from sacred theology, it examines, by the light of reason, the proofs for the existence of God and related questions. The course also considers modern problems about theism and atheism. Prerequisite: PL 101. Three credits.

PL-240 INFLUENCE OF PHILOSOPHY ON THEOLOGY

The course traces some of the effects which Platonic, Aristotelian, and Stoic philosophies have had on such theological questions as the nature of (the Christian) God, God’s relationship to the world, the understanding of the human person, as well as some ethical doctrines which permeate Western thinking. Some solutions are suggested. Prerequisite: PL 101, though six credits in philosophy are strongly recommended. Three credits.

PL-245 PHILOSOPHY OF SCIENCE

This course is designed to address the general question of what it means to take up the world in a “scientific” way. It traces the historical genesis of this special way of knowing, examining how scientific thought came to set itself apart from “non-scientific” engagement with the world. Of particular concern is the division of science, begun in the 19th century, into three branches: the natural, social, and human sciences. The justifications for this division are examined, giving careful attention to their divergence as well as to the question of an underlying commonality. Reflection on the ongoing ramifications of this rift for contemporary life brings the course to its close. Readings will be drawn from across the history of the philosophy of science, including such thinkers as Aristotle, Galileo, Bacon, Comte, Mill, Dilthey, Mach, Carnap, Popper, and Kuhn. Prerequisite: PL 101. Three credits.

PL-250 SYMBOLIC LOGIC

The course begins with basic propositional logic using truth table tests for arguments, then moves to the validation of arguments with the aid of simplification and inference rules. Attention is then directed to propositional proofs, including indirect and conditional proofs. Basic quantification logic follows, beginning with quantificational formulas, translations, proofs, and refutations. The next step is quantificational logic employing identity and relational translations, and arguments. As time permits, a study of modal logic will follow. Two previous courses in philosophy recommended. Three credits.

PL 251 PHILOSOPHY AND FILM

Courses in many disciplines use non-print media such as music and film on an ad hoc or as-useful basis. The purpose of this course, in contrast, is to explore systematically and intentionally some relationships between traditional philosophical documents and

cinematic “texts.” Each section of the course explores a theme such as (but not limited to) philosophy and science fiction, existentialism, humor/comedy, God and religion, the works of Jane Austen, and so forth. Films shown as classroom assignments are treated as serious texts for analysis and critique, just as the philosophical texts that complement it are treated. Prerequisite: PL 101. Three credits.

PL-260 GOOD AND EVIL IN PHILOSOPHY

From our youth we have been nurtured on tales of good and evil; of the just overcoming the wicked; and of the ultimate victory of goodness. Yet is this just so much fantasy? Does good overcome evil in the real world? Are the just rewarded and the wicked punished? Even further, does evil really exist? Such are the questions we will address in this course. The course will be structured around a novel and some films on the theme of good and evil; philosophical texts will be used to elucidate the topics raised. Prerequisite: Three credits in philosophy or instructor permission. Three credits.

PL-261 CONFRONTING DEATH: LITERATURE/PHILOSOPHY/FILM

Just before facing execution, Socrates made the bold claim that philosophers do not fear death and even welcome it as a blessed release from bodily existence. Why do those of us who lack Socrates’s courage fear death? What exactly are we afraid of? How

do we live in the face of death? How do we confront it? This class explores such questions through the use of literature, philosophy, and film. Prerequisite: Three credits in philosophy or instructor permission. Three credits.

PL-262 MUSIC AND THE SOUL

“Without music, life would be a mistake” (Friedrich Nietzsche). We lovers of music know exactly what Nietzsche means here: we have been moved, disturbed, made joyous, or despairing, by the muse of melody and poetic verse. Why does music have this effect on us? What does it MEAN for us? Can music be good or bad for us? Is there a moral aspect to creating music or to listening to it? Such are the questions that inspire this course. Through an examination of philosophical accounts of music, and, of course, by listening deeply to various genres of music, we will attempt to answer them. And, if our questions are not answered, we will move forward in our lives to search for music and philosophical ideas that can help us answer them. Prerequisite: Three credits in philosophy or instructor permission. Three credits.

PL-270 POLITICAL PHILOSOPHY

A survey of the history of reflection on fundamental political goods by both classical and modern writers. Readings will normally include, but not be limited to, material from a subset of these philosophers: Plato, Aristotle, St. Thomas Aquinas, Machiavelli, Hobbes, Locke, Rousseau, and Marx. Common themes may



include the nature of law, justice and rights, the social contract, purposes and justifiability of economic institutions, cultural influences on the identification and attainment of social values, the possibility of political objectivity or neutrality, and the like. Prerequisite: PL 101. Three credits.

PL-271 CATHOLIC POLITICAL THOUGHT

Catholicism has a long tradition of political inquiry that has made many important theoretical and practical contributions to the way we live. From a philosophic perspective, it bears a close resemblance to ancient political philosophy yet diverges in significant ways from modern political philosophy. This divergence raises an important practical question: How can Catholics in America reconcile faith and citizenship? This class is designed to answer that question. To do so we will read important contributors to the Catholic intellectual tradition, contemporary authors, as well as political rhetoric in America. Prerequisite: PL 101. Cross-listed with PS-261. Three credits.

PL-272 PHILOSOPHY OF LAW

What is law, and what is its purpose? Is human law dependent upon a higher, Divine law? What is the relationship between law and morality, and what makes a law binding? Is it ever morally acceptable to disobey the law, and, if so, when? Such are among the central questions of the philosophy of law, and philosophers have been reflecting on them for thousands of years. In this course, we will look at some of the central theories of law that have shaped our legal culture, and which still register in the legal and political debates we have today. Three credits.

PL-280 THOMISTIC PHILOSOPHY

The works of Thomas Aquinas are generally regarded as the highwater marks of Medieval Scholasticism, and they continue to have far-reaching effects on both philosophy and theology. In this course the students will read selections from some of Aquinas' major works organized, in general, along the lines developed in the *Summa Theologiae*. Some of the topics to be considered from a philosophical perspective are the following: philosophy and theology; the existence of God, the attributes, names, and powers of God; predestination; the human end, human acts, habits, virtues and vices; law in general and the various kinds of law. Prerequisite: PL 101, though six credits in philosophy are strongly recommended. Three credits.

PL-303 EASTERN THOUGHT

This course is designed to provide an overview of the basic teachings and historical development of major streams of Eastern thought including Confucianism, Daoism, and Buddhism. Emphasis will be placed on a comparative approach, noting the complex historical and conceptual relationships to be found between and within the systems. The course will also examine the congruencies (as well as the disparities) of these approaches with important developments in Western thought. Prerequisite: PL 101. Three credits.

PL-305 SPECIAL TOPICS IN PHILOSOPHY

These courses provide an opportunity for faculty and students to work together in advanced study in areas of particular expertise and interest. Accordingly, the specific topic of these courses will vary from semester to semester. For the current topic, students should consult with the department or Office of the Registrar. Prerequisite: two courses in philosophy or the permission of the instructor. Three credits.

PL-306 NIETZSCHE

This course will examine various aspects of the thought of Friedrich Nietzsche, his critical reception and ongoing influence. For the specific themes to be addressed during a given semester, please consult with the instructor. Prerequisite: two courses in philosophy or the permission of the instructor. Three credits.

PL-350 INDEPENDENT STUDY – PHILOSOPHY

Independent study is primarily intended for the student who has advanced past a basic understanding of the field. It provides an opportunity to explore in greater depth and sophistication a specific philosophical topic or question of the student's choice. Selection of the topic of study is initiated by the student, while the structuring of the course is done in consultation with the instructor. Variable credit.

PL-440 SENIOR CAPSTONE EXAM

In this independent study course the student will work with a faculty member in the department who will serve as his or her advisor. The student will meet periodically with this advisor to aid in his or her preparation for the exam. These meetings may include practice exams. The exam itself will take place toward the end of the semester. It will be an oral examination, usually lasting about 60 minutes, conducted by the student's advisor and at least one other member of the philosophy department. Should the student's performance be unsatisfactory, she or he will be given one other opportunity to re-enroll in the course and pass the exam. PL 440 is taken in the second semester before graduation. P/F. Three credits.

PL-450 SENIOR THESIS

In this independent study course the student works closely with a faculty advisor to fully develop the capstone project in philosophy, the Senior Thesis. This process prepares the student for work beyond the undergraduate, developing the skills of independent scholarship: informed philosophical research, skillful analysis, thoughtful synthesis, and fluent written work. PL 450 is taken in the second semester before graduation. Three credits.

PL-500 PHILOSOPHY – INTERNSHIP

The internship is an opportunity for philosophy majors and minors to gain work experience and discern a future career path. In consultation with a faculty member in the department, a suitable employer will be found and a determinate number of hours established for the semester. For every 45 hours of work, the student will receive one course credit, with a maximum of three per semester. The student must submit a summary of the work done and reflection on the experience at the end of the semester. This course may be repeated, but this course does not count toward the fulfillment of the major or minor requirements. One to three credits. Majors and minors only.

PHYSICS

David W. Grumbine Jr., *Chairperson*

Michael Antonacci, O.S.B.; Daniel Vanden Berk; Paul Follansbee;
John J. Smetanka

Professor Emeritus: Michael K. Gainer

The mission of the Physics Department works in concert with the mission of the College and begins with the cultivation of a love for learning and an appreciation of the inherent beauty in the study of the natural world. The department serves three populations of students each with specific goals; (1) Physics and Physics Education majors, (2) majors in the departments of Biology, Chemistry, Mathematics, and Computing and Information Systems, as well as students in the 3-2 Engineering program, and (3) non-science majors. The Department's mission is to prepare Physics and Physics Education majors by developing skills in experimental, theoretical, and computational physics so our students are prepared to enter graduate programs in Physics and related fields (for example, Astrophysics, Material Science, and Engineering), obtain a professional and/or technical position in industry, or teach at the high school level.

For students majoring in other departments within the Herbert W. Boyer School of Natural Sciences, Mathematics, and Computing, the Department's mission is to develop the ability to apply the experimental, theoretical, and computational principles of Physics to their specific disciplines. The Department's mission is to fulfill the goals of the core curriculum for students who are non-science majors by promoting scientific literacy, developing a familiarity with the scientific method, and creating an awareness of the impact of science on society. For all students, the Department's mission is to stress the conceptual understanding of Physics

through discussion, demonstration, and experimentation and to develop the ability of the students to effectively communicate their understanding to others.

Two alternative programs are available. The program leading to a B.S. degree in Physics is for students who wish to continue their education in graduate school or to directly pursue careers in the private sector. The Physics Education program certifies students for careers as secondary school physics teachers. Students must contact the Education Department Chairperson for admission to the certification program.

PHYSICS/PHYSICS EDUCATION STUDENT LEARNING OUTCOMES

- Use knowledge of the fundamental theoretical fields of physics to solve problems.
- Perform careful physics laboratory experiments.
- Interpret physics experimental results.
- Explain physical principles to others in both oral and written formats.
- Develop independent research.

CULMINATING ACTIVITY

Students in each program must complete the culminating activity listed as course PH 381. This activity consists of a research project under the direction of a faculty member or an approved internship. Several projects in recent years have been awarded student research grants, students have traveled to present their results at regional and national conferences, while some projects have resulted in a publication in a scientific journal. Successful completion of this activity, typically including a senior thesis, is required.



REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE IN PHYSICS AND PHYSICS EDUCATION

(See core curriculum requirements.)

Major Requirements (B.S. in Physics) (56 credits):

PH 100	Physics Seminar	1
PH 111	General Physics I	3
PH 112	General Physics II	3
PH 113	Physics I Laboratory	1
PH 114	Physics II Laboratory	1
PH 211	Modern Physics I	3
PH 213	Modern Physics I Laboratory	1
PH 215	Thermodynamics	3
PH 221	Classical Mechanics	3
PH 241	Optics	3
PH 243	Optics Laboratory	1
PH 244	Advanced Laboratory	1
PH 252	Electromagnetic Fields	3
PH 261	Electronics	3
PH 263	Electronics Laboratory	1
PH 311	Modern Physics II	3
PH 322	Quantum Mechanics	3
PH 341	Condensed Matter Physics	3
PH 370	Mathematical Physics	3
PH 381	Research	1
MA 111, 112, 211	Analytical Calculus I-III	12
MA 212	Ordinary and Partial Differential Equations	4
CH 101, 103	General Chemistry I and Laboratory	4
CH 102, 104	General Chemistry II and Laboratory	4

A thesis is required in the senior year.

Major Requirements (B.S. in Physics Education) (68 credits):

NSCI 100	Astronomy	3
NSCI 101	Astronomy Laboratory	1
NSCI 135	Physical Geology	3
NSCI 136	Physical Geology Laboratory	1
PH 100	Physics Seminar	1
PH 111	General Physics I	3
PH 112	General Physics II	3
PH 113	Physics I Laboratory	1
PH 114	Physics II Laboratory	1
PH 211	Modern Physics I	3
PH 213	Modern Physics I Laboratory	1
PH 215	Thermodynamics	3
PH 221	Classical Mechanics	3
PH 241	Optics	3
PH 243	Optics Laboratory	1
PH 244	Advanced Laboratory	1
PH 261	Electronics	3
PH 263	Electronics Laboratory	1
PH 322	Quantum Mechanics	3
PH 381	Research	1
MA 111, 112, 211	Analytical Calculus I-III	12
MA 212	Ordinary and Partial Differential Equations	4
CH 101, 103	General Chemistry I and Laboratory	4
CH 102, 104	General Chemistry II and Laboratory	4
BL 150-151	General Biology and Laboratory	4

A thesis is required in the senior year.
See Education Department section of *Bulletin* for Secondary Education course requirements.

Requirements for a Physics Minor: 19 credits

PH 111	General Physics I	3
PH 112	General Physics II	3
PH 113	General Physics I Laboratory	1
PH 114	General Physics II Laboratory	1

and a minimum of 11 credits selected from courses numbered above PH 200, of which at least one must be PH 243, PH 244, PH 213, or PH 263. MA 111-112 Calculus I-II are prerequisites for General Physics. MA 211-114 Calculus III and Differential Equations are recommended electives.

Typical First-Year Schedule: 32 credits

Fall Semester

PH 100	Physics Seminar	1
MA 111	Analytical Calculus I*	4
TH 119	First Theology	3
or		
EL 102	Language and Rhetoric	3
	Core Curriculum courses	6-7

All students will take one course designated as a First-Year Seminar which will satisfy a core curriculum requirement.

Spring Semester

MA 112	Analytical Calculus II	4
PH 111	General Physics I	3
PH 113	Physics I Laboratory	1
EL 102	Language and Rhetoric	3
or		
TH 119	First Theology	3
CS 110 C++	Programming I	3
	Core curriculum courses	6

*These courses fulfill the core curriculum requirements.

PHYSICS COURSE DESCRIPTIONS

PH-00X PHYSICS EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. This course will be automatically added to the student's registration upon submission of the graduation application. Zero credits. Pass/Fail.

PH-100 PHYSICS SEMINAR

Discussions of topics in contemporary physics. One credit.

PH-109 COLLEGE PHYSICS I

This is the basic course for those majoring in the biological sciences and allied health fields. Kinematics, Newton's Laws of Motion, Energy, and Momentum are introduced and treated with algebraic methods. Satisfies one core curriculum science requirement when taken in conjunction with PH-113 Physics I Laboratory. Prerequisite: MA 109. Offered fall semester. Three credits.

PH-110 COLLEGE PHYSICS II

A continuation of PH-109. Electricity, Magnetism, Optics, and Wave Motion are introduced and treated with algebraic methods. Satisfies one core curriculum science requirement when taken in conjunction with PH-114 Physics II Laboratory. Prerequisite: PH-109. Offered spring semester. Three credits.

PH-111 GENERAL PHYSICS I

This is the basic course for those majoring in the physical sciences, mathematics, and engineering. Newton's Laws of Motion, Energy, and Momentum are introduced and treated with applications of calculus. Satisfies one core curriculum science requirement when taken in conjunction with PH-113 Physics I Laboratory. Prerequisite: MA 111. Offered every semester. Three credits.

PH-112 GENERAL PHYSICS II

A continuation of PH-111. Electricity, Magnetism, Optics, and Wave Motion are introduced and treated with applications of calculus. Satisfies one core curriculum science requirement when taken in conjunction with PH-114 Physics II Laboratory. Prerequisite: PH 111. Offered every semester. Three credits.

PH-113 GENERAL PHYSICS I LABORATORY

Laboratory to accompany PH109 and PH 111. Laboratory experiments include applications to kinematics, Newton's Law of Motion and Energy. One credit.

PH-114 PHYSICS II LABORATORY

Laboratory to accompany PH 110 and PH 112. Laboratory experiments include applications to optics, electricity, magnetism, and wave mechanics. One credit.

PH-211 MODERN PHYSICS I

A survey of atomic and nuclear physics including relativity, radiation and matter, and quantum physics. Prerequisites: PH 112, MA 112. Must be taken with PH 213. Offered fall semester. Three credits.

PH-213 MODERN PHYSICS I LABORATORY

Laboratory to accompany PH 211. Laboratory experiments stress basic subjects such as atomic and classical scattering, the particle and wave nature of both radiation and matter, radioactivity, and spectroscopy. One credit.

PH-214 INTRODUCTION TO FLUIDS/THERMODYNAMICS

Fluids covers the fundamentals leading to the continuity equation and Bernoulli's equation followed by a detailed study of these equations with applications. Thermodynamics covers a detailed study of the Kinetic Theory of gases and the first and second laws of thermodynamics with applications. Prerequisite: MA 111. Three credits.

PH-215 THERMODYNAMICS

A study of the basic concepts of both classical and statistical thermodynamics. Topics include work, energy and entropy, the laws of thermodynamics, the Carnot cycle, heat engines, kinetic theory, and classical and quantum statistics. Prerequisites: PH 112 and MA 212. Offered every other spring. Three credits.

PH-221 CLASSICAL MECHANICS

A study of the fundamental principles of the motion of particles and rigid bodies, including vibrational motion, an introduction to the equations of Lagrange and Hamilton, and the two-body problem. Prerequisites: PH 112, MA 112. Offered alternate years. Three credits.

PH-223 MECHANICS: STATICS

Forces in a plane and in space. Equivalent systems of forces. Equilibrium of rigid bodies. Centroids and centers of gravity. Moments of inertia. Analysis of structures. Friction. Vectors used extensively. Prerequisites: PH 111 and MA 112. Cross-listed as MA 223. Offered fall semester. Three credits.

PH-224 MECHANICS: DYNAMICS

Kinematics of particles. Kinetics of particles by: (a) force, mass, and acceleration, (b) work and energy, (c) impulse and momentum. Kinematics of rigid bodies. Plane motion of rigid bodies by: (a) forces and accelerations, (b) energy and momentum methods. Mechanical vibrations. Vectors used extensively. Prerequisite: MA 223. Cross-listed as MA 224. Offered spring semester. Three credits.

PH-225 STRENGTH OF MATERIALS

Strength of Materials is an introductory materials science and engineering course. Students learn about the influence of the structure of materials and inherent defects in materials on ultimate properties and performance. The emphasis is on strength and failure of metals, ceramics, and polymers, but electrical and thermal properties are also considered. Case studies are used to illustrate many of the instructional modules. Prerequisites: CH 102, MA 111. Three credits.

PH-241 OPTICS

A study of the basic principles of physical optics. Studies in refraction, polarization, interference, and diffraction based on the theory of electro-magnetic radiation. Prerequisites: PH 112, MA 212. Offered alternate years. Three credits.

PH-243 OPTICS LABORATORY

Laboratory to accompany PH 241. Topics include lenses, mirrors, and prisms, as well as reflection, refraction, polarization, interference, diffraction, and holography. One credit.

PH-244 ADVANCED LABORATORY

Experiments in various fields of physics focused on developing and applying a variety of common data acquisition and analysis skills. Offered spring of every odd-numbered year. One credit.

PH-252 ELECTROMAGNETIC FIELDS

An intermediate course in electromagnetic field theory. Extensive use is made of vector calculus. The differential forms of Maxwell's equations are developed. Methods of solution of Laplace's equation are investigated as well as electric fields in matter, current and Ohm's Law, and magnetostatics. Prerequisites: PH 111, PH 112, MA 111, MA 112, MA 211, MA 212. Offered spring every other year. Three credits.

PH-261 ELECTRONICS

Covers the fundamental aspects of electronic circuits. Topics include voltage and current courses, measurement techniques, impedance, Kirchhoff's Rules, Thevenin's Theorem, semiconductors, solid-state devices, amplifiers and feedback, boolean algebra, digital logic, programmable logic, memory, and microcontrollers. Extensive use is made of Electronic Design Automation (EDA) software to allow students to follow circuit design from prototype to finished printed circuit board. Must be taken with PH 263. Prerequisites: PH 112 and MA 112. Offered fall semester. Three credits.

PH-263 ELECTRONICS LABORATORY

Laboratory course to accompany PH 261 Electronics. Provides hands-on experience with real world circuits alongside the more theoretical development presented in PH 261. Includes measurement techniques, passive filters, transistor and operational amplifiers, combinational and sequential digital logic, and microcontrollers. Also includes design and fabrication of printed circuit boards and soldering techniques for both through-hole and surface-mount components. Corequisite: PH 261. One credit.

PH-311 MODERN PHYSICS II

Covers the study of the solution of the Schrödinger equation for both one and three dimensional systems, the spin and orbital angular momentum for both one- and multi-electron atoms, quantum statistics, the strong interaction and Yukawa potential, and an introduction to elementary particles. Prerequisite: PH 211. Offered every other spring. Three credits.

PH-322 QUANTUM MECHANICS

Quantum mechanics developed from a review of modern physics. Topics include the eigenvalue problem, expectation values, particle in a box with applications in the areas of expectation values and transitions, Hilbert spaces, superposition, commutators, symmetries and conservation laws, and angular momentum (spin, orbital) operators and eigenstates. Prerequisite: PH 211. Offered alternate years. Three credits.

PH-341 CONDENSED MATTER PHYSICS

Covers topics including crystal structure, Bragg scattering, scattering amplitude and form factors, the reciprocal lattice, lattice vibrations and quantization, phonon heat capacity, free electron gas, and energy bands in solids (Brillouin zones, Bloch functions, and the Kronig-Penney model). Prerequisite: PH 211. Offered every other spring. Three credits.

PH-350 INDEPENDENT STUDY – PHYSICS

May be repeated. Variable credit.

PH-360 HONORS COURSE

The subject and content will be specified when offered.

PH-370 MATHEMATICAL PHYSICS

An advanced course in the mathematical analysis of physical systems. Methods using linear algebra, complex variables, Fourier analysis, Laplace transforms, and other special functions are studied. Analytical software, such as Mathematica, may be used. Prerequisites: PH 111, PH 112, PH 213, and MA 212. Offered every other spring. Three credits.

PH-381 RESEARCH

Investigation and experimentation or an approved internship leading to the completion of the required senior thesis. One credit.

PH-550 PHYSICS INTERNSHIP

Work experience program extending the learning experience beyond the college into the world of work. Students are employed in an area related to their academic endeavor. Academic credits are awarded according to the extent of the work experience. The purpose of the program is to integrate academic studies and employment activities. May be repeated. Variable credit.

POLITICS

Bradley C. S. Watson, *Chairperson*

Bruce Antkowiak; Jerome C. Foss; Jason R. Jividen

Adjunct Faculty: Michael A. Arabia; Richard Coldren;
Mary Beth McConahey; George C. Miller; Richard Saccone

Professor Emeritus: Gabriel S. Pellathy

“What is government itself, but the greatest of all reflections on human nature? If men were angels, no government would be necessary. If angels were to govern men, neither external nor internal controls on government would be necessary. In framing a government which is to be administered by men over men, the great difficulty lies in this: you must first enable the government to control the governed; and in the next place oblige it to control itself.”

—James Madison, *The Federalist*, 51

Politics has been a subject of study from ancient Greece to the present day. For Socrates, Plato, and Aristotle, the word politics referred to the activities of the city, the polis, which they understood to be a necessary form of association for human flourishing. The study of politics was stimulated by the recognition that some cities are better than others at promoting the good life. No political science is complete, therefore, without consideration of what it means to be human and how political communities contribute to happiness.

The Politics Department at Saint Vincent College is unique in the extent to which it promotes an understanding of the nature of political phenomena and their relationship to a life not simply lived, but lived well. To this end, the Department offers a curriculum firmly rooted in the Great Books of Western civilization and the great political writings of the American tradition. Along with philosophical grounding, the program seeks to provide analytical competence to understand the contemporary political environment, to address public policy questions, and to contribute intellectually and practically to the sociopolitical challenges of our times. The Department encourages students to see politics whole, recognizing the intimate relationship that exists between wisdom gained through philosophical inquiry and political knowledge gained through empirical and analytical research. The Department thus helps to fulfill the liberal arts mission of the College. It also takes seriously its obligation to provide civic education: to cultivate the well-educated citizens and scholars who are essential to the long-term flourishing of a constitutional republic.

In light of these concerns, the Politics Department is committed to helping students engage and understand the fundamental ideas that have shaped political life, particularly the political life of Western civilization. We recognize that these ideas often conflict with one another, and we maintain that they are best approached at their source, namely the Great Books of Western civilization.

We also seek to promote patriotic yet analytical citizenship through a close study of the American regime. Courses concentrate on the principles, institutions, and policies under which Americans have lived. A distinctive feature of the Department is its emphasis on American political thought, which requires close study of the principles of the American founding, as well as competing principles.

At the broadest level, we provide students an education in the liberal arts; that is to say, those arts particularly conducive to the cultivation of free citizens and essential to political life in a republic. This includes the abilities and dispositions necessary to engage in public discussions on a variety of topics, both orally and in writing. Such abilities and dispositions include civility and respect for one's interlocutors, analytical tools for assessing

arguments, and rhetorical skills to present persuasively one's own views. Responsible use of any education or ability is essential; the Department therefore does not divorce politics from ethics.

Last but not least, we prepare students for a variety of careers and professions after graduation, including in law, business, nonprofit organizations, public administration, public office, international affairs, and academia. The Department thus takes an active role in helping students prepare for graduate and professional schools. The Department also actively assists students in finding internships and related experiences.

POLITICS STUDENT LEARNING OUTCOMES

Politics courses are designed to promote the following Student Learning Outcomes:

1. Students will be able to identify, explain, apply, and analyze the Great Books of Western civilization and the great political writings of the American tradition and assess how they continue to shape political life.
2. Students will be able to identify, explain, apply, and analyze the principles of the American founding and assess how they continue to shape American political life.
3. Students will be able to identify, explain, apply, and analyze the principles and practices of the U.S. Constitution and American political and legal institutions, and interpret and assess these principles and practices.
4. Students will be able to identify, explain, apply, and analyze the principles of international and comparative politics and assess their relationship to American interests.
5. Students will be able to defend, apply, and combine the liberal and civic arts, i.e., those arts conducive to the cultivation of free citizens, in preparation for successful careers, further education, and meaningful lives.

The Politics Department offers many choices. We have two major tracks: B.A. in Politics or B.S. in Political Science. Each major track is available with a pre-law concentration. The B.A. is particularly well-suited to students contemplating law or graduate school, and to those pursuing a dual or joint major while at Saint Vincent. The B.S. is particularly well-suited to students contemplating employment or graduate work requiring high levels of mathematical competence, such as master's degree programs in public policy or administration. Minors are available in Politics or Public Administration (for Public Administration minor, see Public Policy listing in this *Bulletin*).

REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE IN POLITICS:

(See core curriculum requirements.)

The social science core is satisfied by completing the major requirements.

Major Requirements (33 credits)

PS 100	Principles of American Politics	3
PS 205	Classical Political Thought	3
PS 210	Modern Political Thought	3
PS 242	International Politics	3
or		
PS 244	Comparative Politics	3
PS 295	American Political Thought	3
PS 335	Institutions	3
PS 368	Constitutional Law: National Powers	3
or		
PS 369	Constitutional Law: Civil Liberties	3
PS 345	Domestic Public Policy	3
PS 480	Senior Thesis	3
PS	Politics electives	
	(Any PS class except PS 550)	6

REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE IN POLITICAL SCIENCE:

(See core curriculum requirements.)

The social science core is satisfied by completing the major requirements.

Major Requirements (40 credits)

PS 100	Principles of American Politics	3
PS 205	Classical Political Thought	3
PS 210	Modern Political Thought	3
PS 242	International Politics	3
or		
PS 244	Comparative Politics	3
PS 295	American Political Thought	3
PS 335	Institutions	3
PS 368	Constitutional Law: National Powers	3
or		
PS 369	Constitutional Law: Civil Liberties	3
PS 345	Domestic Public Policy	3
PS 480	Senior Thesis	3
PS	Politics elective	
	(Any PS class except PS 550)	3
BA 350	Statistics I	3
EC 360	Econometrics or BA 351 Statistics II	3
MA 109/111	Calculus I	4
Pre-law concentration: students in either the B.A. or B.S. tracks are advised to take both PS 339 and PS 369.		

MINOR IN POLITICS

(An excellent pre-law minor for students in other fields)

A minor in Politics requires 18 credits. The following six courses are required:

PS 100	Principles of American Politics	3
PS 205	Classical Political Thought	3
PS 210	Modern Political Thought	3
PS 295	American Political Thought	3
PS 335	Institutions	3
PS 368	Constitutional Law: National Powers	3
or		
PS 369	Constitutional Law: Civil Liberties	3
PS 345	Domestic Public Policy	3

Variations from above are possible with permission of the chairperson of the Politics department. A student may choose, with the departmental advisor and with the consent of the chairperson, a program designed to meet individual objectives.

PUBLIC POLICY MAJOR

Courses from both Economics and Politics have been combined to create this major. The major emphasizes the analysis of public institutions and policy formulation. See the Public Policy listing in this *Bulletin* for information concerning this major.

PRE-LAW OPPORTUNITIES

The Politics Department offers courses by trained lawyers. Students may participate in the Pre-Law Club, where they meet members of the bench and bar including many Saint Vincent College graduates. They may also participate on Saint Vincent's competitive Mock Trial Team. Special opportunities are also available for legal internships with a federal judge. Students interested in law and legal internships should contact the Pre-Law advisor, Dr. Jason Jividen.

CENTER FOR POLITICAL AND ECONOMIC THOUGHT

The Politics Department enjoys a close relationship with the nationally-renowned Center for Political and Economic Thought, an interdisciplinary public affairs institution of the Alex G. McKenna School of Business, Economics, and Government at

Saint Vincent College. The Center sponsors research and education programs, primarily in the fields of politics, economics, and moral-cultural affairs. The Center seeks to advance scholarship on philosophical and policy concerns related to freedom, Western civilization, and the American experience. Opportunities abound to attend lectures and conferences, meet speakers, and engage in work-study. Interested students should contact the Center's Director, Dr. Bradley C. S. Watson.

AURELIUS SCHOLARS IN WESTERN CIVILIZATION

The Aurelius Scholars in Western Civilization is a program offered to motivated students interested in the intellectual heritage of Western civilization. It is open to all majors and minors in the McKenna School and to students considering a major or minor in the McKenna School. It should be of particular interest to students in the Politics Department. Aurelius Scholars are committed to taking a coherent sequence of courses in the Western educational tradition. The Aurelius sequence is designed to satisfy the college core curriculum in selected disciplines. Interested students should contact the Aurelius Scholars program director, Dr. Jason R. Jividen.

PI SIGMA ALPHA

Founded in 1920 at the University of Texas, Pi Sigma Alpha is the national political science honor society. Saint Vincent is one of 700 colleges to have a Pi Sigma Alpha Chapter, the purpose of which is to encourage and recognize excellence in the study of politics and government. Membership is restricted to juniors and seniors who have taken at least 10 credits in politics and have demonstrated high academic achievement. Members are eligible for opportunities such as conference attendance, publication, and graduate scholarships. Interested students should contact the chapter advisor, Dr. Jerome Foss.

GRADUATE STUDY

Candidates for the B.A. or B.S. degree who plan to pursue a Ph.D. in Politics, Government, or Political Science generally will have to show competence in one or two foreign languages as well as quantitative skills. We suggest that students contemplating such graduate studies consider taking foreign language courses beyond the intermediate level. The quantitative skill requirement for graduate school varies.

PUBLIC AFFAIRS AND PUBLIC ADMINISTRATION

For those seeking master's degrees in public policy and public administration, it would be advantageous to complete BA 100, BA 101, EC 201, EC 202, BA 350, and EC 360. Students should have further discussions with their advisors.

INTERNATIONAL AFFAIRS

For those seeking master's degrees in international relations or allied fields, it would be advantageous to pursue two foreign languages, and to complete EC 201, EC 202, BA 350, EC 360, EC 351, and EC 353.

INTERNSHIP PROGRAMS

Internships in the third and fourth years are possible. Majors are welcome to apply for internships in government, business, and non-profits. They are also welcome to apply to the Center for Political and Economic Thought for work study opportunities. Local part-time internships are also feasible — the Career and Professional Development Center will coordinate and assist in student placement. Politics students interested in such internships for credit will need the approval of the School Dean. In addition, the Department must be convinced that benefit will accrue to

both the student and the cooperating body. The number of credits granted for the internship is decided on an individual basis, not to exceed three credits in a semester. Internships are Pass/Fail and limited to a total of six credits. See the Business Administration section of this *Bulletin* for a detailed explanation of Internship requirements for McKenna School students. Students must register for PS 550, Internship.

DEPARTMENTAL ACTIVITIES

Depending on their interest and initiative, students are encouraged to join activities such as the Pizza and Politics Club, Pre-Law Club, the Mock Trial Team, the Republican Club, and the Democrat Club. The SVC Mock Trial team is quickly becoming nationally recognized — it competes against and has defeated numerous nationally competitive teams. Other recommended activities include attending relevant lectures and conferences sponsored by the Center for Political and Economic Thought.

JOB OPPORTUNITIES AFTER GRADUATION

Politics majors interested in civil service jobs should take both the federal and state civil examinations. Availability of positions in these areas varies from year to year, depending upon government's hiring practices. Specific federal and state government agencies may have their own entrance examinations. A student going into government service might find it advantageous to take a general Politics program with a minor in Public Administration. For other job opportunities in the private sector, please consult the Career and Professional Development Center.

TEACHER PREPARATION

See the Education Department requirements in this *Bulletin* for teacher certification requirements in various fields of education. Interested students should contact the Education Department chairperson and confer with their academic advisors.

INDEPENDENT STUDY COURSE

It is possible, with the approval of the School Dean, to do individual research projects/papers for credit. Students register for PS 500, taking not more than three credits each semester.

Typical First-Year Schedule

		Fall	Spring
PS 100	Principles of American Politics	3	
	Foreign Language	3	3
PS 135	Classical Political Thought	3	
PS 136	Modern Political Thought		3
EL 102	Language and Rhetoric	3	or 3
TH 119	First Theology	3	or 3
	College Core	0-6	0-9

All students will take one course designated as a First-Year Seminar which will satisfy a core curriculum requirement.

POLITICS COURSE DESCRIPTIONS

PS-00X POLITICS EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. This course will be automatically added to the student's registration upon submission of the graduation application. Zero credits. Pass/Fail.

PS-100 PRINCIPLES OF AMERICAN POLITICS

Politics raises fundamental questions: how ought we, as human beings, to live? Put another way, what is the nature of good and evil, right and wrong, justice and injustice? Implicit in these questions,

at the practical level of government, are further questions as to how we in fact live, how we should organize ourselves in communities, and who ought to govern in the communities in which we, as political beings, dwell. The American constitutional order represents one set of answers to these fundamental questions. This course examines the genesis of this constitutional order through a close study of the writings, speeches, and deeds of those who were responsible for its creation. It also elucidates the relationship of the regime to the larger tradition of Western political thought. The course will aid students in understanding the American regime as its founders understood it and in evaluating that understanding. The course will also pay attention to the extent to which the regime as it currently operates either does or does not reflect this original understanding. Offered every semester. Periodically offered as a first-year seminar or honors course. Three credits.

PS-100-BLS PRINCIPLES OF AMERICAN POLITICS

Politics raises fundamental questions for citizens and leaders alike: how ought we, as human beings, to live? Put another way, what is the nature of good and evil, right and wrong, justice and injustice? Implicit in these questions, at the practical level of government, are further questions as to how we in fact live, how we should organize ourselves in communities, and who ought to govern in the communities in which we, as political beings, dwell. The American constitutional order represents one set of answers to these fundamental questions. This course examines the genesis of this constitutional order through a close study of the writings, speeches, and deeds of those who were responsible for its creation. It also elucidates the relationship of the regime to the larger tradition of Western political thought. The course will aid students in understanding the American regime as its founders understood it and in evaluating that understanding. Students of the Benedictine Leadership Studies Program will consider questions of statesmanship in this class, and evaluate the American regime in light of the Ten Benedictine Hallmarks. Three credits

PS-161 TOPICS IN POLITICAL ECONOMY

This seminar-style course offers a philosophical and historical analysis of topics in political economy. Topics vary, but might include primary source readings from David Hume, Adam Smith, Ludwig Von Mises, Friedrich Hayek, Henry Hazlitt, or Milton Friedman. May be repeated. One credit.

PS-170 TRIAL ADVOCACY

Trial Advocacy is art and profession, theory and application. Students of Trial Advocacy are a multifaceted group, interested in developing and presenting confident, compelling arguments. Trial Advocacy is open to students of all majors. Those interested in logic, history, law, presentation skills, team competition, and public speaking are excellent candidates for the class and the related, and required, Mock Trial Team. Each year, the Mock Trial Team offers students the opportunity to present both sides of a criminal or civil case, while competing on an intercollegiate level, with awards presented to top competitors. The course offers graded credit, at two credits each semester, for a maximum of eight credits. Every semester. Two credits.

PS-200 PROFILES IN STATESMANSHIP

Drawing on classical and modern sources in political philosophy, political biography, and literature, this course will examine the ideas and actions of great statesmen. Confronting the most complex and often perilous circumstances imaginable, these political and military figures altered the direction of history. This course might include readings by or about Pericles, Aristotle, Cicero, Plutarch, Charlemagne, Shakespeare, Elizabeth I, Gibbon,

Burke, Washington, Hamilton, Webster, Lincoln, Marshall, MacArthur, Churchill, Roosevelt, and Thatcher, among others. Questions as to the nature of statesmanship – its practices, principles, and virtues – as well its place in democratic times, will be raised. The course should be of particular interest to anyone concerned with leadership and the elements of human greatness, including students of Politics, Business, History, Philosophy, English, Psychology, and Theology. Three credits.

PS-205 CLASSICAL POLITICAL THOUGHT

A survey of important works of classical political philosophy from the Western tradition, this course examines competing ideas about the political good. Readings will normally include selections from Plato, Aristotle, Augustine, and Aquinas. Offered fall semester. Three credits.

PS-210 MODERN POLITICAL THOUGHT

A survey of important works of modern political philosophy from the Western tradition, this course examines competing ideas about the political good. Readings will normally include selections from Machiavelli, Hobbes, Locke, Rousseau, Kant, Hegel, and Nietzsche. Recommended: PS 135. Offered spring semester. Three credits.

PS-222 STATE AND LOCAL GOVERNMENT

The structures, functions, and relationships of the various units of state and local government are presented, and their linkage to the federal government is analyzed. Important policy issues are analyzed and office-holders are invited to speak in class. Offered fall semester. Three credits.

PS-242 INTERNATIONAL POLITICS

This course studies international politics through texts drawn from, or conversant with, the primary sources in the history of political thought and the American tradition. The themes of the course include the ends of international politics, how states understand their political and economic relationships with one another, how they craft foreign policy, and how human nature both responds to and shapes international politics. Offered fall semester. Three credits.

PS-244 COMPARATIVE POLITICS

This course studies how different regime types might be compared with one another. Special attention is paid to what preserves or destroys regimes, the lives that different regimes encourage their citizens to lead, and how we might distinguish good from bad regimes. Texts are drawn from the history of political thought as well as more contemporary sources. Three credits.

PS-261 CATHOLIC POLITICAL THOUGHT

Catholicism has a long tradition of political inquiry that has made many important theoretical and practical contributions to the way we live. From a philosophic perspective, it bears a close resemblance to ancient political philosophy yet diverges in significant ways from modern political philosophy. This divergence raises an important practical question: How can Catholics in America reconcile faith and citizenship? This class is designed to answer that question. To do so we will read important contributors to the Catholic intellectual tradition, contemporary authors, as well as political rhetoric in America. Prerequisite: PL 101. Cross-listed with PL-271. Three credits.

PS-262 TOPICS IN POLITICAL PHILOSOPHY

This seminar-style course concentrates on a particular topic in political philosophy. Topics vary from year to year, and typically include an in-depth examination of a particular work, philosopher,

or idea of central significance to the development of political thought or practice. May be repeated. Three credits.

PS-264 INTRODUCTION TO INTELLIGENCE AND COUNTER-INTELLIGENCE

This course introduces students to the origins of collecting, assimilating, and using intelligence from ancient times through to the present day, and discusses how the latter helped establish the foundations of contemporary methods used across the intelligence community today. Students will be instructed in the basic means and methods by which intelligence is collected, analyzed, and made practicable for various stakeholders and decision-makers that require it. Throughout the course, students will also gain an appreciation of some of the practical and ethical challenges facing U.S. intelligence agencies, covering issues such as interrogation techniques at war and their efficacy, as well as the legal and institutional barriers to intelligence-sharing; both domestically and with partners and allies abroad. In addition, the course offers a comprehensive study of methods and techniques used by spies working against the U.S., as well as tools and techniques utilized by U.S. counterintelligence agents to both uncover and prosecute espionage. Three credits.

PS-265 CONTEMPORARY ISLAMIC POLITICAL THOUGHT

This course introduces students to the foundations of contemporary political Islamic thought and traces its evolutions to modern day jihadism. Importantly, it studies political Islam in its various manifestations not only in Muslim majority contexts, but also in the West. Students will become familiar with the activism of pioneer Islamist movements like the Muslim Brotherhood, and upon completing the course, will be able to identify the primary ideological differences between violent and non-violent manifestations of political Islam, its impact on social relations across geographical contexts, its resilience and success among Muslim publics, how it relates to the religion of Islam, as well as obstacles to its democratization. This course is a useful prerequisite to those interested in taking the Spring Semester Global Terrorism elective. Three credits.

PS-274 SHAKESPEARE/POLITICAL THINKER

Shakespeare's plays and poetry are helpful for understanding politics because they deal with different regime types. Shakespeare leads us to wonder which, if any, regime would be the best – a question at the very heart of political thought. Readings might include Julius Caesar, Henry V, King Lear, Hamlet, Othello. Three credits.

PS-295 AMERICAN POLITICAL THOUGHT

A study of important themes and/or developments in American political thought from the Civil War to the present. A key theme will be the shift from Madisonian constitutionalism to 20th-century progressivism. The course examines the political ideas that facilitated that shift. Subjects addressed include the nature of political equality, social Darwinism, pragmatism, progressivism and its critics, constitutional interpretation, and the "Reagan Revolution." Offered fall semester. Three credits.

PS-310 PUBLIC OPINION AND ELECTIONS

This course examines the fundamental roots and role of public opinion in America, and its influence on politics and public policy. This influence is examined by addressing elections and the operation of the party system, as well as the use of polls and the role of the media. Three credits.

PS-335 INSTITUTIONS

This course examines the institutions (i.e., Congress, the Presidency, and the Courts) of American government in the order that they are

presented in the United States Constitution. Thus, the Constitution itself serves as the guide. Students read relevant chapters from *The Federalist* in order to gain a full appreciation of the aims of the founders in terms of the design and intent of the governing institutions. Students delve into a good deal of relevant literature, including both primary and major secondary sources. Offered fall semester. Three credits.

PS-341 GLOBAL TERRORISM

This course analyzes the growing phenomenon of terrorism. Students examine diverse perspectives from governments, scholarly experts, and the terrorists themselves. The course covers the source and growth of terror, tactics of terror, key terrorist incidents, specific terrorist groups, and profiles of key leaders within groups. Students study and discuss government policy related to terror, including how the U.S. and other countries counter terrorism. Finally, the course examines the social and political problems associated with terrorism. Offered spring semester. Three credits.

PS-345 DOMESTIC PUBLIC POLICY

This course examines the nature of the administrative state and the public policy process, and considers the political principles, interests, and empirical evidence behind differing policy positions. Readings might be from social theorists, public policy analysts, politicians, commentators, and scholars. Offered spring semester. Three credits.

PS-368 CONSTITUTIONAL LAW: NATIONAL POWERS

An analysis of the historical development of American constitutional law with respect to powers of the national government. U.S. Supreme Court decisions regarding issues of federalism, separation of powers, executive authority, national security and war, the commerce clause, etc. will be considered. Debates in constitutional interpretation and the intended role of the Supreme Court will also be examined. Offered every other spring semester. Three credits.

PS-369 CONSTITUTIONAL LAW: CIVIL LIBERTIES

An analysis of Bill of Rights guarantees, with special emphasis on U.S. Supreme Court rulings. First Amendment issues - free speech, freedom of religion, and freedom of associations, as well as 14th-Amendment issues - equal opportunity, voting, and civil rights legislation are explored. Federal policies and politics in this area are analyzed. Offered every other spring semester. Three credits.

PS-371 INTERNATIONAL LAW

This course concentrates on international law and policy, including international organizations and transnational governance. The course examines treaties including the GATT and the WTO, and reviews specific trade laws and case studies considering the relationship between trade law and other regulatory areas, including product standards and intellectual property protection. This course also addresses U.S. trade policy and trade agreements, unfair trade practices, political restrictions on trade, and national security implications of exporting technology. Offered fall semester. Three credits.

PS-385 SPORTS LAW

This course will provide a detailed overview and analysis of the legal principles and ethical issues found in professional sports. Topics that will be discussed include athlete representation, labor law, antitrust exemption, arbitration, collective bargaining, salary cap administration, free agency, and the application of ethics as a method in the decision-making and problem-solving process. Prerequisite: PS 100. Offered fall semester (starting fall 2018). Three credits.

PS-390 ENVIRONMENTAL LAW AND POLICY

A survey of the history and present status of laws seeking to establish acceptable safety levels for air, water, chemicals, and land use. Methodologies of standard-setting, alternate policies, financial costs, and future developments will be discussed. Offered fall semester. Three credits.

PS-440 CONSTITUTIONAL LITIGATION/ANALYSIS

The course develops in students an understanding of some of the critical issues in constitutional law, as well as a sense of how those issues are argued in a proper legal context. The course gives students a sense of how to analyze legal issues and present them in a thoughtful, authoritative way. Students learn that the Constitution is not just a statement of political theory, but a law to be applied in courts to help people face practical problems that arise in dealing with the government. Three credits.

PS-470 GEORGE WASHINGTON FELLOWSHIP

The George Washington Fellows Program is named after our nation's first president in order to concentrate on the theme of citizenship. Washington emphasized in his writings and addresses that the success of the new American republic would depend upon the nation's ability to become a sacred union of citizens. The fellowship seeks to attract students interested in scholarly inquiry into the key questions of American citizenship, paying careful attention to the duties and responsibilities of individuals in a free, well-ordered society. Applications for projects in the following areas will be considered: American political thought, American economic thought, political or economic thought generally, American culture and religion, and American constitutionalism. Zero credit.

PS-480 SENIOR THESIS

This course facilitates the writing of the senior thesis, which is the culminating project for politics and public policy majors. Special care will be taken to aid students in utilizing their research and writing skills so that they may produce a high quality thesis. Offered spring semester. Three credits.

PS-500 INDEPENDENT STUDY – POLITICAL SCIENCE

Supervised study in areas of special interest to students. Offered to those students whom the department judges ready for such responsibility. May be repeated. Variable credit (not to exceed three credits per semester).

PS-550 POLITICS INTERNSHIP

Internships constitute a practicum to supplement academic learning. The number of credits and the hours involved vary depending on the nature of the internship. Please see the Career and Professional Development Center staff for current procedures that must be followed. Departmental approval and supervision must also be secured. Pass/Fail option only. Students are subject to the McKenna School's Student Guide to Internship Procedures and Requirements. See the Business Administration section of this Bulletin for a detailed description. May be repeated. Variable credit up to three credits.

PRE-HEALTH PROFESSIONS

Michael Rhodes, Ph.D., *Chairperson of Pre-Professional Health Committee*

The pre-health professions refers to undergraduate preparation for study in allopathic medicine, chiropractic medicine, dental medicine, osteopathic medicine, optometry, podiatric medicine, and veterinary medicine. Students interested in these areas may choose any undergraduate major, but a solid foundation in biology and chemistry, and a fundamental knowledge of mathematics and physics are necessary.

Admission to professional schools is highly competitive and the Pre-Professional Health Committee, composed of faculty from within and outside the natural sciences, works closely with individual students to determine where abilities and interests should be directed. During the freshman and sophomore years, the Committee aids students in course selection, guides them toward extracurricular experiences necessary to be competitive, and provides opportunities for students to learn about admissions, schools, and careers. The application process begins in the second semester of the junior year when students ask the Committee to prepare letters of recommendation. The Committee subsequently reviews each applicant. Many factors are weighed, some of which are academic performance, commitment to service, knowledge of the health professions, interpersonal skills, and leadership. Additionally, professional school admission exams are taken near the end of the junior year. Students then complete and submit their professional school applications during the summer between the junior and senior years.

The following courses are required by most health profession schools and the schedule is typical for pre-health students.

First-Year credits

BL 150-153	General Biology	8
CH 101-104	General Chemistry	8

Sophomore Year

MA 109 or 111	Calculus I	4
CH 221-224	Organic Chemistry	8

Junior Year

PH 111-114	General Physics	8
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Additionally, it is strongly recommended that Cell Biology (BL 208, 209) be completed by the end of the junior year. If scheduling permits, Physiology (BL 224) should be completed also. Students interested in optometry should note that one semester each of statistics and microbiology are requisites for admission to some optometry schools.

Students should investigate the requirements of the health profession schools in which they are most interested, because some have additional requirements such as Biostatistics (BL 260) and Microbiology (BL 212 and 213).

Students interested in medical school must take the Medical College Admissions Test (MCAT). To prepare, the following additional courses should be completed before the end of the junior year.

CH 251	Proteins and Metabolism
PY 100	Introduction to Psychological Sciences
PY 331	Biological Psychology
SO 101	Introduction to Sociology

EARLY ACCEPTANCE OSTEOPATHIC PROGRAM

Students interested in attending the Lake Erie College of Osteopathic Medicine (LECOM) have the option of applying for early acceptance. Specifically, they spend four years at Saint Vincent

College where they complete the requirements for a B.A. or B.S. degree in a major of their choice. They also must complete specified science courses (see below) and may take no fewer than 15 credits in any given semester. Application to LECOM and notification of provisional acceptance are made before the senior year. At the end of successful study at LECOM, students receive the Doctor of Osteopathic Medicine degree.

Independent of major, the following courses are required:

First-Year Credits

BL 150-153	General Biology with Lab	8
CH 101-104	General Chemistry with Lab	8
MA 109	Calculus with Applications I	4

Sophomore Year

BL 208, 209	Cell Biology with Lab	4
BL 224, 225	Physiology with Lab	4
CH 221-224	Organic Chemistry with Lab	8

Junior Year

PH 111-114	General Physics with Lab	8
CH 251	Proteins and Metabolism	3

ACCELERATED OSTEOPATHIC MEDICINE PROGRAM

Students interested in attending the Lake Erie College of Osteopathic Medicine have the option of completing their undergraduate and medical degrees in seven years instead of eight years. The required course of study while at Saint Vincent College follows. The curriculum is subject to revision. Students should consult with the Chairperson of the Pre-Professional Health Committee for additional information.

First Semester (16 credits)

BL 150, 151	General Biology I with Laboratory
CH 101, 103	General Chemistry I with Laboratory
MA 111	Analytical Calculus I
TH 119	First Theology

All students must take one four-credit course designated as a First-Year Seminar.

Second Semester (18 credits)

BL 152, 153	General Biology II with Laboratory
CH 102, 104	General Chemistry II with Laboratory
MA 112	Analytical Calculus II
EL 102	Language and Rhetoric Social Science (PY 100 or SO 101)

Third Semester (16 credits)

BL 208, 209	Cell Biology with Laboratory
CH 221, 223	Organic Chemistry I with Laboratory
MA 211	Analytical Calculus III
PH 111, 113	General Physics I with Laboratory

Fourth Semester (17 credits)

BL 224	Physiology - no Laboratory
CH 222, 224	Organic Chemistry II with Laboratory
PH 112, 114	General Physics II with Laboratory
PL 101	First Philosophy

History

Fifth Semester (17 credits)

CH 231, 233	Physical Chemistry I with Laboratory
CH 251, 253	Proteins and Metabolism with Laboratory
	Intermediate Language
	Fine Arts
	Social Science (PY 100 or SO 101)

Sixth Semester (18 credits)

CH 252, 254	Nucleic Acids and Membranes with Laboratory
CH 300	Research Seminar I
CH 304	Biological Chemistry Seminar
	History
	Intermediate Language
	English
	Theology
	Total Credit Hours at Saint Vincent College = 102

The culminating experience at Saint Vincent College is CH 304. At the end of the first year of successful study at the Lake Erie College of Osteopathic Medicine, the student receives the Bachelor of Science degree with a major in Biological Chemistry from Saint Vincent College. At the end of successful study at Lake Erie College of Osteopathic Medicine, the student receives the Doctor of Osteopathic Medicine degree.

EARLY ACCEPTANCE DENTAL PROGRAM

Students interested in attending dental school at the Bradenton, Florida, campus of the Lake Erie College of Osteopathic Medicine (LECOM) have the option of applying for early acceptance. Specifically, they spend four years at Saint Vincent College where they complete the requirements for a B.A. or B.S. degree in a major of their choice. They also must complete specified science courses (see below) and may take no fewer than 15 credits in any given semester. Application to LECOM and notification of provisional acceptance are made before the junior year. At the end of successful study at LECOM, students receive the Doctor of Dental Medicine degree.

Independent of major, the following courses are required:

First-Year Credits

BL 150-153	General Biology with Lab	8
CH 101-104	General Chemistry with Lab	8
MA 109	Calculus with Applications I	4

Sophomore Year

BL 208, 209	Cell Biology with Lab	4
BL 224, 225	Physiology with Lab	4
CH 221-224	Organic Chemistry with Lab	8

Junior Year

PH 111-114	General Physics with Lab	8
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Senior Year

CH 251	Proteins and Metabolism	3
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LECOM also recommends that students complete the following courses:

BL 220, 221	Comparative Anatomy with Lab	4
BL 212, 213	Microbiology with Lab	4
BL 214, 215	Molecular Genetics with Lab	4
BL 242, 243	Histology with Lab	3

ACCELERATED PODIATRIC MEDICINE PROGRAM

Students interested in attending the New York, Ohio, or Pennsylvania Colleges of Podiatric Medicine have the option of completing their undergraduate and medical degrees in seven years instead of eight years. The required course of study while at Saint Vincent College follows. Students should consult the chairperson of the Pre-Professional Health Committee for additional information.

History	6 credits
English	6 credits
Philosophy	6 credits
Theology	6 credits
Social Sciences	6 credits
Intermediate Language	6 credits

General Chemistry	8 credits
Organic Chemistry	8 credits
Mathematics	8 credits
Physics	8 credits
General Biology	8 credits
Cell Biology	4 credits

Additionally, 12 credits must be selected from:

BL 214, 215 Molecular Genetics and Laboratory

BL 220, 221 Comparative Vertebrate Anatomy and Laboratory

BL 224, 225 Physiology and Laboratory

BL 242, 243 Histology and Laboratory

All students must take one course designated as a First-Year Seminar.

Total credit hours at Saint Vincent College = 95 hours.

At the end of the second year of successful study at the College of Podiatric Medicine, the student receives the Bachelor of Arts degree with a major in Biology from Saint Vincent College. At the end of the fourth year of successful study at the College of Podiatric Medicine, the student receives the Doctor of Podiatric Medicine degree.

Please see the Allied Health Professions section of the bulletin for information on programs in Allied Health (e.g, Physical Therapy, Occupational Therapy, Physician Assistant, and Pharmacy, among others.)

PRE-LAW PROGRAM

Professor Bruce Antkowiak, *Pre-law Advisor*

The road to becoming a lawyer begins in college. At Saint Vincent, we are committed to helping you decide whether to take that road and, if you do, to give you the guidance and wherewithal to travel it successfully.

First, we will help you decide if the law is your vocation. The law is a profession for men and women who feel the calling to dedicate their lives to the pursuit of justice through the study and practice of law. It is not a profession to be pursued casually or by default. These are the realities you will face if you choose the law as a career:

- The study of law is a long, arduous and, quite often, expensive process.
- The job market for new law school graduates is extremely difficult and highly competitive.
- Excellence in the practice of law requires many hours of dedicated work and personal sacrifice.

You will embrace these realities if the law is your vocation; do not undertake them if it is not.

If the law is your vocation, the realities you face require that you focus on the critical moment that lies before you. That moment is not the date on which you are admitted to a law school; rather, it is the date on which you enter the profession as a practicing lawyer. To make that date come to pass as soon as possible after you complete law school, you must begin now to focus on these two goals:

- Attending a law school that excels at preparing students for the practice of law; and,
- Becoming a multidimensional person who will stand out in a crowded field of law graduates applying for the legal positions then available.

There are three important ways in which Saint Vincent can help you achieve these goals.

AN UNDERGRADUATE CURRICULUM TO READY YOU FOR LAW SCHOOL

While individual courses in logic, advanced writing, and principles of the judicial process will help acclimate you to the legal system and prepare you for the important LSAT exam, recognize this truth: there is no one major in college that best prepares you for law school or best positions you to be accepted by law schools you will want to attend. Each of the three schools at Saint Vincent can help you fashion an undergraduate curriculum that will make you a desired candidate for law school and prepare you to succeed in any law school program. These curriculum options will allow you to exhibit a rigorous work ethic and the necessary level of competence in the areas most critical to success in the study and practice of law:

- your capacity to synthesize a large body of material;
- your skill in analyzing that material to discern the key principles that will lead to a strategy to resolve the problem the material presents; and,
- your ability to advocate that strategy with force and clarity.

Explore these options with the help of the Deans of each of the schools.

A LIBERAL ARTS CURRICULUM THAT WILL MAKE YOU STAND OUT

Our liberal arts approach will help you become a multidimensional person who will stand out as a candidate for legal positions when that critical time comes. The job market for law school graduates is very difficult. When you seek your first legal position, you will need more than just a credible record of achievement in law school. You will need to exhibit an extra dimension that demonstrates that you are ready to begin promptly to be a productive member of the

legal profession. That dimension could be an indepth understanding of business, government, or the court system, fluency in multiple languages, advanced skill in writing or oral advocacy, or expertise in a field of science or technology. Our strong liberal arts curriculum will help you find new dimensions and enhance them into skills that will give you an edge in the competitive market that awaits you.

A SUPPORTIVE COMMUNITY

The community at Saint Vincent supports those who seek their vocation in the law through active student and alumni Pre-Law organizations that sponsor mentoring programs, raise money to lessen the cost of LSAT prep courses and support our excellent Mock Trial Team. Our Career Center makes the process of applying to law schools effective and efficient, and our pre-law advisor is available to students in any major for advice and counseling on the many decisions that have to be made in pursuing a career in the law. An LSAT prep course is offered by our faculty in the spring semester to help students score well on a test that is important to law schools.

A special level of support is offered to students who achieve recognition as a Saint Vincent Law Scholar. The Deans of the four schools and the pre-law advisor will identify truly exceptional candidates and certify to the law schools that they have demonstrated the academic and ethical attributes necessary to meet the highest standards of law school study and the practice of law that lies beyond it.

Among the criteria for this prestigious designation are the following. A complete list of criteria appears on the College website.

- Attain a GPA that equals or exceeds that which is required for graduation with honors.
- Attend a pre-law orientation session.
- Taken some program of preparation for the LSAT and achieved a score that is consistent with their overall academic performance.
- Complete:
 - a. A three-credit course in Logic or a comparable course in analytical reasoning.
 - b. Six credits in courses in advanced writing, or their equivalent.
 - c. Six credits in courses involving the study of the law or the legal system. A list of these courses will be available through the pre-law advisor.
- Show evidence of excellence in a rigorous course of study.
- Obtain support from faculty members who are intimately familiar with the depth and quality of the student's work.
- Demonstrate high moral caliber.
- Complete relevant internships and mentor experiences.
- Submit an essay demonstrating the student's passion for the study and practice of law, their commitment to upholding the highest traditions of the law, and their dedication to using their legal education in the service of the ends of justice.

Lastly, information about a 3-3 program in law is available through the pre-law advisor.

PSYCHOLOGICAL SCIENCE

Christopher Oldenburg, *Chairperson*

Jessica Black; Devin Fava; Mark Rivardo; Kristine L. Slank

Adjunct Faculty: Amber Eade; Hadara Katarski; Joanne Kornides; Michele Mayger-Skwirut; Larry Montemurro; Mary Niemiec; Paul Niemiec

Professor Emeritus: Vernon A. Holtz, O.S.B.; Susan Walker

The Department of Psychological Science offers a program of study that is designed to prepare students for admission to graduate school or for direct entry into the workforce in fields related to psychology. Students receive broad training in the science and application of psychological methods and principles, as well as opportunities to gain knowledge and hands-on experience in specialized areas.

The primary program of study in the Department of Psychological Science is the Bachelor of Science degree in Psychology. The credit hours required for the psychology major are purposefully kept to a manageable number to allow students to pursue specialized programs within the department and/or majors and minor from other departments. The complete list of programs offered by the department include the following:

- Bachelor of Science Degree in Psychology
- Minor in Psychology
- Concentration in Mental Health
- Addictions Specialist Training Certificate
- Minor in Biological Psychology
- Psychology Scholars Program

Other highlights of the psychology curriculum include a required internship in which students gain practical professional experience in the field. Students also complete a capstone course which can consist of an independent empirical research project (Research Thesis) or a comprehensive research paper (Research Review and Analysis). Students who complete a Research Thesis have the opportunity to present their work at a professional conference. Research Thesis is recommended for students who plan to pursue advanced study, especially in the more research-oriented fields of psychology and at the doctoral level.

PSYCHOLOGY STUDENT LEARNING OUTCOMES

Students will:

- Demonstrate understanding of content, principles, concepts, and applications in psychology.
- Demonstrate understanding of scientific inquiry and engage in critical thinking.
- Apply ethical standards to psychological science and practice.
- Communicate effectively in writing and speaking.
- Demonstrate successful professional development.

Requirements for the Bachelor of Science Degree in Psychology (35 credits)

PY 100	Introduction to Psychological Science	3
PY 203	Statistics I	3
PY 204	Statistics II	3
PY 212	Child Development	3
PY 243	Abnormal Psychology	3
PY 260	Social Psychology	3
PY 308	Cognitive Psychology	3
PY 309	Learning	3
PY 331	Biological Psychology	3
PY 341	Research Methods in Psychological Science	4

PY 550	Psychology Internship	1-3
One of the following two:		
PY 401	Capstone: Research Review and Analysis	3
PY 405	Capstone: Research Thesis I	

REQUIREMENTS FOR CONCENTRATION IN MENTAL HEALTH (24 CREDITS)

(For Psychology Majors Only)

PY 219	Introduction to Counseling	3
PY 230	Positive Psychology	3
PY 243	Abnormal Psychology	3
PY 251	Family Systems	3
PY 370	Ethical Issues	3
PY 343	Abnormal Psychology II	3
PY 382	Psychological Assessment	3
PY 322	Health Psychology OR	3
PY 250	Addictive Behaviors	

REQUIREMENTS FOR MINOR IN PSYCHOLOGY (18 CREDITS)

PY 100	Introduction to Psychological Science	3
Two of the following three:		
PY 212	Child Development	6
PY 243	Abnormal Psychology	
PY 260	Social Psychology	
One of the following four:		
PY 308	Cognitive Psychology	3
PY 309	Learning	
PY 322	Health Psychology	
PY 331	Biological Psychology	
Two additional three-credit courses offered by department		
		6

ADDICTION SPECIALIST TRAINING CERTIFICATE

The Addiction Specialist Training Program is designed to provide the background knowledge necessary for students to develop the skills to help people with substance abuse problems. The program covers areas such as mood-altering chemicals, counseling theories, legal rights of clients, and the development of specific treatment skills including intake, orientation, treatment planning, and case management. Employment opportunities for addiction treatment or prevention exist in addiction treatment centers, hospitals, outpatient treatment facilities, rehabilitation centers, halfway houses, and correctional facilities such as prisons and juvenile detention centers.

The certificate requires 27 credits (or 18 additional credits for Psychology majors). At least 12 credits must be earned at Saint Vincent College.

Required Courses:

PY 100	Introduction to Psychological Science	3
PY 214	Adolescent Development	3
PY 219	Introduction to Counseling	3
PY 250	Addictive Behaviors	3
PY 251	Family Systems	3
PY 252	Rehabilitative Treatment Systems	3
PY 280	Interpersonal and Group Processes	3

One of the following two: 3

PY 243	Abnormal Psychology	
CLS 377	Addiction and Crime	

One of the following two: 3

PY 322	Health Psychology	
PY 331	Biological Psychology	

Upon completion of the program, Saint Vincent College will award an Addiction Specialist Training Certificate. The 300 clock hours of instruction may be applied toward fulfilling the Pennsylvania Chemical Abuse Certification Board instructional requirements for state certification (see www.pacertboard.org).

THE PSYCHOLOGY SCHOLARS PROGRAM

The Psychology Scholars Program is designed to provide high quality students with an intensive education in the science of psychology. Through the program, students receive the educational background for admittance to and success in graduate school. The program places strong emphasis on the reading and analysis of scholarly work, class discussion, written assignments, and empirical research. Interested students apply for admittance to the program in the spring semester of their sophomore year.

In addition to completing the requirements of the Psychology major, students in the Psychology Scholars Program fulfill the following requirements:*

- Participants complete a research thesis (PY 405 and PY 406).
- Participants complete three seminar courses offered in the department. Current seminar courses include the following:
 - PY 271 Seminar: Myth Busting in Psychological Science
 - PY 370 Seminar: Ethical Issues in Psychology
 - PY 371 Seminar: Collaborative Research in Psychological Science
 - PY 374 Seminar: Personality Theories
 - PY 378 Seminar: Cognitive Psychology
- Participants attend a regional or national psychology conference in the junior or senior year.
- Participants present their research at a psychology conference; they apply for an A. J. Palumbo Student Research Grant to fund their travel, if applicable.
- Participants maintain a 3.67 GPA in psychology courses and a 3.50 overall GPA.

**Students not admitted to the Psychology Scholars Program are eligible to participate in any of the above activities if the student meets the requirements of the particular activity. Students who fulfill all requirements of the Psychology Scholars Program receive special recognition as a Psychology Scholar.*

MINOR IN BIOLOGICAL PSYCHOLOGY

There is a strong connection between the fields of Biology and Psychology. Psychology is often defined as the study of the mind and behavior. Contemporary psychologists understand and teach that all processes of the mind are ultimately the result of the functions of the brain. As a result, changing the brain - either through disease, injury, surgery, pharmacology, or even naturally over time - changes our minds and the way we think, feel, behave, and ultimately perceive and understand our world. Understanding the connection between biology and behavior is critical in any health-related field involving patient interaction, but it is of particular importance in the areas of mental health and neuroscience.

MINOR IN BIOLOGICAL PSYCHOLOGY (21 CREDITS TOTAL)

Required Courses (15 credits):

PY 100	Introduction to Psychological Science	3
PY 331	Biological Psychology	3
BL 150	General Biology I	3
BL 151	General Biology I Lab	1
BL 152	General Biology II	3
BL 153	General Biology II Lab	1
BL XX	any 200-Level Biology lab course	1

Clustered Courses (6 credits): For courses in this category, students are not allowed to count toward the minor courses housed in their own major department.

Psychology Cluster (for non-Psychology majors):

PY 250	Addictive Behaviors	3
PY 308	Cognitive Psychology	3
PY 309	Learning	3
PY 322	Health Psychology ¹	3
PY 333	Sensation and Perception	3
PY 382	Psychological Assessment	3

Biology Cluster (for non-Biology majors):

BL 220	Comparative Vertebrate Anatomy ¹	3
BL 222	Developmental Biology	3
BL 226	Neuroscience	3
BL 228	Wildlife Biology	

1 – These courses can be applied to an Allied Health Concentration of the Integrated Sciences Major or the Minor in Biological Psychology, but not both.

PSYCHOLOGY-SOCIOLOGY DOUBLE MAJOR

The Psychological Science and Sociology Departments offer a collaborative program designed to facilitate students' completion of majors in both psychology and sociology. Please see the chairpersons of Psychological Science and Sociology for specific details.

Typical First-Year Schedule**Fall Semester**

PY 100	Introduction to Psychological Science – First-Year Seminar	4
EL 102	Language and Rhetoric	3
or		
TH 119	First Theology	3
PY 243	Abnormal Psychology	3
	(if entering with PY 100 credit)	
	Intermediate Modern or Classical Language	3
	Mathematics	3
	History, Fine Arts, Philosophy, or Social Science	3

Spring Semester

PY 260	Social Psychology	3
TH 119	Exploring Religious Meaning	3
or		
EL 102	Language and Rhetoric	3
	Intermediate Modern or Classical Language	3
	History, Fine Arts, Philosophy, or Social Science	3

PSYCHOLOGICAL SCIENCE COURSE DESCRIPTIONS**PY-00X PSYCHOLOGY EXIT INTERVIEW**

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. Zero credits. Pass/Fail.

PY-100 INTRODUCTION TO PSYCHOLOGICAL SCIENCE

Introduction to the field of psychology, the scientific study of mind, body, and behavior. Topics are chosen by the instructor and may include research methods, biological bases of behavior, personality, learning, memory, social behavior, development, and behavior disorders. Offered both semesters. Periodically offered as a first-year seminar. Three credits.

PY-203 STATISTICS I

This first course in statistics introduces students to some of the basic statistical procedures that are most commonly used in the social sciences. The course begins with basic measures of central tendency and variability, and progresses into the study of probability and the logic of hypothesis testing. Analyses such as t-tests and Pearson correlations develop from these topics. Offered every fall. Three credits.

PY-204 STATISTICS II

A continuation of the first course in statistics, this course introduces more advanced procedures including analysis of variance and multiple regression. Non parametric statistical tests such as the chi-square test are also covered. Most statistical tests will be conducted by hand as well as using specialized computer software (SPSS). Prerequisite: ED-201 or PY-203 or equivalent course. Offered every spring. Three credits.

PY-212 CHILD DEVELOPMENT

This course examines human development from conception to the beginning of adolescence. The topics span cognitive, social, emotional, and physical development. In addition to the major theories and methods that have shaped the field of child development, we will become familiar with today's leading issues affecting children in family, school, and society. Prerequisite: PY 100 or ED 115. Offered spring semester. Three credits.

PY-214 ADOLESCENT DEVELOPMENT

This course examines biological, cognitive, and social development during adolescence. Covering roughly the developmental period from puberty through the late teens or early twenties, students will study family and peer relationships, sexuality, moral development, career issues, and various psychological and behavioral problems as they pertain to adolescents. Prerequisite: PY 100 or ED 115. Offered spring semester. Three credits.

PY-218 LIFE-SPAN DEVELOPMENT

This course examines human development from conception until death. The course is an introduction to the science of lifespan psychology emphasizing physical, psychological, interpersonal, and cognitive development. These issues are explored using scientific research, theoretical perspectives, and practical applications. Offered fall semester. Three credits.

PY-219 INTRODUCTION TO COUNSELING

This course provides an introduction to the skills, methods, and procedures of counseling and psychotherapy, including effective interaction and communication between therapist and client and the development of student self-awareness and self-assessment. The course also provides an overview of the major theoretical models of individual and family therapy, including psychodynamic, cognitive-behavioral, Gestalt, and humanistic-existential models. Prerequisite: PY 100. Offered spring semester. Three credits.

**PY-220 PSYCHOLOGY OF RELIGION:
THE SEARCH FOR MEANING**

This course is designed to assist students to believe developmentally and meaningfully in themselves and in their God during our Post-Modern era. An existential phenomenological approach will address contemporary issues: humans' search for meaning, 21st-century interpretations of religion and spirituality, evil, humans' experience of God and the Spirit, social justice, and love and human sexuality. Three credits.

PY-230 INTRODUCTION TO POSITIVE PSYCHOLOGY

This introductory course provides an overview of topics and concepts related to happiness and the positive aspects of human experience. From this perspective, psychology is a study of strengths, optimism, happiness, hope, and other positive emotions and states of well-being. Positive psychology requires a focus on strength and in building the best things in life as in repairing the worst, and as much attention to fulfilling the lives of healthy people as to healing the wounds of the distressed. Offered variably. Three credits.

PY-243 ABNORMAL PSYCHOLOGY

This course provides an introduction to psychological disorders. All major disorders are discussed in terms of specific symptoms, as well as the impact of the disorder on the individual's life. Etiology and treatment are also studied. Special emphasis is placed on understanding the classification system used in developing a diagnosis. Prerequisite: PY 100. Offered fall semester. Three credits.

PY 250 ADDICTIVE BEHAVIOR

The focus of one's addiction varies based on generational effects, cultural effects, and myriad other individual characteristics; yet addiction remains a stable issue across time. The primary goal of this course is that at its conclusion, students will leave with an empirically sound understanding of addiction and a more nuanced view of the individual struggling with addiction. To that end, this course aims to provide a broad overview of the study of addictive behaviors. The primary focus will be on substance use disorders. Secondary attention will be given to process addictions such as gambling disorder, time permitting. The course will cover the following topics: neurobiology of addiction, risk factors for addiction, the effects of addiction on the family, common conceptualizations of addiction, adolescent-specific issues, substance-specific considerations, and comorbidity. Attention to important cultural and ethical considerations will be embedded throughout the course. Typically offered fall semester. Three credits.

PY-251 FAMILY SYSTEMS

This course examines the major family systems theories, their assessment techniques, and associated therapies. Emphasis is placed on the features of a functional and dysfunctional family system. Separated/divorced, substance abusing, sexually abusing, and violent family systems and their dynamics are studied in detail. Prerequisite: PY 100 or ED 115. Typically offered fall semester. Three credits.

PY-252 REHABILITATIVE TREATMENT SYSTEMS

This pre-professional course introduces students to rehabilitative treatment systems currently used by chemical dependency programs. Topics include case management and treatment planning with various populations (e.g., youth, families), ethical and legal issues, the role of family and workplace in treatment, and community resources. Offered fall semester. Three credits.

PY-260 SOCIAL PSYCHOLOGY

An introduction to both classic and contemporary social psychological research and theories. Topics include research methods, the self as a social construction, perceiving social others, persuasion, and aggressive and altruistic behavior. Prerequisites: PY 100 or SO 101. Offered every spring. Three credits.

PY-270 INDUSTRIAL – ORGANIZATIONAL PSYCHOLOGY

An introduction to the psychological and sociological perspectives of the behavior of individuals in work settings. The key theme of the course is to show how the broad principles of I-O psychology can be applied in situations at work. Topics include worker

engagement, measuring motivation, productivity, group behavior, leadership, worker fairness, social networking and the workplace, and achieving balance between work and non-work. Offered variably. Three credits.

PY-271 MYTH BUSTING IN PSYCHOLOGICAL SCIENCE

Numerous studies have shown that many Americans hold beliefs about human behavior that are not true. For example, even well-educated individuals believe that we only use 10% of our brain. Although evidence refuting these myths is plentiful, these beliefs have become entrenched in modern society. By reading and discussing primary and secondary sources students will explore why the myths are not true, prevalence rates for belief in the myths, and how they may have come about and persisted. Offered variably. Three credits.

PY-275 SPORT PSYCHOLOGY

In this course students will learn the theories, concepts, and intervention techniques of sport psychology. The course will cover all populations including youth, senior athletes, and college and professional athletes. Topics covered will include, but not be limited to, motivational climate, goal orientation, anxiety, aggression, team dynamics, coaching, leadership, overtraining, injuries, and other challenges. Students will acquire an understanding of (1) Psychological theories, research, and research methods in sport psychology, (2) How psychological factors influence performance, (3) How athletes and coaches can improve psychological and communication skills for greater success, (4) The impact sports and athletes play in our society, and (5) The role of sport psychologists. Offered variably. Three credits.

PY-280 INTERPERSONAL AND GROUP PROCESS

This experiential-learning course is designed to introduce the art and skill of interpersonal communication and the organization and dynamics of groups to students interested in business management and in human services (e.g., psychology, education, and social work). This is primarily a skill-based course that emphasizes learning and practicing skills in active listening, open communication, problem-solving, and conflict management. The weekly format of the course includes a theory session followed by an experiential-learning laboratory. Enrollment is limited due to the nature of the experiential laboratory. Prerequisite: Seniors only. Offered spring semester. Three credits.

PY-308 COGNITIVE PSYCHOLOGY

An analysis of human cognition, including such topics as attention, perception, pattern recognition, memory, language production and comprehension, problem-solving, creativity, and artificial intelligence. Prerequisite: PY 100 or ED 115. Offered fall semester. Three credits.

PY-309 LEARNING

An overview of processes that cause human behavior to change in response to the environment. Animal models of learning are discussed, along with their application to human behavior. Topics include natural selection, classical and operant conditioning, biological constraints on learning, observational learning, and applications of the principles of learning to therapeutic approaches to behavior change. Prerequisites: PY 100 and PY 203. Offered spring semester. Three credits.

PY-320 FORENSIC PSYCHOLOGY

A survey of topics in forensic psychology, a specialized subfield involving the interface between psychology and law. Topics include forensic assessment, civil competence, eyewitness testimony, criminal responsibility, psychology of criminal behavior, criminal

profiling, jury issues, expert witness issues, police issues, and career paths in forensic psychology. Prerequisite: PY 100. Offered variably. Three credits.

PY-322 HEALTH PSYCHOLOGY

This course introduces students to affective, behavioral, and cognitive influences on health. The biological, psychological, and social influences on health, and health-improving interventions, will be recurrent themes throughout the course. Additional topics of study are decided by the class and vary by semester. Possibilities include the effects of stress, eating behaviors, substance abuse, specific diseases/disorders, and the patient/health care provider relationship on health. Prerequisite: PY 100. Offered variably. Three credits.

PY-331 BIOLOGICAL PSYCHOLOGY

This course introduces students to the ways in which behaviors are based on biological processes occurring within our bodies. An introduction to neurons, neurotransmitters, psychopharmacology, and the central nervous system forms the foundation of the course. Additional topics of study are decided by the class and vary by semester. Possibilities include sensory processes, motor behavior, reproductive behavior, emotion, learning and memory, and biological bases for psychological disorders. Prerequisite: PY 100. Offered fall semester. Three credits.

PY 333 SENSATION AND PERCEPTION

This course introduces students to the ways in which stimuli from our environments (e.g., a vibration in the air or a chemical molecule) are detected and interpreted by creatures, with a specific focus on humans. Course topics will be examined by studying the relevant physiology and neurology and the psychological implications for understanding and behavior. Prerequisites: PY100; PY331 or BL151 is recommended. Offered variably. Three credits.

PY-341 RESEARCH METHODS IN PSYCHOLOGICAL SCIENCE

The purpose of this course is to introduce students to the various tactics of performing research within the field of psychology. Although the emphasis is on psychological research methods, the procedures developed are applicable to all areas of scientific research. Course work includes hands-on experience conducting psychological research, analyzing data, and reporting results. Prerequisites: PY 203 and PY 204. Offered both semesters. Fee. Four credits.

PY 343 ABNORMAL PSYCHOLOGY II

Building upon the material in the introductory Abnormal Psychology course, this more advanced course provides students with an intense examination of mental illness and the issues surrounding it. Disorders covered in detail include Posttraumatic Stress Disorder, Obsessive Compulsive Disorder, Major Depressive Disorder, Schizophrenia, and Eating Disorders, among others. Psychology majors only. Offered alternating spring semesters. Three credits.

PY-350 INDEPENDENT STUDY – PSYCHOLOGY

May be repeated. Variable credit.

PY-370 SEMINAR: ETHICAL ISSUES IN PSYCHOLOGY

This upper division seminar course examines the prominent professional and ethical issues in psychology. Issues primarily surround work with patients; however, research and teaching issues are also covered. This is a seminar course in which students read and discuss articles from scholarly journals. Prerequisite: psychology major. Offered fall semester. Three credits.

PY-371 SEMINAR: COLLABORATIVE RESEARCH IN PSYCHOLOGICAL SCIENCE

Students read and discuss primary sources on a topic selected by the instructor and then collectively design a research project. The final paper for the course is a collaborative research proposal with pilot data and preliminary analyses. Completion of the entire project is expected to yield a publication-quality manuscript or a professional conference presentation. Students interested in continuing their involvement in the research beyond PY 371 may do so through PY 300 Directed Research. Prerequisites: PY 100 and Instructor's permission. Other prerequisites may be recommended depending on the semester's topic. Offered variably. Three credits.

PY-374 SEMINAR: PERSONALITY THEORIES

This upper division seminar course examines the major theories of personality. Students read and discuss articles from scholarly journals, as well as selected original works from prominent personality theorists. Topics include psychoanalysis, behaviorism, humanism, and trait theories, in addition to disorders of personality. Offered alternate spring semesters. Periodically offered as an honors course. Offered variably. Three credits.

PY-378 SEMINAR: COGNITIVE PSYCHOLOGY

In this upper division seminar course, students read and discuss articles from scholarly journals and complete laboratory demonstrations. The course examines special topics in the field of cognitive psychology such as memory errors, divided attention, and problem-solving. Prerequisite: PY 100 and permission of instructor. Offered variably. Three credits.

PY-382 PSYCHOLOGICAL ASSESSMENT

This course provides an introduction to the field of psychological assessment. Assessment includes a variety of psychological tests and other approaches designed to gain a better understanding of the human person. Includes personality and intellectual testing, as well as standardization and construction. Prerequisite: PY 203. Offered alternating spring semesters. Fee. Three credits.

PY-390 HISTORY AND SYSTEMS OF PSYCHOLOGY

An examination of the major systems and trends in the history of psychology. Special attention is given to the various schools of philosophical thought that preceded the emergence of psychology as a science. Although the contributions of particular psychologists are considered, the primary emphasis is on the major systems or schools of thought that have influenced the development of psychology as a science. Prerequisite: Twelve previous credits in psychology. Offered variably. Three credits.

PY-401 CAPSTONE: RESEARCH REVIEW AND ANALYSIS

In this capstone course, students write a literature review and analysis of a topic in the field of psychology. Students identify and examine primary sources and use these sources to develop a critical analysis of the topic area. Psychology majors completing PY 405 are exempt from this requirement. Prerequisite: PY 341. Offered both semesters. Three credits.

PY-405 CAPSTONE: RESEARCH THESIS I

Junior psychology majors design an empirical study and submit an APA-style research proposal and IRB application. Students conduct an extensive review of the literature, synthesize existing theory and research to build a rationale for their study, develop specific hypotheses, devise appropriate methodology and statistics, and obtain or construct supporting materials. Prerequisites: PY 341, 3.5 Psychology GPA, and permission of the department chair. Offered spring semester. Three credits.

PY-406 CAPSTONE: RESEARCH THESIS II

In this follow-up to Research Thesis I, students conduct the empirical study that they designed in PY 405. Students recruit participants; collect, analyze, and interpret data; compose the results, discussion, tables, and figures; and revise all earlier portions of the paper to produce an empirically based APA-style research thesis. Prerequisite: PY 405. Offered fall semester. Three credits.

PY-550 PSYCHOLOGY INTERNSHIP

Students engage in professional work experience in the community that complements and strengthens academic learning. The number of credits earned and the academic requirements are variable, depending on the duration of the experience. Students may or may not receive monetary compensation depending on the organization. Students must receive approval from their academic advisor and complete all paper work with the Career Center before registering for or beginning the internship. May be repeated. Offered both semesters. Variable credit.

PUBLIC HEALTH MINOR

Elaine Bennett, *Director*

PROGRAM DESCRIPTION

Public health is the science of protecting and improving the health of families and communities through promotion of healthy lifestyles, research for disease and injury prevention, and detection and control of infectious diseases (CDC Foundation). Designed to work with any major, this minor program helps students to learn about the exciting field of Public Health and to see how their liberal arts education prepares them to make important contributions to the health of our nation and globe.

PUBLIC HEALTH MINOR STUDENT LEARNING OUTCOMES

- To introduce students to the core functions of public health including assessment, program and policy development, and assurance of quality public health provisions;
- To increase students' awareness and understanding of the importance of social, cultural, behavioral, psychological, biological, environmental, and other processes to disease and health locally and globally;
- To foster skills and proficiencies, students need to contribute to the changing field of public health through the development of health programs and policies, research, awareness, and leadership.

REQUIREMENTS FOR A MINOR IN PUBLIC HEALTH

REQUIRED COURSES: (9 CREDITS)

AN 285	Foundations of Public Health	3
SO 248	Fundamentals of Epidemiology	3
HI 288	Global Health	3

Students must complete 12 credits of electives. These must come from at least two of the five clusters of courses below. No more than one may be at the 100-level. Up to three credits may be fulfilled using a public health-related internship or independent research experience with a faculty member.

CLUSTER 1

EL 111	Green Writing: Literature and the Environment	3
HI 206	Acupuncture to Alchemy: Topics in Medical History	3
HI 209	Issues in Contemporary East Asia	3
HI 226	Society and the Environment: The American Experience	3
HI 283	Health and Medicine in East Asia	3
PL271/PS261:	Catholic Political Thought	3
TH 280	Catholic Bioethics	3
One of the following:		
PL 216	Ethical Problems	3
PL 217	Environmental Ethics	3
PL 218	Bioethics	3

CLUSTER 2

BA 335	Internet Marketing	3
CS 214	Introduction to Mobile Application Programming	3
**CS 305	Web Technologies	3
**CS 350	Database Concepts and Information Structures	3
ES 220	Introduction to Geographic Information Systems	3

CLUSTER 3

**BA 440 Government and Not-for-Profit Accounting	3
**BA 491 Operational Excellence in the Service Industry with Applications in the Health Care Professions	3
CA 140 Interpersonal and Organizational Communication	3
PS 222 State and Local Government	3
PS 345 Domestic Public Policy	3
PS 390 Environmental Law and Policy	3

CLUSTER 4

AN 280 Medical Anthropology	3
AN 315 Applied Anthropology or Research Methods	3
AN 360 Research Methods	3
AN 295 Culture and Health in Guatemala	3
**PY 322 Health Psychology	3
PY 373 What Would Fred Rogers Do?	3
SO 340 Sociology of Health and Illness	3
SO 161 Environmental Sociology	3

CLUSTER 5

Note: Physics, chemistry, biology, or biochemistry majors are not recommended to use NSCI courses to fulfill the minor requirements.

NSCI 110 Bacteria, Friends or Foes?	3
NSCI 125 Introduction to Environmental Science (100)	3
NSCI 140 Science and Global Sustainability	3
NSCI 245 Killer Germs	3
NSCI 235 Human Biology and Laboratory	4
NSCI 260 Biotechnology: How Do They Do It?	3
NSCI 265 Science for International Development	3
**BIN 219 Biomedical Informatics	3
**BL 212 Microbiology	3
**BL 216 Biotechnology	3
**BL 232 Ecology	3
**BL 250 Medical Microbiology	3
**CH 251 Proteins and Metabolism	3
**CH 252 Nucleic Acids and Membranes	3

** This course has prerequisites that are not elective credits toward the minor.

PUBLIC POLICY

Bradley C.S. Watson, *Program Chairperson*

Seung (Ginny) Choi; Zachary Davis; Charles Fazzi; Robert DePasquale; Jerome C. Foss; Jeffrey Godwin; Thomas Holowaty; Andrew R. Herr; William J. Hisker; Jason R. Jividen; John Pascarella; Gary Quinlivan; Michael Urick

Distinguished Visiting Professor of Politics:
Hon. Tom Corbett

Adjunct Faculty: Michael A. Arabia; Mark D'Amico; Cecilia Dickson; Mary Beth McConahey; George C. Miller; Joseph Polka; Richard Saccone

Professor Emeritus: Gabriel S. Pellathy

The Public Policy program of the McKenna School is designed to develop an understanding of the economic and political institutions, principles, and processes involved in public policy decision-making. Students are led to examine issues critically while developing a substantive knowledge of market economics and democratic-constitutional government as the context for American public policy. These studies contribute to the development of a well-rounded liberal arts education while helping students pursue their professional goals. The Public Policy program offers a general public policy major. The major seeks to provide the theoretical and analytical background needed to effectively participate in public policy-related endeavors.

Governmental actions at the various levels have a broad impact on society and affect businesses, the professions, and many aspects of individuals' lives. Economic analysis and knowledge of political organization and politics comprise much of the intellectual framework for public policy decision-making. The curriculum combines courses in economics and political science to help foster the development of such skills and knowledge. All Public Policy majors are encouraged to participate in the programs of the McKenna School's Center for Political and Economic Thought, which sponsors numerous lectures and conferences by prominent outside speakers on campus.

The program's capstone experience is a senior thesis on a public policy topic fulfilled in PS 480. It is anticipated that many public policy majors may be interested in seeking immediate employment in public policy-related positions in the non-profit sector or business, or in government service or politics. To enhance career opportunities, an internship or other relevant work experience is recommended, which may be pursued through the College's Career Center.

The curriculum is also good preparation for students interested in law school; such students should also consult the College's Pre-Law program in this *Bulletin*. Students may consider applying to graduate school in public policy, public administration, or public affairs. Public Policy majors receive the Bachelor of Science degree.

PUBLIC POLICY: MAJOR REQUIREMENTS (49 CREDITS)

BA 100	Financial Accounting I	3
BA 150	Managerial Accounting	3
BA 350	Statistics I	3
BA 351	Statistics I Excel Lab	3
BA 350	Statistics I	3
BA 351	Statistics II Excel Lab	3
EC 101	Principles of Economics: Micro	3
EC 102	Principles of Economics: Macro	3
EC 201	Microeconomic Theory	3
EC 202	Macroeconomic Theory	3
MA 109	Calculus with Applications I	4
PS 100	Principles of American Politics	3
PS 242	International Politics	3
PS 336	American Political Thought	3
PS 345	Domestic Public Policy	3
PS 480	Senior Thesis (on a public policy topic)	3

This major satisfies all of the social sciences requirements of the college core curriculum. After completing this major and the college core, you will have 34 credits for electives.

Typical First-Year Schedule

Fall/Spring

EC 101, 102	Principles of Microeconomics and Macroeconomics	3 or 3
PS 100	Principles of American Politics	3
BA 100	Financial Accounting I	3
BA 150	Managerial Accounting	3
College Core—Foreign Language		3 or 3
TH 119	First Theology	3 or 3
EL 102	Language and Rhetoric	3 or 3
MA 109	Calculus with Applications I	4 or 4

All students will take one course designated as a First-Year Seminar which will satisfy a core curriculum requirement.

Minor in Public Administration

For those majoring in Politics, in addition to the major requirements, the following courses will be required:

BA 102	Survey of Accounting	3
BA 150	Managerial Accounting	3
BA 170	Organizational Behavior	3
BA 350	Statistics I	3
BA 350A	Statistics I Excel Lab	1
EC 101	Principles of Microeconomics	3

For those **not majoring in Politics**, 18 credits are required for the minor in Public Administration. **Business majors may not minor in Public Administration.** The following courses will be required:

BA 100	Financial Accounting I and	
BA 101	Financial Accounting II	6
or		
BA 102	Survey of Accounting	3
BA 350	Statistics I	3
BA 350A	Statistics I Excel Lab	1
PS 100	Principles of American Politics	3
PS 345	Domestic Public Policy	3

The student will also be required to choose two courses from the following list:

BA 150	Managerial Accounting	3
BA 170	Organizational Behavior	3
EC 101	Principles of Economics, Micro	3

The above program is an interdisciplinary program under the direction of the Politics Department. Substitutions for some of the courses above are allowed with the consent of the Dean of the McKenna School.

DOUBLE MAJORS AND MINORS

Public Policy majors may not receive a double major or minor in Economics or Politics; nor may they receive the Public Administration minor.

COURSE LISTINGS

For a description of the courses and semesters when they are offered, see the Business Department, Economics Department, and Political Science Department course listings. For a description of the courses and semesters when they are offered, see the Business Department, Economics Department, and Politics Department course listings.

SOCIOLOGY/ ANTHROPOLOGY

Thaddeus Coreno, *Chairperson*

Elaine Bennett; Phyllis Riddle

Adjunct Faculty: Angela Belli

The Department offers a Bachelor of Arts degree in Sociology and Anthropology, as well as a minor in two courses of study: Sociology and Anthropology. The philosophical foundation of the Department embraces the institution's emphasis on the need for a holistic liberal arts education. The unique perspective given by the department is particularly appropriate and helpful to any major or career path that would benefit from an understanding of human behavior. The Department seeks to develop a student's scientific understanding of the cultural and social forces that shape human behavior. By making use of the perspectives found in the fields of Anthropology and Sociology, students come to understand the science of human behavior within a cross-cultural and historical context.

An undergraduate degree in Sociology provides a strong liberal arts foundation for entry-level positions in social services, law or criminal justice, education, community development, marketing or other business-related fields, and government jobs. Those who enter human services might work with youths at risk, the elderly, or people experiencing problems related to poverty, substance abuse, or the justice system. Those who enter the business world might work in sales, marketing, customer relations, or human resources. Others may choose a teaching career. Sociology also offers valuable preparation for careers in journalism, politics, public relations, business, or public administration — fields that involve investigative skills and working with diverse groups. In addition, an undergraduate degree in sociology is excellent preparation for future graduate work in sociology in order to become a professor, researcher, or applied sociologist.

With a B.A. in anthropology, students are prepared for graduate school work in any of the four fields of anthropology, leading to careers in fieldwork, publication, cultural resource management, archival administration, teaching, or applied anthropology. The degree also provides valuable preparation for professional schools in fields such as medicine, law, dentistry, veterinary sciences, or public health. A degree in anthropology can also lead directly to careers in secondary school teaching, social services, business, government, culture and human resource management, and international development.

All Sociology and Anthropology majors are encouraged to undertake internships in areas that will allow them to explore career options and help determine what aspects of sociology they find most interesting. Sociology and Anthropology majors are also encouraged to select minors or concentrations that will support their career goals.

Students with a major in Sociology are eligible to participate in a cooperative program between Saint Vincent College and Duquesne Law School that allows students to earn their bachelor's degree and Juris Doctor degree in six years. In this program, qualified students who complete their first three years of study at Saint Vincent, fulfilling the core curriculum requirements and the requirements for the major, may transfer into the Law Program and complete the requirements for the Juris Doctor in three years. For details, see the explanation of this program in the Pre-Law section of the *Bulletin*.

SOCIOLOGY STUDENT LEARNING OUTCOMES

- Delineate the major theoretical frameworks and distinctive concepts upon which the discipline is grounded.
- Explain the effects of social location on groups and individuals.
- Explain the dynamics of social change and explain how social structures change as a result of social forces.
- Critically evaluate explanations of human behavior and social phenomena by using the sociological imagination.
- Apply scientific principles to understand the social world.
- Conduct and critique empirical research.

ANTHROPOLOGY LEARNING OBJECTIVES

- Articulate the anthropological perspective as built on comparative and holistic approaches to understanding cultural and biological systems.
- Describe how evolutionary and historical processes have shaped humankind and led to present day biological and cultural diversity.
- Apply anthropological theories and frameworks to analyze how cultural systems shape the human experience.
- Demonstrate knowledge and skills in anthropological research design, data collection, and analytical techniques.
- Apply ethical principles to analyzing issues in anthropological research.
- Demonstrate the ability to clearly communicate verbally and in writing by constructing a logical argument from anthropological and related literature.
- Articulate the nature and value of anthropological perspectives and skills in professional and academic applications.

REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE IN SOCIOLOGY

(See core curriculum requirements.)

B.A. Sociology Requirements: (36 credits)

SO 101	Introduction to Sociology	3
AN 222	Cultural Anthropology	3
SO 235	Inequality and Social Problems	3
PY 203	Statistics I	3
SO 307	Sociological Theory	3
AN 360	Research Methods	3
SO 405	Senior Seminar I	3
SO 406	Senior Seminar II	3
Any Four Sociology Electives		12

Students are encouraged to select a complementary area of study (minor or second major) in consultation with their faculty advisor.

REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE IN ANTHROPOLOGY

B.A. Anthropology Requirements: (36 credits)

AN 101	Introduction to Anthropology	3
AN 222	Cultural Anthropology	3
AN 230	Archaeology	3
AN 360	Research Methods	3
AN 450	Senior Seminar in Anthropology	3
PY 203	Statistics I	3
SO 235	Inequality and Social Problems	3

One of the following:

SO 101	Introduction to Sociology	3
SO 106	Sociology and Global Issues	3
SO 307	Sociological Theory	3
Any Four Anthropology Electives		12

Students are encouraged to select a complementary area of study (minor or second major) in consultation with their faculty advisor.

REQUIREMENTS FOR A MINOR IN SOCIOLOGY: (18 CREDITS)**Required Courses:**

SO 101	Introduction to Sociology	3
SO 235	Inequality and Social Problems	3
	Any four Sociology electives	12

REQUIREMENTS FOR A MINOR IN ANTHROPOLOGY: (18 CREDITS)**Choose one of the following concentrations:****Concentration in General Anthropology**

The general concentration provides students with a basic foundation in the discipline of anthropology, allowing students to incorporate the principles of anthropology's holistic perspective into their approach to their major discipline.

AN 101	Introduction to Anthropology	3
AN 222	Cultural Anthropology	3
	Elective Courses:	
	Any four Anthropology electives	12

CONCENTRATION IN APPLIED ANTHROPOLOGY

The concentration in applied anthropology is designed to prepare students to integrate anthropological thinking into their work in other disciplines. Students will become familiar with the broad range of applications of anthropology and will learn to approach problems from a holistic, interdisciplinary perspective.

AN 101	Introduction to Anthropology	3
AN 222	Cultural Anthropology	3
AN 315	Applied Anthropology	3
AN 360	Research Methods	3

Any two courses from the following: AN 221, AN 230, AN 238, AN 280, AN 332, SO106, SO 161, OR SO 235. Only one sociology course may count toward the minor.

TEACHER PREPARATION

Sociology or Anthropology majors interested in obtaining a teaching certificate should consult the requirements of the Education Department of Saint Vincent College in the Bulletin.

The Psychological Science and Sociology Departments offer a collaborative program designed to facilitate students' completion of majors in both psychology and sociology. Please see the chairpersons of Psychological Science and Sociology for specific details.

Typical First-Year Schedule**Sociology*****Fall Semester***

SO 101	Introduction to Sociology	3
EL 102		
or		
TH 119	Language and Rhetoric or First Theology	3
	Modern or Classical Language	3 or 4
PY 100	Introduction to Psychological Science	3
	History or Natural Science Core	3

Spring Semester

SO	Elective	3
AN 222	Cultural Anthropology	3
EL 102	Language and Rhetoric or First Theology	3
or		
TH 119	Modern or Classical Language	3 or 4
	History, Math, or Natural Science Core	6 or 7

* One course must be a First-Year Seminar (4 cr.).

*Actual schedule will depend on student's prior preparation and course availability. All students will take one course designated

as a First-Year Seminar which will satisfy a core curriculum requirement.

Typical First-Year Schedule**Anthropology*****Fall Semester***

AN 121	Anthropology I	3
EL 102	Language and Rhetoric or First Theology	3
TH 119	Modern or Classical Language	3 or 4
SO 101	Introduction to Sociology	
or		
PY 100	Introduction to Psychological Science	3
SO 106	Sociology and Global Issues	3
	History or Natural Science Core	3 or 4

Spring Semester

AN 222	Cultural Anthropology	3
EL 102	Language and Rhetoric	
or		
TH 119	First Theology	3
	Modern or Classical Language	3 or 4
	History, Math, or Natural Science Core	6 or 7

* One course must be a First-Year Seminar (4 cr.).

*Actual schedule will depend on student's prior preparation and course availability. All students will take one course designated as a First-Year Seminar which will satisfy a core curriculum requirement.

SOCIOLOGY/ANTHROPOLOGY COURSE DESCRIPTIONS**AN-00X ANTHROPOLOGY EXIT INTERVIEW**

All graduating students are required to meet with their department chairperson/program director to finalize requirement, for degree completion. This course is automatically added to the student's registration upon submission of the graduation application. Zero credits. Pass/Fail.

AN-101 INTRODUCTION TO ANTHROPOLOGY

This course presents an introduction to anthropology as a holistic discipline that studies the human condition across space and time, employing comparative and evolutionary perspectives. Students will develop a fundamental grasp of the principles, methods, and theories that define each of the four fields of anthropology as well as appreciation of how the discipline offers tools for a holistic study of the human condition. Typically offered fall semester. Periodically offered as a first-year seminar. Three credits.

AN-215 ARCHEOLOGY OF ANCIENT EGYPT

Ancient Egypt has a rich history which is illuminated through the archaeological record. The aim of this course is to provide a broad introduction to the historical periods of Egypt from the founding of the earliest state around 3,000 BC through the Roman conquest by Augustus in 30 BC. We will explore these historical periods by using examples from the archaeological record as well as through the examination of the art. In addition to providing background knowledge on ancient Egypt, this course promotes a student's understanding of the sources and methods by which knowledge about an ancient civilization may be obtained. Occasional offering. Three credits.

AN-221 BIOLOGICAL ANTHROPOLOGY

This course explores human biological origins, evolution, and

variation through the application of evolutionary theory and examination of the fossil record. Topics include primatology, paleoanthropology, ecology, forensic anthropology, evolutionary medicine, genetic variation of living populations, and evolutionary origins of human behavior. (Occasional offering.) Three credits.

AN-222 CULTURAL ANTHROPOLOGY

This course explores the concept of culture as an integral part of the human experience. We will explore the many facets of culture, including marriage and kinship and religion and ritual. We will examine the myriad ways in which humans organize and sustain themselves and examine concepts of gender, race, and ethnicity. We will explore how an anthropological perspective can be applied to understand and solve human problems. Typically offered spring semester. Three credits.

AN-225 ANTHROPOLOGY AND WORLD ART

What is art? What counts as art, and how and why is it designated so? Why do humans create art? Is there a universal aesthetic? These are questions we explore in this course. We begin by examining the evolutionary foundation of appreciation for aesthetics and capacity for creative expression in Homo Sapiens. We then explore, from an anthropological perspective, the creative urge that is a human universal. We consider the question, "What is art?" and seek answers from a number of societies and perspectives. We examine a broad range of material and social functions of art and contemplate the symbolic character of artistic expression and then explore the worlds of artists themselves, examining their position in and relationship to society and how they often simultaneously embody and transcend traditional social expectations. We will also consider issues such as including the integration of art from small scale societies into global markets and the impact of tourism on local art practices. (Occasional offering.) Three credits.

AN-230 ARCHAEOLOGY

This course provides an overview of the field of archaeology. Through the exploration of numerous archaeological case studies, we learn about the methods and theories that archaeologists use to study and recreate the story of past humans through an examination of the materials they left behind. We also examine the ethical and legal issues inherent to uncovering the past, particularly with regard to the handling of human remains. Typically offered every other spring semester (odd-numbered years). Three credits.

AN-255 CULTURES OF THE BIBLE

The people of the Bible lived in an environmental and cultural setting very different from that of modern times. Using a variety of frameworks and sources from archaeology and cultural anthropology, this course will examine how Biblical narratives take place within social, economic, political, and ecological contexts of the ancient Middle East and surrounding areas. Students will apply a combination of archaeology and cultural anthropology to illuminate the lives and times of the Biblical eras. This is an online course. Occasional offering. Three credits.

AN-280 MEDICAL ANTHROPOLOGY

Medical Anthropology is a specialization within anthropology that draws from the discipline's four fields of cultural anthropology, physical anthropology, archaeology, and linguistics. This course presents an overview of the range of theories and approaches medical anthropologists use to understand the way

people deal with, think about, and experience health and disease. Topics to be covered include evolutionary approaches to health, cultural and political ecology of health, ethnomedical systems, cultural constructions of illness, biomedicine as a cultural system, and applied medical anthropology. Typically offered every other spring semester (even numbered years). Periodically offered as an honors course. Three credits.

AN-285 FOUNDATIONS OF PUBLIC HEALTH

Public health applies social and natural sciences toward the mission of "fulfilling society's interest in assuring conditions in which people can be healthy" (Institute of Medicine, Future of Public Health, 1988). This course explores the foundations of public health through study of the history, ethical, and theoretical foundations and institutional structures by which public health professionals work toward this mission. Through readings, lectures, discussions, and active learning projects, students will examine concepts, principles, and tools of the discipline and develop an understanding of the role of public health professionals and organizations in promoting health of populations. Three credits.

AN-287 GLOBAL HEALTH PRACTICE

In this course, students will take part in an on-going global health project in collaboration with the instructor. The course will include introductions to global health topics, frameworks, and programs and involve planning and preparation for practical activities, research, and internships in global health, such as foundational research, data collection, program planning, and program evaluation. Zero to three credits.

AN-288 APPLIED RESEARCH AND SERVICE IN GUATEMALA

In this course, students will take part in an on-going global health project with a community partner in Guatemala. Students will be part of a team conducting community-based participatory research with the goal of supporting the community partner's implementation of evidence-based interventions for improving community health in specific localities. Students will gain practical experience working on a research and practice team as the team contributes to the design and implementation of data collection and analysis, program planning, local capacity building, and program evaluation. Zero to six credits.

AN-295 CULTURE AND HEALTH IN GUATEMALA

Guatemala is a country characterized by majestic mountains, towering volcanoes, elegant colonial architecture, and colorful indigenous culture. Its beauty and exoticism stand in stark contrast to the poverty that affects 75% of its people. In this course, we will explore how the culture, political economy, and ecology of this land and its people become important factors in the health of its population. During a 14-day trip to Guatemala, students will be immersed in Guatemalan culture through service learning projects with clinics, schools and hospitals, visits to museums and Mayan ruins, and experiential learning opportunities with local families and organizations. Six credits.

AN-315 APPLIED ANTHROPOLOGY

Applied anthropology is the application of anthropological theories, perspectives, and research methods to understanding and solving real-world problems. This course will examine applications of anthropology in areas including medicine and public health, environmental and ecological issues, indigenous rights and basic human rights, as well as in the context of other

disciplines such as business, marketing, and education. Students will participate in an applied project as part of an experiential and service-learning approach. Typically offered every other fall semester (odd numbered years). Three credits.

AN-322 GLOBAL ENGAGEMENT SEMINAR

In this seminar course, students will engage in reading, discussion, and debate about various ways to analyze and interpret the world's increasingly interconnected political, social, cultural, ecological, and economic systems. Drawing from a range of academic materials and resources on current events and issues, students will practice skills and ways of thinking that will allow them to work productively with people and institutions from various cultures and backgrounds and will analyze how their actions, locally, play a part in the complex dynamics of our connected world. Three credits.

AN-328 LINGUISTIC ANTHROPOLOGY

The course examines the origins, nature, and development of human language and communication. The topics we cover include the mechanics of speech, history of languages, ways in which languages change, connections between language and cognition, kinesics, literacy, and language acquisition. No prerequisites. Occasional offering. Periodically offered as an honors course. Three credits.

AN-350 INDEPENDENT STUDY - ANTHROPOLOGY

Independent investigation and research into a special topic for selected students. Topics are determined by both student and professor. Prerequisite: permission of faculty member and departmental chair. May be repeated. Variable credit.

AN-360 RESEARCH METHODS

This course takes a practical, experiential approach to collection and analysis of qualitative and quantitative data. Students will learn the fundamentals of research design and, through a series of field exercises, develop skills in a number of data collection methods and analysis. Research methods covered will include observation, participant observation, informal and formal interviewing, focus groups, and questionnaires. Through discussion and exercises, we will examine ethical issues, theoretical foundations, and potential applications of mixed method research. Typically offered every other fall semester (odd numbered years). Three credits.

AN-375 SPECIAL TOPICS/ANTHROPOLOGY

Topics vary, but the focus of this course is an in-depth examination of specific issues and/or developments in anthropology. Prerequisite: junior or senior standing. Occasional offering. Three credits.

AN-450 SENIOR SEMINAR – ANTHROPOLOGY

This course is a capstone course for Anthropology majors. It is designed to facilitate critical reflection and analysis through completion of an independent senior project as well as a self-evaluation of anthropological skills/knowledge and personal objectives. Prerequisite: permission of the faculty member. Three credits.

AN-550 ANTHROPOLOGY INTERNSHIP

Students may arrange to receive credit for employment experience in various non-college settings. It is also possible to have paid or unpaid professional work entered into the transcript as "no credit." Prerequisite: permission of the departmental coordinator. May be repeated. Variable credit.

SO-00X SOCIOLOGY EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. Zero credits. Pass/Fail.

SO-101 INTRODUCTION TO SOCIOLOGY

This course is an overview and survey of the scientific study of human interactions in society. The course explores the basic concepts that are the foundation of the discipline. Students are introduced to research methods, theoretical perspectives, culture, socialization, social interaction, deviance, and inequality. Typically offered every semester. Periodically offered as a first-year seminar or honors course. Three credits.

SO-106 SOCIOLOGY AND GLOBAL ISSUES

This course is an introduction to sociological perspectives on globalization and the global dimensions of problems facing contemporary society. The course will review globalization theories and trends and the processes and structures of globalization. While the emphasis is on theoretical frameworks and data from sociology, this course takes an interdisciplinary approach to the issues surrounding globalization. Prerequisite: SO 101 recommended. Typically offered fall semester. Three credits.

SO-161 ENVIRONMENTAL SOCIOLOGY

This course is designed as an introductory course on environmental sociology. The course will examine the varied forces and perspectives that have an impact on environmental policy making. Subject areas include environmental policy-making, the concepts of ecology and sustainability, renewable and non-renewable resources, pollution, energy policy, and global environmental degradation. Offered every fall semester. Three credits.

SO-200 RACE AND ETHNICITY

This course explores the causes and consequences of prejudice and discrimination in America. We will connect the historical emergence of racial and ethnic groups to the social, cultural, political, and economic forces that shaped their experiences. The continuing role of these social forces will be highlighted in order to nurture a sociological vision of contemporary minority group life. The course will also accent relations between racial and ethnic groups and the evolution of social movements that resist oppression. No prerequisites. Typically offered fall semester. Three credits.

SO-202 SOCIOLOGY OF CHILDHOOD

Studying childhood from a sociological perspective means that we look at children's experiences in their larger social, cultural, and historical context. In this course, we will begin by exploring childhood as a social phenomenon, engaging in discourse on topics such as the social construction of childhood, the ways in which they take part, and how children shape society. After this foundation is established, we will examine several of the problems faced by children today within a global context: issues such as poverty, access to education, child labor, human trafficking, and the effects of conflict. Prerequisites: SO 101 recommended. Typically offered spring semester. Three credits.

SO-204 DEVIANCE

This course begins with an overview of sociological theories of deviance and applies the different theoretical perspectives to current topics in deviance. A variety of definitions, key theoretical perspectives, and concepts are presented and

analyzed in an effort to understand the numerous ways that deviant behavior may be defined, explained, and interpreted. The field of deviance provides an opportunity to study interesting and important substantive areas of sociology, as well as an opportunity to study basic concepts and theoretical approaches in sociology. No prerequisite. Typically offered every other spring semester (even-numbered years). Three credits.

SO-206 SELF AND SOCIETY

The main goal of this course is that the student understands how we become social creatures and how, through our everyday interactions with one another, we make and remake ourselves and our social worlds. We will explore topics such as the social construction of reality, socialization, identity construction and expression, group interactions, symbolic interaction, and impression management. With an understanding of how we participate in the construction of our own realities, we can take a more active and purposeful approach toward making this the sort of world in which we want to live. Three credits.

SO 207 VIETNAM ERA: SOCIETY, CONFLICT AND CHANGE

This course will examine social/cultural conflict and change in the U.S. during the Vietnam Era. Although we will look at the war itself from the perspective of the Burns and Novick documentary "The Vietnam War," the course includes a discussion of many of the significant social trends of that time. Prerequisite: Juniors or Seniors. Three credits.

SO-212 SOCIOLOGY THROUGH CINEMA

This course will explore sociological themes through film, focusing on issues relating to social inequality and social justice. The course is organized around key films and documentaries, accompanied by lectures and class discussions. We will focus on movies as text, allowing us to develop our sociological imaginations through the viewing, discussion, and analysis of feature-length films. Three credits.

SO-217 SOCIOLOGY OF RELIGION

All forms of religious experience are connected to a social environment. The focus of the course is the impact of the social context upon religious belief and behavior. Special topics include apocalyptic movements, Catholics and modernity, cults, sects, fundamentalism, Satanism, conversion experiences, the charismatic movement, and the changing role of women in religious institutions. No prerequisite. Typically offered every other spring semester (odd-numbered years). Three credits.

SO-235 INEQUALITY AND SOCIAL PROBLEMS

This course is an introduction to stratification, class theory, and social inequality, with an emphasis on the United States. We will explore relevant sociological theories and research findings concerning economic, political, and gender disparities, and the social problems created by these structures of inequality. No prerequisite. Typically offered fall semester. Three credits.

SO 248 FUNDAMENTALS OF EPIDEMIOLOGY

This course covers the fundamentals of epidemiology as the study of the distribution and determinants of diseases, health conditions, or events among populations and the application of that study to prevent and control health problems. Three credits.

SO-276 SOCIOLOGY OF GENDER

This course explores the social formation of gender inequality as well as the accompanying cultural construction of masculine and feminine ideologies and identities. Our investigations will focus

on the following themes: the institutionalization of patriarchy; the intersection of class, power, and racial disparities between men and women; sexual violence against women; the transformation of gender roles; and the social movements and organizations that resist discrimination. No prerequisite. Typically offered every other fall semester (odd-numbered years). Three credits.

SO-307 SOCIOLOGICAL THEORY

This course traces the origin and development of sociological theory from the Enlightenment to the 21st century. The first part of the course will investigate the primary works of the classical theoreticians, focusing on Marx, Durkheim, and Weber. The second part of the course explores contemporary theories that have shaped sociology since the early 1900s, focusing on functionalism, conflict theory, and symbolic interactionism. Additional theories such as social exchange theory, phenomenology, and postmodernism will also be discussed. Prerequisite: SO 101, junior or above. Typically offered every other spring semester (even-numbered years). Three credits.

SO-340 SOCIOLOGY OF HEALTH AND ILLNESS

This course explores the sociological factors involved in the onset and progression of mental and physical illness. Sociological theories and research are used to make sense of the distribution of disease across groups in society. The main goal of the course is to show how social conditions like poverty, economic inequality, discrimination, environmental pollution, and segregation can produce harmful physical and psychological effects, especially in the form of elevated stress levels. The course will also consider the role of public policy as a strategy for improving health and alleviating suffering. No prerequisite. Typically offered every other spring semester (odd-numbered years). Three credits.

SO-350 INDEPENDENT STUDY – SOCIOLOGY

Independent investigation and research into a special topic for selected students. Topics are determined by both student and professor. Prerequisite: permission of faculty member and departmental chair. May be repeated. Variable credit.

SO-356 QUANTITATIVE RESEARCH METHODS

This course is an overview of research methodology in the social sciences. The general subject areas include research design, sampling, quantitative and qualitative methods, ethical issues, and computer-assisted analysis of results using SPSS. The emphasis will be on quantitative methods. Occasional offering. Three credits.

SO-375 SPECIAL TOPICS IN SOCIOLOGY

Topics vary, but the focus of this course is an in-depth examination of specific social issues and/or developments in sociology. Prerequisite: junior or senior standing. Occasional offering. Three credits.

SO-405 SENIOR SEMINAR I

This is a required capstone course for senior sociology majors. The seminar will review each step of the research process, and students will complete an original research project. The fall semester is dedicated to composing a literature review and devising a research plan, with completion of the project in the spring semester. Prerequisite: AN 360 or SO 356 or permission of instructor. Typically offered fall semester. Three credits.

SO-406 SENIOR SEMINAR II

This course is the second half of the capstone course for sociology majors. It is designed to facilitate the completion of the research project proposed in the fall in SO 405. Prerequisites: SO 405. Typically offered spring semester. Three credits.

SO-550 SOCIOLOGY INTERNSHIP

Students may arrange to receive credit for employment experience in various non-college settings. It is also possible to have paid or unpaid professional work entered into the transcript as “no credit.” Prerequisite: permission of the departmental coordinator. May be repeated. Variable credit.

THEOLOGY

Christopher McMahon, *Chairperson*

Rev. John Aupperle; Lucas Briola; Rabbi Jason Edelstein; Jason King; Nathan Munsch, O.S.B.; Catherine Petran; Patricia Sharbaugh

Professor Emeritus: Campion Gavalier, O.S.B.

The Theology Department at Saint Vincent College offers a rigorous and engaging course of study in theology, embracing St. Anselm’s famous description of theology as “faith seeking understanding.” In the spirit of the Benedictine tradition, the department teaches students to integrate faith and reason.

THEOLOGY PROGRAM OUTCOMES

Graduates of the Theology Program will (1) have the basic knowledge and experience appropriate to secure entry-level positions as professional Directors of Faith Formation, Teachers of Theology/Religion at the Secondary Level, Campus Ministers, and Youth Ministers. Graduates of the program will also (2) be prepared to enter accredited graduate programs in Theology (and related fields), as well as seminary formation programs, enabling them to become professional pastors/ministers and academics. Additionally, graduates of the Theology Program who pursue vocational/professional opportunities in other areas will (3) demonstrate an awareness of the broader purpose of human living (including its moral/ethical dimensions) as it relates to their chosen professional field.

THEOLOGY STUDENT LEARNING OUTCOMES

Students will:

- Define the meaning of the Christian scriptures and apply the various methods necessary for studying them.
- Identify and contextualize the major doctrines of Christianity in general and Catholicism in particular.
- Assess the relevance of the Christian tradition to contemporary moral issues.
- Define and assess the Catholic approach, as articulated by the Second Vatican Council, to the true and holy as expressed in other religious and intellectual traditions.

THEOLOGY MAJOR REQUIREMENTS: (30 CREDITS)

The basic requirements are below. Majors wishing to focus on ministry, graduate schools, or teaching high school need further courses chosen in conjunction with the chairperson of the department.

TH 119 First Theology

TH 300 Systematic Theology

TH 301 Systematic Theology II

TH 499 Theology Capstone

One course in scripture (TH 201-249)

One course in moral theology (TH 250-299)

One course in doctrines (TH 300-349)

One course in religious traditions (TH 350-399)

Two Electives

Exit Interview: 0 credits

JOINT MAJOR IN PHILOSOPHY AND THEOLOGY REQUIREMENTS: (57 CREDITS)

The joint major in Philosophy and Theology was specifically designed for students who are interested in pursuing studies in both disciplines; the major will help such students to appreciate the similarities, differences, and relationship between philosophy and theology.

From Philosophy:

PL 120	Logic
PL 201	Ancient Philosophy
PL 202	Medieval Philosophy
PL 203	Modern Philosophy
PL 204	Kant and His Successors
or	
PL 206	19th- and 20th-Century Philosophy
PL 215	Ethics
PL 240	The Influence of Philosophy on Theology, Then and Now
PL 440	
or	
450	Senior Capstone Exam or Thesis

Six credits in Philosophy electives

From Theology:

TH 119	First Theology
TH 300	Systematic Theology
TH 301	Systematic Theology II
TH 499	Theology Capstone
One course in scripture (TH 201-249)	
One course in moral theology (TH 250-299)	
One course in doctrines (TH 300-349)	
One course in religious traditions (TH 350-399)	
One Theology elective (TH 250, 255, 275, 280, 315, 320, 335, 344, 348, 365, 385)	

THEOLOGY MINOR REQUIREMENTS (18 CREDITS)

TH 119	First Theology
TH 300	Systematic Theology
TH 301	Systematic Theology II
Three other theology courses.	

Typical First-Year Schedule

Fall Semester

TH 119	First Theology	3
PY 100	Introduction to Psychological Science	3
MA 104	Elementary Functions	3
	Foreign Language (intermediate level)	3
	Natural Science	4

All students will take one course designated as a First-Year Seminar (typically this will be TH 119) which will satisfy a core curriculum requirement.

Spring Semester

One course in scripture (TH 201-249)		3
or		
One course in doctrines (TH 300-349)		3
History Course		3
EL 102	Language and Rhetoric	
	Foreign Language (intermediate or advanced level)	3
	Natural Science	4

THEOLOGY COURSE DESCRIPTIONS

TH-00X THEOLOGY EXIT INTERVIEW

All graduating students are required to meet with their department chairperson/program director to finalize requirements for degree completion. This course will be automatically added to the student's registration upon submission of the graduation application. Zero credits. Pass/Fail.

TH-119 FIRST THEOLOGY

The objective of the course is to explore the meaning of the Judeo-Christian tradition primarily through the study of the Hebrew and Christian Scriptures, with an appreciation of the various critical methods necessary for further study. Offered every semester. Periodically offered as a first-year seminar or honors course. Three credits.

TH-201 TORAH

This course will provide a comprehensive study of the first five books of the Bible (Genesis, Exodus, Leviticus, Numbers, and Deuteronomy). It will explore the ancient world of these texts (making use of comparative ancient Near Eastern works) as well as their literary character and theological meaning. Attention will be given to key themes such as creation and covenant, and the course will focus on how these themes resonate in the contemporary world. Three credits.

TH-204 PSALMS AND WISDOM LITERATURE

This course offers an in-depth study of the Book of Psalms and the Wisdom tradition of the Old Testament. It explores ancient Israel's approach to worship and moral formation as well as its approach to questions about human righteousness and suffering. This historical study provides the foundation for discovering the meaning and value of Israel's prayers and wisdom in contemporary thinking and practice. Three credits.

TH-205 PROPHETS

This course will offer an overview of biblical prophecy, focusing on the Former, Latter, and Minor Prophets and how these individuals functioned in their societies. Special attention will be given to the historical settings of the prophets, their desire for social justice and the modern-day implications of their works. Offered alternating spring semesters. Three credits.

TH-207 WOMEN IN THE OLD TESTAMENT

This course explores the shape and meaning of the Old Testament by examining its portrayal of women. It will investigate the historical realities which shaped the lives of these ancient women. In addition, this course will ask theological questions about gender in relation to major biblical themes such as creation, covenant and salvation. Three credits.

TH-209 PRAYERS AND SONGS OF THE BIBLE

This course explores the meaning of biblical prayers and songs (in both the Old and New Testaments) in relation to religious practice in different contexts. It will excavate the ancient world out of which such texts emerged, and move forward through history, examining the different ways that people have spoken and sung these poems and why. In addition, this course will examine the use of biblical prayers and songs in modern liturgical and spiritual practice. Three credits.

TH-212 THE SYNOPTIC GOSPELS

A deeper look into the methods of Gospel criticism including an historical approach to the life of Jesus. An introduction to the background and theology of each of the three synoptic gospels, Matthew, Mark, and Luke. Three credits.

TH-214 JOHANNINE LITERATURE

An introduction to the historical context, literary analysis, and theological themes of the Gospel and Letters of John and an interpretation of the apocalyptic message of the Book of Revelation. Three credits.

TH-215 EPISTLES OF SAINT PAUL

A study of the background and arguments of the Pauline writings. Reading and interpretation of the major epistles, especially as they regard Christian living. Three credits.

TH-218 APOCALYPTIC LITERATURE

A survey of Jewish and Christian literature including a history of the apocalyptic movement in biblical times, the Old Testament books of Ezekiel and Daniel, the "Little Apocalypses" of the Synoptic Gospels, and the Book of Revelation. Three credits.

TH-219 APOCALYPSE IN THE BIBLE/FILM

This course will begin by exploring the origins of apocalyptic thinking in the Jewish and Christian biblical traditions. The current proliferation of apocalyptic thinking in film has deep roots in this biblical world. Thus, this course will seek to draw connections between the ancient and the contemporary through selected films that demonstrate the persistence and development of ideas about the apocalypse. It will focus particularly on the issues of divine judgment, human suffering, and restoration. Three credits.

TH-221 CHRISTIAN APOCRYPHA

In the past 50 years, we have seen an explosive interest in those writings that did not make it into the final biblical canon. In this course we will examine how the early Church decided on those Christian writings which would finally be canonical and on those which would remain consigned to the "Christian apocrypha." We will listen to the contemporary interest on this question arising in our generation and examine how the Church is responding to them today. Three credits.

TH-230 BIBLICAL THEOLOGY

The biblical text, rather than any philosophical or external theological system, provides the starting point and structure for biblical theology's critical evaluation of scripture and tradition in light of contemporary needs. This course will begin with a study of the book of Exodus through one sharply defined question: What does this book say about God? The study of Exodus will provide the groundwork for an extended discussion of the themes related to this question in the Old Testament, Judaism, The New Testament, and Christianity. The significance of this development for addressing contemporary theological questions will be emphasized. Three credits.

TH-232 WISDOM TRADITION IN THEOLOGY

Beginning with a study of the Wisdom literature of the Old Testament, this course will explore Jesus' relationship to Wisdom as well as the influence of the Wisdom tradition on the New Testament and Christian theology. Attention will be given to the themes of creation, incarnation, divinization, grace, and Wisdom or Sophia Christology. The significance of the Wisdom tradition in addressing contemporary theological issues will be emphasized. Three credits.

TH-235 WOMEN IN THE NEW TESTAMENT

An exploration of the roles and responsibilities of women as they are reflected in the texts of the New Testament. Attention will be given to issues of language, power, economics, and gender role expectations with a focus on the ways in which early Christianity attempted to liberate people from oppression, as well as the ways in which it compromised with the dominant society. Three credits.

TH-237 SCRIPTURE/ROMAN MISSAL, AND LECTONARY

Examines the use of Scripture in the Roman Missal and its use in the Lectionary, and how it complements the more strictly academic, scientific critical methods of biblical hermeneutics. Three credits.

TH-240 HISTORY/BIBLICAL INTERPRETATION

This course will explore the various ways that the Christian Scriptures have been used in the Church as the "soul of sacred theology." Special attention will be given to particular passages of Scripture which have provided inspiration for significant movements in church history, as well as particular methods which have arisen at various time periods in the history of the Church. Three credits.

TH-250 INTRODUCTION TO MORAL THEOLOGY

This course is to introduce students to the basic concepts of Catholic moral theology: natural law, conscience and decision-making, and the virtues. Three credits.

TH-252 PEACE, JUSTICE, AND FORGIVENESS

This course is designed to give the student an overview of Christian teaching on peace, justice, and forgiveness, primarily (though not exclusively) from a Roman Catholic point of view. This will include an introduction to Catholic Social Teachings. The course also serves as a foundational course for the Peace and Justice Program and as such introduces students to ideas and concepts that they will encounter in their other Peace and Justice courses. Three credits.

TH-255 RELIGION AND POLITICS

This course will study the Catholic Church social doctrine as it relates to issues of politics. It will also focus on the recent history of the Church thought and its interaction with the political culture of the United States. Three credits.

TH-260 ALIENS/MONSTERS/HEROES/JESUS

This course is to explore the world views and moral imperatives implied in science-fiction. It analyzes these ideas and ethics from a Christian perspective and uses their perspectives to develop understandings of Jesus. Three credits.

TH-265 GOD, WORK, AND MONEY

Purpose of the course is an exploration of the Catholic Church's social doctrine on and contemporary theological discussions of poverty, work, and economics. Three credits.

TH-270 CATHOLIC MARRIAGE

The purpose of the course is to explore the theological foundations and implications of marriage and family. Three credits.

TH-272 THEOLOGY OF CHILDREN

This course explores the various Christian understandings of children and the implications of these perspectives for church, society, parents, and teachers. It also explores the theological views of Fred Rogers. Three credits.

TH-273 ETHICS OF AQUINAS

This course explores the moral theology of Thomas Aquinas. It covers his thoughts on natural law and the virtues, situating them in his overall theological system. Three credits.

TH 274 GREEN DISCIPLESHIP

This course explores the Catholic church's teachings on the environment. With a focus on integral ecology, the course examines the ways that the environment connects to all aspects of life and thus how Christian discipleship includes care for creation. Three credits.

TH-275 CATHOLIC SEXUAL ETHICS

This course will present the understanding of human sexuality and of sexual morality as it has been developed in the continuing Catholic Tradition. This course will explore the broad meaning of human sexuality and the differences in male and female sexuality and the significance of these differences. Furthermore, we will examine the development of the Catholic Tradition regarding sexual morality, beginning with the Scriptures, continuing with the Fathers and medieval theologians. The course will also examine the debates over contraception, the response of the magisterium to these debates in *Humane Vitae* and the reaction to this magisterial document. Offered every spring semester. Three credits.

TH-280 CATHOLIC BIOETHICS

This course is to introduce students to how Catholic beliefs provide a framework for assessing bioethical issues, including health, health care, death, suffering, and medicine. Offered every semester. Three credits.

TH-300 SYSTEMATIC THEOLOGY I

The purpose of the course is to provide students with a critical and systematic overview of the central tenets of Christian faith from the Roman Catholic perspective and the perspective of contemporary theology as it seeks to engage a pluralistic world. Prerequisite: TH 119 Exploring Religious Meaning. Offered every fall semester. Periodically offered as an honors course. Three credits.

TH-301 SYSTEMATIC THEOLOGY II

This course provides an advanced introduction to contemporary developments in theology. In addition, the course will consider how the pastoral life of the Church both expresses and shapes theological principles. Prerequisite: Systematic Theology I or permission of chair. Three credits.

TH-307 CHURCH HISTORY: 500-1789

This course explores the development of Christianity from the Middle Ages to the Enlightenment. Topics explored in this course include the growth of the papacy, medieval heresies, new religious orders, Mysticism, religion during the Renaissance, Martin Luther, John Calvin, radical reformers in Europe, the English Reformation, the Council of Trent and the Catholic Reformation, and the Enlightenment. Three credits.

TH-308 CHURCH HISTORY: 1789-1962

This course is an in-depth study of the Christian churches during the 19th and 20th centuries with an emphasis on Roman Catholicism. Nineteenth century topics include the French Revolution and its impact on religion, English Roman Catholicism, the Oxford Movement, Pius IX and Vatican Council I, church and state relations in France, Germany, and Italy, Anglican Orders, and Leo XIII. Twentieth-century topics emphasize the role of the papacy in European society and will conclude with the pontificate of Pius XII and the Second World War. Three credits.

TH-310 THEOLOGY OF EARLY CHRISTIANITY

This course will trace the history and thought of the first 500 years of Christianity. Topics of study include Christians' tenuous relationship with Roman society, Church order and practice, and the development of doctrine. Three credits.

TH-312 CHRISTIAN MARTYRDOM

This course will explore the witness of Christian martyrs from the early Christian period to contemporary times. The study will include consideration of varying definitions of martyrdom, accounts of martyrdom, and the context in which martyrdom occurs. Three credits.

TH-320 THEOLOGY OF MEDIEVAL CHRISTIANITY

The development of Western Christianity from 700 to 1400 is the crucible from which modern civilization grew. This course traces the development of Christian thought and life in this period, including the development of doctrine, theological method, and the emergence of new religious orders. The main focus is on select theologians such as Saints Anselm of Canterbury, Bonaventure, and Thomas Aquinas. Three credits.

TH-325 VATICAN II HISTORY AND THEOLOGY

This course provides students with a historical and theological overview of the Second Vatican Council as well as an examination of the council's major documents. The perspective taken is that Vatican II represents an important moment in the development of the Catholic tradition, representing both theological innovation as well as signaling fundamental continuity in the life of the Church. Three credits.

TH-327 LIVING THEOLOGY IN GUATEMALA

The course is designed to help students critically engage the concrete experience of economic struggle and injustice in Guatemala through the lens of contemporary theology. As a travel service learning course, students will broaden their understanding of the developing world and the place of faith and theology therein. Course requirements include: (1) meeting in a classroom setting several times prior to the trip, (2) full and active participation in the trip (additional costs), and (3) the production of a brief research/report following the trip. Three credits.

TH-330 CATHOLIC SACRAMENTS

The course begins with an investigation of the theological foundation of the sacraments as actions of Christ and the Church. The individual sacraments are studied with an emphasis on historical development and liturgical practice as keys to understanding them. Special emphasis is given to the sacraments of initiation: Baptism, Confirmation, and Eucharist. A special unit is devoted to the marriage preparation process and the liturgical options of the wedding ceremony. Three credits.

TH-332 ECCLESIOLOGY

A theological study of the teaching of the Catholic Church concerning the origin and meaning of the Church of Jesus Christ. Primary emphasis is placed upon biblical testimony and the teaching of the Second Vatican Council. The study also includes an overview of the Church in history as well as contemporary issues. Periodically offered as an honors course. Three credits.

TH-333 THE MODERN PAPACY

This course covers the role and theology of the papacy from Pius IX to the present. Three credits.

TH-334 CHRISTOLOGY

A biblical study of the life and teaching of Jesus. An examination of various portraits of Jesus from earliest Christianity through the Middle Ages to contemporary images. Three credits.

TH-335 CHRISTIAN DOCTRINE OF GOD

The course will examine the historical development of the Christian doctrine of God and will explore attempts by contemporary theologians to appropriate this doctrine. Three credits.

TH-340 BASICS OF CATHOLIC FAITH

Based on the Catechism of the Catholic Church, this course addresses the most basic elements that together make up the living reality of Catholic faith: Gospel, Jesus of Nazareth, Church, Jewish roots, liturgy, doctrine, Christian moral life, tradition, and the Kingdom of God. Offered every semester. Three credits.

TH-342 BENEDICTINE HERITAGE

This course combines a study of Benedictine Monasticism and the local history of Saint Vincent College. It begins with Boniface Wimmer and the 19th-century revival of monastic life leading to the founding of Saint Vincent Archabbey and College. It then shifts to a study of monastic sources, in particular the Rule of Saint Benedict as an animating "Wisdom document" of the SVC community. The course includes field trips to nearby religious communities and walking tours of little known parts of the Saint Vincent campus. Three credits.

TH-342 BENEDICTINE HERITAGE, BLS

This course will cover the standard curriculum of the Benedictine Heritage course consisting of:

- a brief overview of pre-Benedictine patristic monastic sources.
- a textual study of select chapters of the Rule of Benedict.
- an overview of the History of the founding and growth of Saint Vincent Archabbey and College.
- an introduction to the monastic practice of Lectio Divina.
- walking tours to the more historic parts of the campus and to other monastic communities in the area.

Since this is a section dedicated to the Benedictine Leadership Studies Program, it will emphasize the Benedictine Hallmarks and how they are rooted in the text of the Rule of Benedict and in the subsequent history of the Benedictines. Taken in isolation the Hallmarks can seem to be merely a list of virtues. In the context of the Rule of Benedict and in the context of the enfolded Benedictine lifestyle, the Hallmarks become a program for living the Christian lifestyle as applicable to lay people as to monastics. Three credits.

TH-343 MARIOLOGY

This course offers a theological study pertaining to the Church's teachings on the Virgin Mary. This study will include: pertinent texts from Sacred Scripture, post-canonical literature, teachings from the early councils, Mary and the Patristics, scholastic Mariology, Mary and the Protestant Reformation, dogmas concerning the Immaculate Conception and the Assumption, Mary in Art, Marian devotions, Marian apparitions, and Mary within the context of the Second Vatican Council with subsequent articulation. Three credits.

TH-344 CLASSICS OF CATHOLIC THEOLOGY

The course will focus on five major periods in the history of Roman Catholic theology: the Patristic Period, the Middle Ages, the Counter Reformation, the Modern Period, and the

Contemporary or "Postmodern" Period. The course will focus on one major work from an author associated with each of the five aforementioned periods. Three credits.

TH-345 CHRISTIAN SPIRITUAL WRITINGS

This course will survey a selection of Christian spiritual texts from the early Church period to contemporary writings. Students will learn to read primary texts theologically by attending to doctrinal, spiritual, and pastoral issues. Three credits.

TH-346 THOMAS MERTON: SPIRITUAL MASTER

An exploration of the life and thought of Thomas Merton (Cistercian monk, writer, social critic, poet, pioneer in cross-religious dialogue) in the context of 20th-century history and theology. Three credits

TH-347 THE NEW EVANGELIZATION

This course will examine the defining elements of Catholic evangelization, including: biblical mandates, ecclesial documents, and papal writings. Particular emphasis will be given to the work of the 2012 World Synod on the New Evangelization and the USCCB's document *Disciples: Called to Witness*. Select resources for parish evangelization will be highlighted and concrete evangelizing strategies will be explored. Three credits.

TH-348 FILM, FICTION, AND FAITH

This course examines both the distinctive ways film and literary fiction explore the basic tenets of the Christian faith and the way Christian theology understands film and literary fiction. Three credits.

TH-350 HOLOCAUST QUESTIONS

An inquiry concerning the kingdom of death and the religious and moral issues attending the building of that kingdom. Hitler's war against the Jews assaulted the fundamental values of Biblical religion. This course will confront the implications for contemporary humanity of the shaking of these foundations. Three credits.

TH-355 HISTORY OF JEWISH THOUGHT

This course is a study of the evolution of Jewish thought as it interacted with and grew from the varied environments in which the Jews found themselves from the biblical period to the present day. Three credits.

TH-358 CATHOLIC-JEWISH DIALOGUE

In a world torn by violence and pain, the need for a living conversation aimed at Shalom, a peace of wholeness and understanding, is the goal of this course. The course is inspired by the dialogue between Catholic and Jewish scholars initiated by the Second Vatican Council. By dialogue is meant a fourfold activity: dialogue of life (living together in solidarity as neighbors); dialogue of action (working together for the common good); dialogue of theological exchange (exploring together in friendship different religious traditions); and dialogue of religious experience (sharing in common prayer or in religious practice). Participation in class discussions will be expected of students enrolled in this course. It is hoped that this course will help students become active participants in a life of dialogue. Periodically offered as an honors course. Three credits.

TH-360 PROTESTANT TRADITIONS

A course dealing with the foundations which the Reformation Period laid for Protestantism in Europe. Luther and basic

Protestant tenets will be explored as well as the Wesleyan movement in England and 19th-century American revivalism. Offered every semester. Three credits.

TH-362 RELIGION IN AMERICA

A study of the American experience from the colonial period to the present from the perspective of religion and its relation to the individual and society. Three credits.

TH-364 20TH-CENTURY PROTESTANT THOUGHT

This course will explore major trends in Protestant theology during the 20th century. That goal will be pursued by looking at several important theological figures which were a part of these themes and time. Three credits.

TH-365 PROTESTANT THOUGHT 20TH CENTURY

The course begins with a brief discussion of late 19th-century foundational thinking. The impact of Karl Barth and Paul Tillich will be explored followed by the thinking of the German martyr Dietrich Bonhoeffer. The social impact of Reinhold and Richard Niebuhr explores 20th-century issues of economic and political concern. Racial justice in the writing of Martin Luther King and James Cone will be coupled with feminist theologians such as Rosemary Reuther. The course concludes with an examination of the return of the evangelical theology of Bernard Ramm and Carl Henry. It is understood that other theologians will be a part of this study. Three credits.

TH-366 RELIGIOUS BELIEFS OF ABRAHAM LINCOLN

A study of Abraham Lincoln's unique and strong faith; his religious convictions in relationship to the context of his childhood, his presidency, 19th-century America, and their effect upon the age in which we live. Three credits.

TH-367 LINCOLN: A MODEL OF VITALITY

The course examines the background, spiritual development, and leadership qualities of Abraham Lincoln. Although Lincoln had an impoverished childhood, he rose above his humble beginnings to unite a divided and war-torn nation. Unique experiences and profound influences from the wider community shaped his spiritual development and honed his leadership abilities. This three-week course is designed to provide an intense understanding of a man who overcame so much and contributed even more. Three credits.

TH-368 REFORMATION REVISITED

This course will introduce students to some of the cultural, historical, and theological issues that led to Martin Luther's posting of the 95 Thesis in 1517 and the start what became known as the Reformation. Students will then go on to explore where Roman Catholics and Lutherans stand on these theological issues and other issues from the Reformation today – 500 years later. Areas where consensus has been reached through 50+ years of dialog and areas where conversation is continuing will be addressed. Three credits.

TH-370 INTRODUCTION TO ORTHODOX CHRISTIANITY

A survey of the Orthodox Christian faith focusing on the fundamental beliefs of the Church including: the nature and meaning of the Church, the primary sources of faith, the liturgical and sacramental life, the nature and role of iconography and ecclesiastical architecture, and hymnography. This course will compare and contrast elements of the traditions of the Orthodox and Roman Catholic Churches. Three credits.

TH-380 WORLD RELIGIONS

A survey of the world religions including Hinduism, Buddhism, Islam, as well as Shintoism, Confucianism, and Taoism. Included will be the religious practices, customs, and beliefs of each tradition. This course also addresses Catholic responses to the significance and meaning of the diversity of world religions. Three credits.

TH-385 BUDDHISM

This course is intended to give the student an overview of The Buddhist Tradition. It will examine the life of Siddhartha Gautama the historical Buddha. The basic views and beliefs of Buddhism along with the variations of the three traditions of Buddhism will be discussed. This course will also examine the life of the current Dalai Lama, emphasizing his life as well as his thinking for the 21st century. Comparisons with The Christian Tradition will be explored. Three credits.

TH-388 FAITH, WORK, AND GOD IN INDIA

This one-credit class is a short-term travel service-learning course. Students will travel to Kolkata, India, to work with the Missionaries of Charity in various houses of ministry. The class then moves through the northern Indian cities of Bod Gaya (the birthplace of Buddhism) and Allahabad/Varanasi (major Hindu pilgrimage centers) and Jaipur (an ancient Moghul city). In preparation for the trip, students will engage classical and contemporary texts on Indian religion, history, and culture. One credit.

TH-400 METHODS OF RELIGIOUS EDUCATION

A study of the key documents concerning Catechesis in the church that come from the Vatican and the USCCB. It discusses some basic elements of Religious Education from elementary age students through adults, works on Liturgical and sacramental preparation, Youth and Young Adult Ministry, retreat planning, elementary and high school teaching, and Campus Ministry. Offered alternating spring semesters. Three credits.

TH-410 MINISTRY FIELD EXPERIENCE

This seminar serves as a complement to a ministry internship placement that will be completed concurrently or in the previous summer. Readings, reflection, and group conversations will help students to integrate a theology of ministry with their field experience and developing vocation. Students will learn to establish ministry goals and objectives for their ministry placements. Offered in the fall semester. One credit.

TH-499 THEOLOGY CAPSTONE

This seminar course requires majors to complete a research project under the direction of the faculty member. This research will build upon work done in Systematics I and II. Prerequisites: TH 300 Systematics I and TH 301 Systematics II. Offered fall semester.

TH-500 INDEPENDENT STUDY — THEOLOGY

Theological study of a topic to be chosen and developed by the student with guidance of the directing professor. Course requirements to be developed in consultation with supervising faculty. May be repeated. Variable credit.

TH-550 THEOLOGY INTERNSHIP

In conjunction with the chairperson, the student pursues an internship which enables the student to implement various teaching skills. It is expected that the student can utilize acquired academic knowledge and manifest leadership abilities in a religious education setting. Offered every semester. One to three credits.

UNDECLARED

Nancy A. Rottler, *Coordinator*

Mark Abramovic; Doreen Blandino; Marisa Carlson; Thaddeus Coreno; Linda Eicher; Matt Elam; David W. Grumbine; Timothy Kelly; Mary Niemiec; John J. Smetanka; Theresa Torisky; Margaret Watkins

Many first-year college students are unsure about a specific course of studies or a possible career, and they might want to explore several options in college. Saint Vincent College recognizes that high school seniors might not be prepared to make a definite choice about an academic major and consequently offers the undeclared major for those students who have not yet arrived at a definite choice concerning their future.

The undeclared major is transitional in nature, but advising and supervision provide the framework found in any traditional major. On arrival at Saint Vincent, the undeclared student will be assigned an experienced and trained academic advisor from the college faculty who will assist the student in selecting courses from the core curriculum of the College which fit individual interests and expose the student to various academic courses and career options. The advisor will continue to monitor the student's progress, help with future course selection, and ultimately assist the undeclared major in the selection of a traditional academic major. In order to complete requirements for the selected major, the student will declare a major no later than the spring semester of the sophomore year.

In addition to the academic advisor, the Career and Professional Development Center at Saint Vincent College also helps the undeclared major select the right major and career. The Career and Professional Development Center administers a battery of personal inventory tests which assess a student's skills, interests, and potential. The Career and Professional Development Center also sponsors career seminars, assists in the preparation of résumés, maintains placement files, coordinates internships and on-campus recruiting, and maintains an up-to-date library of career resources.

Typical First-Year Schedule*

	Fall	Spring
Language and Rhetoric	3	3
or		
First Theology	3	3
Mathematics	3	
History	3	3
or		
Social Sciences	3	3
Modern Language	3	3
Natural Sciences		4
Fine Arts	3	
Total	15	16

All students will take one course designated as a First-Year Seminar which will satisfy a core curriculum requirement.

*Course selection will depend upon the individual interests of the student. For example, a student considering a major in the social sciences will enroll in the introductory-level course for the major; i.e. SO 101 Introduction to Sociology or PY 100 Introduction to Psychological Science in the fall semester.

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Fr. Albert Gahr, O.S.B.
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Admission, Advancement and Marketing Committee

John Lally, *Chair*

John Stevens, *Vice Chair*

Executive Committee

J. Christopher Donahue, *Chair*

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Finance, Audit, and Investment Committee

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Information Technology Committee

Michael L. Keslar, *Chair*

Br. David Carlson, O.S.B., *Vice Chair*

Investment and Institutional Advancement Committee

Richard A. DiClaudio, *Chair*

Student Affairs Committee

Robert F. Pusateri, *Chair*

Bibiana Boerio, *Vice Chair*

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Chancellor, Rt. Rev. Douglas R. Nowicki, O.S.B., B.A., M.Div., Ph.D.

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Assistant to the President for Mission, Fr. Thomas Hart, O.S.B., B.A., M.Div.

Interim Executive Director of Fred Rogers Center, Roberta Schomberg, B.A., M.Ed., Ph.D.

Legal Counsel, Bruce Antkowiak, B.A., J.D.

Vice President for Student Affairs, Mary L. Collins, B.A., M.A.

Vice President for Academic Affairs and Academic Dean, John J. Smetanka, B.S., M.S., Ph.D.

Vice President for Finance and Administration, Richard S. Williams, B.S., M.S.

Chief Information Officer, Peter E. Mahoney, B.A., M.B.A.

Director of Athletics, Fr. Myron Kirsch, O.S.B., B.A., M.Div., M.B.A.

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President, Ryan D. Retter, C'08

Vice President, Alexandria C. Simmons, C'10

Secretary, Renold Sossong, C'12

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Listed alphabetically 2019

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Vice President for Academic Affairs and Academic Dean, John J. Smetanka, B.S., M.S., Ph.D.

Assistant Vice President for Student Success and Retention, Nancy A. Rottler, B.A., M.A., D.Ed.

Director of Academic Accommodations, Academic Adviser, Marisa R. Carlson, B.A., M.A.

Admission

Dean of Admission, Heather L. Kabala, B.S.

Assistant Dean of Admission, William A. Barnes, B.S.

Associate Director, Regional Recruitment, Donna M. Edmonds, B.A., M.A.

Associate Director, Christina Andrae, B.A., M.M.

Associate Director, Melissa Sobek, B.S., M.Ed.

Assistant Director, Nicole Beckett, B.S., M.S.

Associate Director, Event and Visit Coordinator, Renee Garbeglio, B.A.

Admission Counselor, Ross Abbott, B.A.

Admission Counselor, Pat Conroy, B.A., MEQ

Admission Counselor, Sharon Nincke, B.S.

Alex G. McKenna School of Business, Economics, and Government

Dean, Gary Quinlivan, B.A., Ph.D.

Executive Assistant, Eva Kunkel, B.S., M.S.

Assessment and Institutional Research

Director, Julia A. Cavallo, B.A., M.S.

Athletics

Director, Myron M. Kirsch, O.S.B., B.A., M.Div., M.B.A.

Associate Athletic Director and Compliance Officer, Senior Woman Administrator, Susan Hozak, B.A., M.S.

Director, Sports Information, Jeffrey Zidek, B.A.

Assistant Sports Information Director, Ronald Leisie, B.A., M.B.A.

Bookstore

Director, Anthony Grossi, O.S.B., B.A., M. Div.

Business Affairs

Vice President for Finance and Administration,
Richard S. Williams, B.S., M.S.

Controller,

Joshua Guiser, B.S., M.B.A., C.P.A.

Director of Financial Planning, Accounting and Analysis,
Gina Nalevanko, B.S., C.P.A.

Assistant Controller,

Patricia Dellinger, B.S., M.S.

Campus Life

Associate Director of Residence and Multicultural Student Life,
Ishmael Solomon, B.S., M.S.

Assistant Director, Campus Life and Student Recreation,
James W. Walters, B.A., M.S.

Director, Campus Life, Deanna Wicks, B.S., M.S.

Campus Ministry

Director, Killian Loch, O.S.B., B.A., M.Div.

Assistant Director of Campus Ministry,
Lawrence Machia, O.S.B., B.A., M.A., M.Div.

Coordinator of Office and Service, Jody Marsh, B.A., M.S.

Assistant Director of Spiritual Formation,
Bridget DiVittis, B.A., M.A.

Campus Minister for Ministry to Women, Samantha Pashel, B.S.

Assistant to the Director of Campus Ministry,
Cassian Edwards, O.S.B., B.A.

Assistant to the Director of Campus Ministry,
Barnabas O'Reilly, O.S.B., B.S., M.A.

Part-Time Campus Minister,

John Aupperle, B.A., B.Div., M.Div., Ph.D.

Sacramental Help, Anthony Grossi, O.S.B., B.A., M.Div.

Career and Professional Development Center

Director, Courtney Baum, B.S., M.A.

Associate Director,

Kimberly Woodley, B.A., M.A.

Assistant Director,

Jenna Churilla, B.A., M.A.

Career Consultant,

Lynn Scalise, B.S.

Career Consultant,

Kim Dickert-Wallace, B.A., M.S.

Center for Political and Economic Thought

Co-Director, Gary Quinlivan, B.A., Ph.D.

Co-Director, Bradley C.S. Watson, B.A., M.A., Ph.D., J.D., M.Phil.

Assistant Director, Mary Beth McConahey, B.A., M.A., Ph.D.

Dale P. Latimer Library

Director, David A. Kelly, O.S.B., B.S., M.A., J.C.L., M.C.L., MLIS

Cataloger/Technical Services/Special Collections Librarian,
Elizabeth DiGiustino, B.A., M.S.L.S.

Administrative Assistant, Clydene Duran

Assistant Director/Bibliographic Instruction Librarian,
Denise A. Hegemann, B.A., M.T.S., M.L.S.

Public Service/Interlibrary Loan Librarian,
Bridget Hornyak, B.S., M.S.L.S.

Serials Librarian, Matthias Martinez, O.S.B., B.A., M.Div., M.L.S.

Library Assistant, Timothy Ward, O.S.B.

Disability Support Services

Director of Academic Accommodations, Academic Adviser,
Marisa R. Carlson, B.A., M.A.

Event and Conference Services

Director, Kathleen A. Pantalone, B.S.

Assistant Director, Operations Management,
Angela M. Zalich, B.S.

Assistant Director, Amber Keefer, B.A.

Event Coordinator, Cara Palmiere, B.S.

Facility Management

Director of Facilities, Capital Management, and Planning,
Douglas Eppley, B.S.

*Assistant Director of Facilities, Head of Facility Housekeeping
and Grounds,* Vicky Booth

Maintenance Manager/Trades Supervisor, Shelley Shaffer

Financial Aid

Director, Mary Gazal, B.S.

Assistant Director, Cheri Kramer, B.S., M.B.A.

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Coordinator, Mary Ann Shaffer, B.S.

Fine Arts

*Director of Saint Vincent Gallery; Curator of Saint Vincent Art
and Heritage Collection,* Andrew Julio

Director of Concert Series, Mr. Thomas Octave, B.F.A., M.M.

Director of Camerata, Stephen Concordia, O.S.B., B.M., M.M.

Food Service

Senior General Manager, Jamie Ballew

Office Manager, Marty Radocaj

Executive Chef, Jeff Shaffer

Director of Dining, Mike Logesky

Director of Catering, Julia Molnar-Bish

Fred Rogers Center for Early Learning and Children's Media

Interim Executive Director,

Roberta Schomburg, B.A., M.Ed., Ph.D.

Director of Simple Interactions and Academic Programs,

Dana Winters, B.A., M.A., Ph.D.

Associate Director and Director of Development and Communications, Karen Struble Myers, B.A., M.S., CFRE

Archivist, Emily Uhrin, B.A., MLIS

Senior Research Associate, Annie McNamara, B.A., M.A., Ph.D.

Senior Program Associate, Emma Lee, B.A., Ed.M.

Program Assistant, Katherine Luchini, B.A.

Operations Coordinator, Theresa Noel

Graduate and Continuing Education

Coordinator, Amanda Gunther, B.A., M.A.

Herbert W. Boyer School of Natural Sciences, Mathematics, and Computing

Dean, Stephen Jodis, BCPE, M.S., Ph.D.

Administrative Assistant, Tammy Marsh

Lab Manager, Biology, Molly Grace, B.A.

Lab Manager, Chemistry, Beth Bollinger, B.S.

Lab Manager, Human Anatomy Lab, Krista Jobe, B.S.

Chemical Hygiene Coordinator, Romi Green, B.A.

Human Resources

Director, Judith Maher, B.A., J.D.

Administrator of Human Resource Services, Barbara Joyce

Human Resources Assistant, Lana Dillon

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Chief Information Officer, Peter E. Mahoney, B.A., M.B.A.

Director of Application Services, J. Roberto Wisnesck, B.A.

Administrative Systems Analyst, Nancy A. Ramaley, B.S.

Senior Programmer Analyst, Douglas Carns, B.S.

Director of Technical Services, Justin N. Fabin, B.A., M.B.A.

Network Services Manager, Anthony Concannon, B.S.

User Services Manager, Joshua SeEVERS

Service Desk Analyst, Ryan Kuntz, B.A.

Service Desk Analyst, Jonathan Lapinsky, A.A.S.

Service Desk Analyst, Fabio FlasiK, B.S., M.S.

Multimedia Technician, Benjamin Riddle, B.S.

Coordinator, Mailing and Duplicating, Lee Ann Ross

Mailing Coordinator, Kim Houck

Receptionist, Jacki Latimer

Office Assistant, Logan Hunter

Institutional Advancement

Assistant Vice President, Foundation, Government, and Corporate Relations, Christine L. Foschia, B.A., M.A.

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Senior Director of Development and Alumni Relations, Ben Becze

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Director of Development for Operations and Events, Lisa Poole, B.S.

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Alumni Secretary, Mary Ann Dunlap, B.S., MSMOE

Advancement Coordinator, Denise Heydorn, A.S.

Gifts Processor, Maria Meyers, B.S.

Kennametal Center for Operational Excellence (KCOE)

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Senior Director of Marketing and Communications, Michael J. Hustava, B.A.

Associate Director of Marketing and Communications for Public Relations, James Berger, B.A.

Assistant Director of Marketing and Communications for Digital Marketing, Alex Byers, B.A.

Art Director, George Fetkovich, B.A., M.A.

Director of Web Services, Cindy Hoffman, B.S.

Associate Director of Marketing and Communications for Digital Marketing, Amanda Jupena, B.A.

Coordinator of Marketing and Communications, Carol Riddle

Opportunity/Act 101/Student Support Services (SSS-TRIO) Program

Director, Assistant Vice President for Student Success and Retention, Nancy A. Rottler, B.A., M.A., D.Ed.

Advising Coordinator, Academic Advisor and Professional Tutor, Theresa Torisky, B.A., M.S., M.A.

Academic Advisor and Professional Tutor, Matthew Elam, B.A., M.F.A.

Academic Advisor and Professional Tutor, Linda M. Eicher, B.A.

Assistant Director, Academic Advisor and Professional Tutor, Mary B. Niemiec, B.A., M.S.

Post Office

Manager, Donna Werner

President's Office

Executive Assistant, Lisa Poole

Prevention Projects

Executive Director, Donna Kean, B.S.W., M.S.

Intervention/Student Assistance Program Services

Manager/SAP Coordinator, Laurel Sherbondy, M.S.W.

Intervention Specialist, Rebecca Casale, B.S., B.A., M.S.Ed.

Intervention Specialist, Lisa Rizza, B.A., M.A.

Intervention Specialist, Judith Jones, M.S.

Student Assistance Program Assistance Coordinator, Donna Cartia, B.A., M.A.

Prevention Education/Community Outreach Services

Manager, Beth Joseph, B.S., M.Ed.

Prevention Specialist, Debora Babilya, B.A.

Prevention Specialist, Stephanie Frey, B.A.

Prevention Specialist, Sharon Lewis, B.A.

Prevention Specialist, Dennis McDonough, B.S.

Prevention Specialist, Diane Meadows, B.A., M.S.

Prevention Specialist, Laurie Moorhead, B.S.

Prevention Specialist, Gregg Norton, B.S.

Prevention Specialist, Lori Rodgers, B.S.

Prevention Specialist, Kathryn Senic, B.A.

Prevention Specialist, Autumn Sonnet, B.S., M.A.

Prevention Specialist, Robin Watson, B.S.

Fiscal/Office Manager, Corliss Aukerman, A.A.S.

Secretary, Data Entry, Laurie Hillis

Secretary, Debra Rick

Public Safety

Director, Stephanie J. Fago, B.S.

Fire Chief, Joseph Adams, O.S.B., B.A., M.S.

Registrar and Records

Registrar, Celine R. Brudnok, B.S., M.B.A.

Residence Life

Coordinator of Residence Life,
Colin McLaughlin, B.A.

Director of Residence Life and Student Conduct,
Jenna Churilla, B.A., M.A.

School of Arts, Humanities and Social Sciences

Interim Dean, Margaret Watkins, B.A., M.A., Ph.D.

Service Learning and Campus Outreach

Director, Kelly King, B.A., M.A.

Coordinator, Jessica Parsons, B.S.

Small Business Development Center

Executive Director, Small Business Development Center,
James H. Kunkel, B.S., M.B.A.

Business Analyst, Timothy Bates, B.S.

Global Trade Manager, Victoria A. Gyenes, B.S., M.S.M.

Office Manager, Anita Hudock

Stage and Theatre

Director of Stage and Summer Theatre,
Greggory Brandt, B.F.A., M.A.

Technical Director, Christopher J. Plummer, B.A.

Student Affairs

Vice President of Student Affairs, Mary L. Collins, B.S., M.A.

Dean of Students, Robert Baum, B.A., M.S.W.

Assistant to the Vice President and Dean,
Samantha Firestone, B.S., M.S.

Coordinator of Commuter Student Outreach,
Bridget DiVittis, B.A., M.A.

Student Conduct

Dean of Students, Robert Baum, B.A., M.S.W.

Study Abroad Program

Director of International Education, Sara Hart, B.A., M.S.

Attending Physicians

Chestnut Ridge Primary Care Weldon Division

Donald J. Jakubek, M.D.

Aldo J. Prospero, M.D.

Wellness Center

Director/Personal Counselor, Gretchen Flock, L.P.C.

Staff Nurse, Connie Krznaric, R.N., B.S.N.

Staff Nurse, Kathy Prospero, R.N., B.S.N.

Assistant Director/Personal Counselor, Amy Meade, L.S.W.

Personal Counselor, Rose Barchesky, L.P.C.

Staff Nurse, Sharon Smetanka, B.S.N.

Medical Assistant, Kim Morrison

THE FACULTY 2019-2020

A. Mark Abramovic, *Instructor of Finance*, B.S., Penn State University; M.B.A., University of Pittsburgh. 2007-

Shawn Anderson, O.S.B., *Assistant Professor of Biology*, B.S., Duquesne University; M.Div. Saint Vincent Seminary; Ph.D., Virginia Commonwealth University. 2014-

Bruce A. Antkowiak, *Professor of Criminology, Law and Society*, B.A., Saint Vincent College; J.D., Harvard Law. 2011-

Michael Antonacci, O.S.B., *Assistant Professor of Physics*, B.S., Saint Vincent College, M.Div., Saint Vincent College, Ph.D., University of North Carolina, 2014-

Daniele Arcara, *Professor of Mathematics*, B.S., Università di Torino; Ph.D., University of Georgia. 2006-

James G. Barnett, *Associate Professor of Biology*, B.S., Ph.D., University of California at Davis. 1985-

Kathleen A. Beining, *Assistant Professor of Education, Director of Early and Middle Grade Education*, B.S., Indiana University of Pennsylvania; M.S., Saint Vincent College; D.Ed. Indiana University of Pennsylvania. 2009-

Elaine M. Bennett, *Associate Professor of Anthropology*, B.A., University of Pittsburgh; M.P.H., Southern Connecticut State University; M.A., Ph.D., University of Connecticut. 2010-

Bruce D. Bethke, *Associate Professor of Biology*, B.A., The College of Wooster; M.S., Ph.D., The Catholic University of America. 1996-

Stacy Birmingham, *Professor of Engineering Science*, M.S., Ph.D., Chemical Engineering, Carnegie Mellon University. 2018-

William Birmingham, *Professor of Computing and Information Systems*, B.S., M.S., Ph.D., Carnegie Mellon University, 2018-

Jessica Black, *Assistant Professor of Psychology*, B.S., University of Pittsburgh; M.A., Ph.D., University of Cincinnati. 2018-

Doreen Blandino, *Professor of Modern and Classical Languages and Liberal Arts*, B.A., State University of New York at Oswego; M.A.,

Ph.D., State University of New York at Buffalo. 1986-

Gilbert M. Bogner, *Associate Professor of History*, B.A., Ohio State University; M.A., Ph.D., Ohio University. 1998-

Brian D. Boosel, O.S.B., *Assistant Professor of History*, B.A., Saint Vincent College; M.Div., Saint Vincent Seminary; M.A. Slippery Rock University; Ph.D., Candidate, The Catholic University of America. 2005-

Alexander Borselli, *Assistant Professor of Mathematics*. B.S., University of Scranton; M.S., Ph.D., Lehigh University. 2017-

Greggory Brandt, *Instructor of Visual Arts and Director of Stage and Summer Theatre*, B.F.A., M.A.M., Carnegie Mellon University. 2015-

Derek Breid, *Assistant Professor of Engineering Science*, B.S., University of Kansas, M.S., Ph.D., University of Massachusetts. 2014-

Lucas F. Briola, *Assistant Professor of Theology*, B.A. Saint Vincent College, M.T.S. Boston College School of Theology and Ministry, Ph.D., The Catholic University of America.

David Carlson, O.S.B., *Associate Professor of Computing and Information Systems*, M.S., Syracuse University; Graduate Studies in Theology and Scripture, Saint Vincent Seminary; M.A., B.S., Pennsylvania State University. 1980-

Thomas Cline, *Professor of Marketing and Statistics*, B.S., M.B.A., University of Virginia; Ph.D., University of Cincinnati. 2002-

Wulfstan Clough, O.S.B., *Associate Professor of English*, B.A., University of Delaware; Ph.D., University of Notre Dame. 1996-

Cyprian G. Constantine, O.S.B., *Assistant Professor of Music, Director of Liturgical Formation*, Saint Vincent Seminary; B.Mus. Ed., D.M.A., University of Colorado; M.Div., Saint Vincent Seminary; M.M., Northwestern University. 1998-

Thaddeus Coreno, *Associate Professor of Sociology*, B.S., John Carroll University; M.A., Ph.D., Kent State University. 1996-

Bonaventure Curtis, O.S.B., *Assistant Professor of Business Administration and Franchising*, B.S., University of Minnesota; M.Div., Saint Vincent Seminary; J.D., Western State University-



Thomas Jefferson Law School. 2005-

Sarah Daly, *Assistant Professor of Criminology, Law and Society*. B.A., University of Notre Dame; M.S.Ed., University of Pennsylvania; M.A., Ph.D., Rutgers University. 2016-

Zachary Davis, *Assistant Professor of Economics*, B.S., Miami University; M.S., Ph.D., Purdue University. 2016-

Lea Delcoco-Fridley, *Assistant Professor of English*. B.A., Saint Vincent College; M.A., Ph.D., Indiana University of Pennsylvania.

Robert J. DePasquale, *Professor of Accounting*, B.S., Saint Vincent College; M.B.A., Ph.D., University of Pittsburgh; C.P.A. (Pennsylvania). C.M.A., C.F.M. 1978-

Michelle Duennes, *Assistant Professor of Biology*, B.S., St. Joseph College, Indiana; M.S., Ph.D., University of Illinois. 2018-

Sarah Dumnich, *Assistant Professor of Mathematics*, B.S., Washington and Jefferson College; M.S., Ph.D., Lehigh University. 2018-

Jason Z. Edelstein, *Associate Professor of Theology*, B.A., M.A., University of New Hampshire; BHL, M.A.H.L., D.D., Hebrew Union College; D.Min., Pittsburgh Theological Seminary. 1995-

Veronica I. Ent, *Associate Professor of Education*, B.A., University of Findley; M.A., M.Ed., Ohio University; Ed.D., University of Pittsburgh. 2002-

Thomas Ernst, *Assistant Professor of Modern and Classical Languages*, B.A., Clarion University; M.A. French, M.A. German, Ph.D., University of Pittsburgh. 2000-

Melinda Farrington, *Assistant Professor of Communication*, B.A., State University of New York at Albany; M.A., Boston College; Ph.D., Duquesne University. 2017-

Devin Fava, *Associate Professor of Psychological Science*, B.A., Denison University; M.S., Ph.D., Kent State University. 2012-

Caryl L. Fish, *Professor of Interdisciplinary Science*, B.A., Manchester College; M.B.A., University of Dayton; Ph.D., State University of New York College of Environmental Science and Forestry. 1991-

Daryle H. Fish, *Associate Professor of Chemistry*, B.S., M.S., Ph.D., State University of New York College of Environmental Science and Forestry. 1992-

Matthew A. Fisher, *Professor of Chemistry*, B.A., Temple University; Ph.D., University of Wisconsin-Madison. 1995-

Mark Floreanini, O.S.B., *Associate Professor of Visual Arts*, B.A., Saint Vincent College; M.A., Saint Vincent Seminary; M.F.A., Savannah College of Art and Design. 2005-

Paul Follansbee, *James F. Will Professor of Engineering Science*, B.S.E., Duke University; M.S., Rensselaer Polytechnic Institute; Ph.D., Carnegie Mellon University. 2008-

Jerome C. Foss, *Associate Professor of Politics*, B.A., University of Dallas; M.A., Ph.D., Baylor University. 2011-

Janet L. Franicola, *Assistant Professor of Education*, B.S., Indiana University of Pennsylvania; M.S., California University of Pennsylvania; Ed.D., University of Pittsburgh. 2010-

Albert Gahr, O.S.B., *Associate Professor of Biology*, B.S., Saint Vincent College; M.A., Saint Vincent Seminary; Ph.D., West Virginia University. 2012-

Michelle Gil-Montero, *Associate Professor of English*, B.A., Brown University; M.F.A., University of Iowa. 2007-

Jeffrey L. Godwin, *Associate Professor of Management*, B.B.A., The College of William and Mary; M.Div., Wesley Theological Seminary; M.B.A., West Virginia University; Ph.D., Virginia Tech. 2010-

Steven J. Gravelle, *Associate Professor of Chemistry*, B.A., St. John's University (MN); M.S., Ph.D., Northwestern University. 1991-

David W. Grumbine, Jr., *Professor of Physics*, B.S., Physics, Villanova University; B.S., Comprehensive, Villanova University; M.S., Physics, Lehigh University; Ph.D., Physics, Lehigh University. 2001-

Thomas M. Hart, O.S.B., *Instructor in Theology*, B.A., Franciscan University of Steubenville; M.Div., Saint Vincent Seminary; Graduate studies, The Catholic University of America. 1993-

Jessica Harvey, *Associate Professor of Communication*, B.A., Purdue University; M.A., Arizona State University; Ph.D., University of Washington. 2012-

Andrew R. Herr, *Associate Professor of Economics*, B.S., North Carolina State University; M.A., Ohio State University; Ph.D., Indiana University-Bloomington. 1996-

Norman W. Higgs, O.S.B., *Professor of Mathematics*, B.A., Saint Vincent College; M.A., Ph.D., Northwestern University. 1972-1974, 1976-

William J. Hisker, *Professor of Management*, B.A., Saint Vincent College; MRCPL, University of Oklahoma; M.Div., Saint Vincent Seminary; Ph.D., University of Pittsburgh. 1974-

Thomas C. Holowaty, *Associate Professor of Accounting*, B.S., M.B.A., Duquesne University; C.P.A. (Pennsylvania); Member of the Pennsylvania Institute of Certified Public Accountants. 1972-

Matthias P. Huehn, *Professor of Business Administration*, Mary S. Carey Chair in Ethics and Catholic Social Teaching, Professor of Management, M.Phil. in Management, Economics and Politics, University of St. Andrews; M.Litt. in Literature and Society, University of St. Andrews; Ph.D. in Management, University of St. Gallen.

Kayla Jachimowski, *Assistant Professor of Criminology, Law and Society*, B.S., M.A. California University of Pennsylvania; Ph.D., Indiana University of Pennsylvania. 2018-

Jason R. Jividen, *Associate Professor of Politics*, B.A., M.A., Marshall University; Ph.D., Northern Illinois University. 2010-

Stephen Jodis, *Professor of Computing and Information Systems*, Dean, Herbert W. Boyer School of Natural Sciences, Mathematics, and Computing; B.S., M.S. and Ph.D. Auburn University. 2011-

Tina Phillips Johnson, *Professor of History and Director of Chinese Studies*, B.A., Oklahoma State University; M.L.A., Johns Hopkins University; M.A., Ph.D., M.P.H. University of Pittsburgh. 2005-

Philip M. Kanfush, O.S.B., B.C.B.A.-D., C.B.I.S., L.B.S., C.E.S.P. *Professor of Education*, B.A., M.B.A., University of Pittsburgh; B.A., Saint Vincent College; M.A., M.Div., Saint Vincent Seminary; M.Ed., University of Pittsburgh; Post-Graduate Certificate, Pennsylvania State University; Ed.D., West Virginia University. 2007-

Karen A. Kehoe, *Associate Professor of History*, B.M.E., Milton College; B.A., University of Wisconsin-Oshkosh; M.A., Ph.D., Marquette University. 2006-

- James S. Kellam**, *Associate Professor of Biology*, B.A., College of the Atlantic; Ph.D., Purdue University. 2007-
- David A. Kelly, O.S.B.**, *Director of Libraries, Assistant Professor of Political Science*, B.S., St. Joseph's University; M.A., Providence College; M.A., Georgetown University; J.C.B., J.C.L., St. Paul University; B.C.L., M.C.L., University of Ottawa; M.L.I.S., University of Pittsburgh. 1974-1979; 1984-1992; 1994-
- Timothy Kelly**, *Professor of History*, B.A., Rutgers University; M.A., University of Texas at Austin; Ph.D., Carnegie Mellon University. 1995-
- Jason E. King**, *Professor of Theology*, B.A., Berea College; M.A., Ph.D., The Catholic University of America. 2005-
- Eric Kocian**, *Associate Professor of Criminology, Law and Society*, B.S., University of Pittsburgh at Greensburg; M.S., Ph.D., Indiana University of Pennsylvania. 2013-
- Jennifer Schmidt Koehl**, *Associate Professor of Biology*, B.A., Lycoming College; M.S., Clarion University; Ph.D., Illinois State University. 2002-
- Rene M. Kollar, O.S.B.**, *Professor of History*, B.A., Saint Vincent College; M.Div., Saint Vincent Seminary; M.A., University of Maryland; Graduate Studies: Institute of Historical Research, University of London; Ph.D., University of Maryland; F.R. Hist. S., London. Fall semester, 1976, 1981-
- Michael P. Krom**, *Professor of Philosophy*, B.A., St. Mary's College (CA); M.A., Boston College; Ph.D., Emory University. 2007-
- Katie Leckenby**, *Assistant Professor of Education*, B.S., M.Ed., B.S., Ed.D., Slippery Rock University, 2019-
- George H. Leiner**, *Associate Professor of Philosophy and Liberal Arts*, B.A., Knox College; M.A., Ph.D., Purdue University. 1989-
- Bo Liang**, *Assistant Professor of Marketing*, B.S., Hebei University; M.S., Renmin University, M.B.A., Clemson University; Ph.D., University of Utah. 2014-
- Sara Lindsey**, *Professor of English*, B.J., B.A., University of Missouri; Ph.D., University of Minnesota. 2008-
- Whitney Liske**, *Assistant Professor of Mathematics*, B.A. College of Saint Benedict, M.S., University of Notre Dame, Ph.D., University of Notre Dame, 2019-
- Mohamed Anis Maize**, *Professor of Physics*, B.S., Cairo University; M.S., University of Louisville; Ph.D., Purdue University. 1990-
- Robert Markley**, *Instructor of Management Information Systems*, B.S., Pennsylvania State University; M.B.A., University of Chicago. 2007-
- Cynthia J. Martincic**, *Associate Professor of Computing and Information Systems*, A.S., Community College of Allegheny County; B.S., University of Pittsburgh; M.S.I.S., Ph.D., University of Pittsburgh. 2001-
- Dennis D. McDaniel**, *Associate Professor of English*, B.A., Saint Vincent College; M.A., Ph.D., Duquesne University. 1998-
- Christopher McMahon**, *Professor of Theology*, B.A., The University of Scranton; M.A., Saint Mary's Seminary and University; Ph.D., Catholic University of America. 2007-
- Tracy A. McNelly**, *Assistant Professor of Education*, B.S., Duquesne University; M.Ed., University of Pittsburgh, D.Ed., Indiana University of Pennsylvania. 2015-
- Eric Mohr**, *Assistant Professor of Philosophy*, B.A., Franciscan University of Steubenville; M.A., Ph.D., Duquesne University. 2016-
- Nathan Munsch, O.S.B.**, *Assistant Professor of Theology*, B.A., University of Notre Dame; M.A., Duquesne University; S.T.B., Catholic University; Ph.D., Boston College. 1994-
- Annie Laurie Nichols**, *Instructor of Communication*, B.A., Roberts Wesleyan College; M.A., Ph.D., University of Maryland. 2018-
- Douglas R. Nowicki, O.S.B.**, *Chancellor, Associate Professor of Psychological Science*, B.A., Saint Vincent College; M.Div., Saint Vincent Seminary; Ph.D., University of Tennessee. Jan., 1978-
- Stacie Hoffer Nowikowski**, *Associate Professor of Education*, B.S., Slippery Rock University; M.Ed., D.Ed., Indiana University of Pennsylvania. 2011 -
- Thomas Octave**, *Associate Professor of Music*, B.F.A., Carnegie Mellon University; M.M., Duquesne University. 2008-
- Christopher Oldenburg**, *Associate Professor of Psychological Science*; B.A., University of Notre Dame; M.A., Ph.D., Kent State University. 2000-
- Nathan Orlando**, *Postdoctoral Fellowship in International Politics*, B.A., Hillsdale College; M.A., Ph.D., Baylor University. 2018-
- Catherine Petranj**, *Assistant Professor of Theology*, B.A., Marshall University; M.A., Ph.D., Fordham University. 2014-
- Justin Petrovich**, *Assistant Professor of Statistics*, B.S., Saint Vincent College; Ph.D., Pennsylvania State University. 2018-
- Gary M. Quinlivan**, *Professor of Economics, Dean, McKenna School of Business, Economics, and Government*, B.A., SUNY/Geneseo; Ph.D., University at Albany. 1981-
- Nicholas M. Racculia**, *Associate Professor of Finance*, B.S., Saint Vincent College; M.A., Ph.D., Princeton University. Summer, 2002; 2006-07; 2007-
- Michael Rhodes**, *Associate Professor of Biology*, B.S., Saint Vincent College; M.S., Ph.D., Duquesne University. 2005-
- Phyllis Riddle**, *Professor of Sociology*, B.A., M.A., Western Washington University; Ph.D., Stanford University. 1994-
- Mark G. Rivardo**, *Professor of Psychological Science*, B.S., Saint Vincent College; M.A., Ph.D., Bowling Green State University. 1999-
- Juan Carlos Rivas**, *Associate Professor of Modern and Classical Languages*, B.A., M.A., University of California; Ph.D., The University of Arizona. 2012-
- Nancy A. Rottler**, *Assistant Professor of Health Science*, B.A., University of Pittsburgh; M.A., D.Ed., Indiana University of Pennsylvania. 2001-
- Mary Veronica Sabelli, R.S.M.**, *Associate Professor of Philosophy*, B.S., Michigan State University; J.D., Thomas M. Cooley Law School; M.A., Concordia University; Ph.L., Ph.D., Pontificia Universitas Urbaniana. 2016-
- David Safin**, *Assistant Professor of Communication*, B.A., Saint Vincent College; M.S., California University of Pennsylvania; M.F.A., Chatham University. 2003-
- Aaron Sams**, *Instructor of Education*, B.S., M.A. Ed., Biola University, 2017-
- Ben Schachter**, *Professor of Visual Arts*, B.A., Wesleyan University; M.S., M.F.A., Pratt Institute. 2003-
- Anthony Serapiglia**, *Associate Professor of Computing and Information Systems*, B.S. Allegheny College; M.S., Ph.D., Robert Morris University. 2011-

- Patricia Sharbaugh**, *Associate Professor of Theology*, B.A., University of Pittsburgh at Johnstown; M.Div., Pittsburgh Theological Seminary; Ph.D., Duquesne University. 2010-
- Paul-Alexander Shutt, O.S.B.**, *Instructor in Modern and Classical Languages*, B.A., Thiel College; M.A., Middlebury College Language Schools; M.Div., Saint Vincent Seminary. 1997-
- Michael Sierk**, *Assistant Professor of Interdisciplinary Science (Bioinformatics)*; B.A., Rice University; Ph.D., University of Virginia. 2005-
- Kristine L. Slank**, *Associate Professor of Psychological Science*, B.A., Berea College; M.A., Ph.D., Virginia Polytechnic Institute and State University. 1991-
- John J. Smetanka**, *Associate Professor of Physics*, B.S., Carnegie Mellon University; M.S., Ph.D., University of Chicago. 1997-
- Terrance Smith**, *Assistant Professor of Management*, B.S., Saint Vincent College; M.B.A., Grantham University; D.B.A., Walden University. 2015-
- Peter Smyntek**, *Assistant Professor of Interdisciplinary Science*, B.Sc., Grove City College; Ph.D., State University of New York College. 2016-
- William C. Snyder**, *Professor of English*, B.A., Saint Vincent College; M.A., Ph.D., West Virginia University. 1976-
- Susan Mitchell Sommers**, *Professor of History*, B.A., M.A., Southern Illinois University; A.M., Ph.D., Washington University in St. Louis. 1993-
- Mary Beth Spore**, *Associate Professor of Education*, B.A., Saint Mary's College (Indiana); M.A., Ph.D., University of Pittsburgh. 2006-
- Ian "Mitch" Taylor**, *Assistant Professor of Chemistry*, B.S. *Chemistry*, Westminster College; Ph.D. *Analytical Chemistry*, University of Pittsburgh, 2018-
- Eugene V. Torisky, Jr.**, *Associate Professor of Philosophy*, B.A., M.A., Ph.D., Bowling Green State University. 2002-
- Dawn Turkovich**, *Assistant Professor of Education*, B.A., Saint Vincent College; M.A., D.Ed., Indiana University of Pennsylvania. 2006-
- Michael Urick**, *Associate Professor of Management*, B.S., Saint Vincent College; M.S., M.B.A., Duquesne University; Ph.D., University of Cincinnati. 2012-
- Daniel Vanden Berk**, *Associate Professor of Physics*, B.S., University of Wisconsin-Madison; M.S., Ph.D., University of Chicago. 2008-
- Jason Vohs**, *Associate Professor of Chemistry*, B.S., The College of Charleston; Ph. D., University of Georgia. 2005-
- Margaret Watkins**, *Professor of Philosophy*, B.A., College of William and Mary; M.A., Ph.D., University of Notre Dame. 2009-
- Bradley C.S. Watson**, *The Philip M. McKenna Chair in American and Western Political Thought, Professor of Politics*, B.A., University of British Columbia; J.D., Queen's University; M.A., Claremont Graduate University; M.Phil., Institute of Philosophy, Catholic University of Louvain; Ph.D., Claremont Graduate University. 1999-
- Jennifer White**, *Assistant Professor of Mathematics*, B.S., University of Dayton; M.S., Ph.D., University of Colorado. 2015-
- Dana Winters**, *Assistant Professor of Child and Family Studies*, B.A., Saint Vincent College; M.A., Indiana University of Pennsylvania; Ph.D., University of Pittsburgh. 2018-

EMERITUS FACULTY

John F. Bleyer, *Emeritus Professor of Education*, B.A., Pontifical College Josephinum; M.Ed., Ed.D., University of Pittsburgh; Graduate Studies: Millersville University of Pennsylvania; Post Graduate Studies: Duquesne University. 1974-

Michael W. Botsko, *Emeritus Professor of Mathematics*, B.S., M.A., Duquesne University; Ph.D., University of Pittsburgh. 1967-

Charles Fazzi, *Emeritus Professor of Accounting*, B.S., M.B.A., Ph.D., Pennsylvania State University, 2002-

Michael K. Gainer, *Emeritus Professor of Physics*, B.A., M.S., West Virginia University; Graduate Studies: Oklahoma University. 1968-

Campion P. Gavalier, O.S.B., *Emeritus Professor of Theology*, B.S., Saint Francis College; S.T.L., Pontifical Atheneum of Sant' Anselmo, Rome. 1962-

Richard A. Gosser, *Emeritus Professor of Mathematics*, B.A., Saint Vincent College; M.S., D.A., Carnegie Mellon University. 1975-1976, 1977-

Vernon A. Holtz, O.S.B., *Emeritus Professor of Psychological Science*, B.S., Lock Haven State College; M.A., Saint Vincent College; M.A., The Catholic University of America; Ph.D., Duquesne University. 1966-

Peter M. Hutchinson, *Emeritus Professor of Economics*, B.A., Saint Vincent College; M.A., Ph.D., University of Pittsburgh. 2002-

Harry L. Morrison, *Emeritus Professor of Computing and Information Systems*, B.S., M.S., Carnegie Mellon University. 1982-

Gabriel S. Pellathy, *Emeritus Professor of Politics*, B.A., Columbia College of Columbia University; Ph.D., New York University; J.D., (LL.B.) Cornell University; LL.M., New York University; M.Sc. (Ed.), Hofstra University. 1978-

Chrysostom V. Schlimm, O.S.B., *Emeritus Professor of Languages, Special Collections Librarian*, B.A., Saint Vincent College; M.Div., Saint Vincent Seminary; M.A., The Catholic University of America; M.L.S., University of Pittsburgh; Graduate Studies: Tufts University; Virgilian Society Summer in Italy. 1961-1969, 1970-

Ronald Tranquilla, *Emeritus Professor of English*, B.A., Allegheny College; M.A., Ph.D., University of Pittsburgh. 1964-

Andrew B. Turner, *Emeritus Professor of Chemistry*, B.A., Franklin and Marshall; M.S., Bucknell University; Ph.D., University of Virginia. 1980-

Susan Walker, *Emeritus Professor of Psychology*, B.S., M.Ed., Edinboro University; M.Ed., University of Pennsylvania; Ed.D., University of Pittsburgh. 2012.

Richard D. Wissolik, *Emeritus Professor of English and Liberal Arts*, B.A., M.A. (English Literature), M.A. (African Affairs), Duquesne University; Graduate Studies: University of Nairobi, Indiana University of Pennsylvania, Duquesne University; Ph.D., Duquesne University; Jan., 1968-

LECTURERS, 2019-20*

Mr. David Adams, Lecturer in Business Administration

Ms. Christina Andrae, Lecturer in Music

Dr. Mark Andrews, Lecturer in Integrated Science

Ms. Jennifer Antkowiak, Lecturer in Business Administration and Communication

Mr. Jeffrey Anzovino, Lecturer in Business Administration

Dr. Shavonne Arthurs, Lecturer in Criminology, Law and Society

Dr. John Aupperle, Lecturer in Theology

Mr. Todd A. Behanna, Lecturer in Education

Ms. Angela M. Belli, Lecturer in Environmental Science

Ms. Beth L. Bollinger, Lecturer in Chemistry

Dr. Robert Bufalini, Lecturer in Modern and Classical Language

Dr. Arnon Cahen, Lecturer in Philosophy

Ms. Marisa Carlson, Lecturer in English and Liberal Arts

Ms. Lauren Churilla, Lecturer in History

Mr. Donald J. Cole, Lecturer in Mathematics

Mr. Andrew Cuff, Lecturer in Philosophy

Mr. David Cullen, Lecturer in Mathematics

Mr. Mark D'Amico, Lecturer in Business Administration

Dr. Bettie A. Davis, Lecturer in Chemistry

Dr. Michael DeBroeck, Lecturer in Health Sciences

Mr. Jerome DiBernardo, Lecturer in Modern and Classical Language

Mr. Scott DiTullio, Lecturer in Music

Ms. Leann R. Downs, Lecturer in Education

Mr. Donald Ellenberger, Lecture in Finance

Mr. George Fetkovich, Lecturer in Communication

Ms. Deborah Fischer, Lecturer in Education

Mr. Jeremy Frantz, Lecturer in Music

Dr. Barry Fulks, Lecturer in History

Ms. Martha Fusco, Lecturer in Accounting

Dr. Beth Grabiak, Lecturer in Health Sciences

Ms. Molly Grace, Lecturer in Biology

Ms. Danielle Gray, Lecturer in Health Sciences

Ms. Teri Haight, Lecturer in Education

Ms. Sara Hart, Lecturer in English

Ms. Denise Hegemann, Lecturer in Liberal Arts

Mr. Ryan L. Hejnosz, Lecturer in Computer Science

Ms. Amy Hildebrand, Lecturer in Education

Ms. Vera Hisker, Lecturer in English

Mr. Nathan Hoffer, Lecturer in Computer Science

Mr. Patrick Jaquay, Lecturer in Environmental Science

Ms. Barbara Jene, Lecturer in Criminology

Ms. Krista Jobe, Lecturer in Integrated Science

Mr. Mark Kachmar, Lecturer in Business Administration

Ms. Jean Keene, Lecturer in Environmental Science
Robert Keffer, O.S.B., Lecturer in Art
Mr. William Kimbro, Lecturer in Business Administration
Ms. Kelly A. King, Lecturer in Theology
Mr. Randall Kratofil, Lecturer in Music
Dr. Michael Kuhar, Lecturer in Criminology, Law, and Society
Ms. Eva Kunkel, Lecturer in Business Administration
Mr. James Kunkel, Lecturer in Business Administration
Ms. Susanna Lemberskaya-Khait, Lecturer in Music
Mr. Steven Leuschel, Lecturer in Business Administration
Ms. Tammy Lyons, Lecturer in Education
Ms. Christine Mahady, Lecturer in Music
Mr. John Malone, Lecturer in Business Administration
Ms. Lisa Maloney, Lecturer in Education
Ms. Renata K. Marino, Lecturer in Music
Mr. Joseph Materkowski, Lecturer in Art
Ms. Michele Mayger-Skwirut, Lecturer in Psychology
Ms. Mary Beth McConahey, Lecturer in Politics
Mr. Timothy J. Meszar, Lecturer in Biology
Dr. George Miller, Lecturer in Politics
Mr. Matthew K. Miller, Lecturer in Business Administration
Dr. Larry Montemurro, Lecturer in Psychology
Maurus Mount, O.S.B., Lecturer in Modern and Classical Language
Mr. Sean A. Myers, Lecturer in Education
Dr. Shannon Nesser, Lecturer in Mathematics
Ms. Mary Niemiec, Lecturer in Psychology
Dr. Paul Niemiec, Lecturer in Psychology
Ms. Helene E. Paharik, Lecturer in Theology
Ms. Kelly Palmer, Lecturer in Education
Mr. J. Christopher Pardini, Lecturer in Music
Mr. Justin Pearl, Lecturer in Theology
Mr. Robert Peretti, Lecturer in Business Administration
Ms. Allison Petris, Lecturer in Environmental Science
Dr. Sara-Jane Pillsbury, Lecturer in Chemistry
Mr. Gerard Police, Lecturer in Education
Fr. Nathanael Polinski, O.S.B., Lecturer in Theology
Mr. Joseph Polka, Lecturer in Economics
Mr. Christopher Reed, Lecturer in Philosophy
Mr. Adam Reger, Lecturer in English
Ms. Wanda Reynolds, Lecturer in Education
Ms. Maria Rivas, Lecturer in Modern and Classical Language
Mr. John Rolin, Lecturer in Communication
Mr. William S. Rullo, Lecturer in Education
Placid Sellers, O.S.B., Lecturer in Art
Ms. Tanya Shearer, Lecturer in Psychology
Mr. Michael Steele, Lecturer in Philosophy

Ms. Lisa Thackrah, Lecturer in Music
Dr. JoAnn Thistlethwaite, Lecturer in Integrated Science
Dr. Robert Thomas, Lecturer in Education
Ms. Carla Tomas, Lecturer in Nursing
Ms. Theresa Torisky, Lecturer in Non-Departmental Studies
Dr. Susan Tranchine, Lecturer in Health Sciences
Ms. Kayla Uveges, Lecturer in Biology
Dr. Elizabeth Ventura, Lecturer in Criminology, Law, and Society
Mr. Daniel R. Waldow, Lecturer in Theology/Philosophy
Mr. Feng Wang, Lecturer in Chemistry
Ms. Judith Washburn, Lecturer in Modern and Classical Language
Dr. Robert Welch, Lecturer in English
Ms. Elise Wells, Lecturer in English
Ms. Stacia Wetherington, Lecturer in Communication
Mr. Richard Williams, Lecturer in Business Administration
Mr. Thurman Wingrove, Lecturer in Business Administration
Mr. Charles Wolenter, Lecturer in Finance
Mr. Joseph M. Yezovich, Lecturer in Finance

** Lecturers during Fall 2019.*

NOTICE OF RIGHTS UNDER FERPA AND ITS IMPLEMENTING REGULATIONS

The Family Educational Rights and Privacy Act (FERPA), enacted by 20 U.S.C. § 1232g, is a conditional funding law that prohibits federal education funding to educational agencies or institutions unless certain policies involving inspection, review, access, and protection of student education records are in place. 20 U.S.C. § 1232g(e) mandates that institutions of higher education effectively inform students of the rights accorded to them by FERPA. This notice is meant to inform students pursuant to 34 C.F.R. § 99.7, the implementing regulation of 20 U.S.C. § 1232g(e), of these rights.

A. Student Rights under FERPA

1. Eligible students are afforded certain rights with respect to their education records. An “eligible” student” under FERPA is a student who is 18 years of age or who attends a postsecondary institution. As used in this notice, “student(s)” means “eligible student(s).”
2. All students at Saint Vincent College have the right to inspect and review their education records within 45 days after the day Saint Vincent College receives a request for access. A student should submit to the registrar, dean, head of the academic department, or other appropriate official, a written request or an in-person verbal request that identifies the record(s) the student wishes to inspect. The school official will make arrangements for access and notify the student of the time and place where the records may be inspected. The student may be required to show proof of identification at the time of or prior to inspection. If the records are not maintained by the school official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.
3. All students at Saint Vincent College have the right to seek amendment of their education records that the student believes to be inaccurate, misleading, or otherwise in violation of the student’s privacy rights under FERPA. A student who wishes to ask the school to amend a record should write the school official responsible for the record, clearly identify the part of the record the student wants changed, and specify why it should be changed. If Saint Vincent College decides not to amend the record as requested, Saint Vincent College will notify the student in writing of the decision and the student’s right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.
4. All students at Saint Vincent College have the right to provide written consent to disclosures of personally identifiable information contained in the student’s education records, except to the extent that FERPA and 34 C.F.R. § 99 authorize disclosure without consent. Consistent with FERPA and its implementing regulations, Saint Vincent College may, without written consent of the student, disclose the following:

- i. Directory information, as defined in § C.3 of this notice, containing personally identifiable information about a student unless that student opts out of directory information disclosure under the procedures outlined in § C.4 of this notice; and

- ii. Education records containing personally identifiable information under the conditions specified in 34 C.F.R. § 99.31. Those conditions are listed in § D.1 of this notice.

5. All students at Saint Vincent College have the right to file with the Family Compliance Office of the Department of Education under 34 C.F.R. §§ 99.63 and 99.64 concerning alleged failures by the educational institution to comply with the requirements of FERPA and 34 C.F.R. § 99. The address of the Family Compliance Office is: Family Compliance Office, U.S. Department of Education, 400 Maryland Avenue, SW., Washington, DC 20202.

- i. A complaint must contain specific allegations of fact giving reasonable cause to believe that a violation of FERPA or 34 C.F.R. § 99. has occurred. A complaint does not have to allege that a violation is based on a policy or practice of the educational institution, other recipient of Department of Education funds under any program administered by the Secretary, or any third party outside of an educational institution.

- ii. A timely complaint is defined as an allegation of a violation that is submitted to the Family Compliance Office within 180 days of the date of the alleged violation or of the date that the complainant knew or reasonably should have known of the alleged violation. The Family Compliance Office may extend this time limit for good cause shown.

B. Education Records

1. FERPA protections extend to education records. Therefore, it is important for students to know what constitutes an “education record” within the meaning of FERPA. 34 C.F.R. § 99.3 defines education records as follows:

- i. The term “education records” means those records that are:

- a. **Directly related to a student; and**

- b. Maintained by an educational institution—i.e.

Saint Vincent College—or by a party acting for the institution.

- ii. The term “education records” does not include

- a. Records that are kept in the sole possession of the maker, are used only as a personal memory aid, and are not accessible or revealed to any other person except a temporary substitute for the maker of the record.

- b. Records of the law enforcement unit—i.e. the Department of Public Safety at Saint Vincent College—if those records, files, documents, or other materials are (1) Created by a law enforcement unit;

- (2) Created for a law enforcement purpose; and

- (3) Maintained by the law enforcement unit.

- c. **Records of a law enforcement unit does not mean**

- (1) Records created by a law enforcement unit for a law enforcement purpose that are maintained by a component of the educational institution other than the law enforcement unit; or

- (2) Records created and maintained by a law enforcement unit exclusively for a non-law enforcement purpose, such as a disciplinary action or proceeding conduct by the educational institution.

- d. **Records relating to an individual who is employed by an educational institution that (1)** Are made and maintained in the normal course of business;

- (2) Relate exclusively to the individual in that individual's capacity as an employee; and
- (3) Are not available for any other purpose.

e. Records relating to an individual in attendance at the institution who is employed as a result of his or her status as a student are education records and thus are not excepted under (3)(i-iii) of this subsection.

f. Records on a student attending an educational institution that are (1) Made or maintained by a physician, psychiatrist, psychologist, or other recognized professional or paraprofessional acting in his or her capacity or assisting in a paraprofessional capacity;

(2) Made, maintained, or used only in connection with treatment of the student; and

(3) Disclosed only to individuals providing the treatment. For the purpose of this definition, "treatment" does not include remedial educational activities or activities that are part of the program of instruction at the institution.

g. Records created or received by an educational institution after an individual is no longer a student in attendance and that are not directly related to the individual's attendance as a student.

h. Grades on peer-graded papers before they are collected and recorded by a teacher.

- Weight and height of members of athletic teams
- Past and present participation in officially recognized activities and sports
- Degrees, honors, and awards received
- Previous institutions attended
- Home parish, church, synagogue, mosque, temple, or any other place of worship

iii. Directory information does not include a student's

a. Social security number; or

b. Student identification (ID) number, except as provided in (1) and (2) of this subsection (1) Directory information includes a student ID number, user ID, or other unique personal identifier used by a student for purposes of accessing or communicating in electronic systems, but only if the identifier cannot be used to gain access to education records except when used in conjunction with one or more factors that authenticate the user's identity, such as a personal identification number (PIN), password or other factor known or possessed only by the authorized user; and

(2) Directory information includes a student ID number or other unique personal identifier that is displayed on a student ID badge, but only if the identifier cannot be used to gain access to education records except when used in conjunction with one or more factors that authenticate the user's identity, such as a PIN, password, or other factor known or possessed only by the authorized user.

C. Directory Information

1. FERPA requires Saint Vincent College, with certain exceptions, to obtain written student consent prior to disclosing personally identifiable information about the student. However, Saint Vincent College may disclose "directory information" without written student consent unless the student has advised Saint Vincent College to the contrary in accordance with College procedures. The primary purpose of directory information is to allow Saint Vincent College to include this type of information from students' education records in certain school publications. Examples include, but are not limited to, the following:

- News releases informing the public about events at Saint Vincent College
- Dean's Lists and other honors/recognitions
- Updates regarding athletics and athletes
- Commencement programs

2. Directory information can also be disclosed to outside organizations without a student's prior written consent.

3. Saint Vincent College's definition of directory information is modeled after the definition contained in 34 C.F.R. § 99.3:

- i. Directory information means information contained in an education record of a student that would not generally be considered harmful or an invasion of privacy if disclosed.
- ii. Saint Vincent College considers the following information pertaining to a student to be directory information:
 - Name
 - Address (local, home, and email)
 - Telephone listing (local, mobile, and home)
 - Photograph
 - Date and place of birth
 - Major field of study
 - Class level
 - Enrollment status (e.g., undergraduate or graduate, full-time or part-time);
 - Dates of attendance
 - Participation in officially recognized activities and sports

4. If a student does not want Saint Vincent College to disclose directory information from his/her education records without his/her prior written consent, he/she must notify Saint Vincent College by filing a written statement in the Registrar's Office by the end of the first week of each semester. Failure to file a written statement may result in the routine disclosure of directory information.

5. A student may not opt out of directory information disclosures to (1) prevent Saint Vincent College from disclosing or requiring a student to disclose the student's name, identifier, or institutional email address in a class in which the student is enrolled; or (2) prevent Saint Vincent College from requiring a student to wear, to display publicly, or to disclose a student ID card or badge that exhibits information that may be designated as directory information.

D. Disclosure of Education Records Notice

1. FERPA permits the disclosure of personally identifiable information from students' education records, without consent of the student, if the disclosure meets certain conditions found in § 99.31 of the FERPA regulations. Except for disclosures to school officials, disclosures related to some judicial orders or lawfully issued subpoenas, disclosures of directory information, and disclosures to the student, § 99.32 of FERPA regulations requires the institution to record the disclosure. Eligible students have a right to inspect and review the record of disclosures. A postsecondary institution may disclose personally identifiable information from the education records without obtaining prior written consent of the student –

- i. To other school officials, including teachers, within Saint Vincent College whom the school has determined to have legitimate educational interests. This includes contractors, consultants, volunteers, or other parties to whom the school has outsourced institutional services or functions, provided that the conditions listed in § 99.31(a)(1)(i)(B)(1) - (a)(1)(i)(B)(2) are met. (§ 99.31(a)(1))

a. Saint Vincent College defines “school official” in the following way: A school official is a person employed by Saint Vincent College in an administrative, supervisory, academic, research, or support staff position (including law enforcement unit personnel, health staff, head coaches, assistant coaches, and residence life staff); a person serving on the board of trustees; or a student serving on an official committee, such as a disciplinary or grievance committee. A school official may also include a volunteer or contractor outside of Saint Vincent College who performs an institutional service of function for which Saint Vincent College would otherwise use its own employees and who is under the direct control of the school with respect to the use and maintenance of personally identifiable information from education records, such as an attorney, auditor, or collection agent or a student volunteering to assist another school official in performing his or her tasks.

b. Saint Vincent College defines “legitimate educational interest” in the following way: A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibilities for Saint Vincent College

ii. To officials of another school where the student seeks or intends to enroll, or where the student is already enrolled if the disclosure is for purposes related to the student’s enrollment or transfer, subject to the requirements of § 99.34. (§ 99.31(a)(2))

a. Saint Vincent College forwards education records to other agencies or institutions that have requested the records and in which the student seeks or intends to enroll or is already enrolled so long as the disclosure is for purposes related to the student’s enrollment or transfer.

iii. To authorized representatives of the U. S. Comptroller General, the U. S. Attorney General, the U.S. Secretary of Education, or State and local educational authorities, such as a State postsecondary authority that is responsible for supervising the university’s State-supported education programs. Disclosures under this provision may be made, subject to the requirements of § 99.35, in connection with an audit or evaluation of Federal- or State-supported education programs, or for the enforcement of or compliance with Federal legal requirements that relate to those programs. These entities may make further disclosures of personally identifiable information to outside entities that are designated by them as their authorized representatives to conduct any audit, evaluation, or enforcement or compliance activity on their behalf. (§§ 99.31(a)(3) and 99.35)

iv. In connection with financial aid for which the student has applied or which the student has received, if the information is necessary to determine eligibility for the aid, determine the amount of the aid, determine the conditions of the aid, or enforce the terms and conditions of the aid. (§ 99.31(a)(4))

v. To organizations conducting studies for, or on behalf of, Saint Vincent College, in order to: (a) develop, validate, or administer predictive tests; (b) administer student aid programs; or (c) improve instruction. (§ 99.31(a)(6))

vi. To accrediting organizations to carry out their accrediting functions. (§ 99.31(a)(7))

vii. To parents of an eligible student if the student is a dependent for IRS tax purposes. (§ 99.31(a)(8))

viii. To comply with a judicial order or lawfully issued subpoena. (§ 99.31(a)(9))

ix. To appropriate officials in connection with a health or safety emergency, subject to § 99.36. (§ 99.31(a)(10))

x. Information that Saint Vincent College has designated as “directory information” under § 99.37. (§ 99.31(a)(11))

xi. To a victim of an alleged perpetrator of a crime of violence or a non-forcible sex offense, subject to the requirements of § 99.39. The disclosure may only include the final results of the disciplinary proceeding with respect to that alleged crime or offense, regardless of the finding. (§ 99.31(a)(13))

xii. To the general public, the final results of a disciplinary proceeding, subject to the requirements of § 99.39, if Saint Vincent College determines the student is an alleged perpetrator of a crime of violence or non-forcible sex offense and the student has committed a violation of the school’s rules or policies with respect to the allegation made against him or her. (§ 99.31(a)(14))

xiii. To parents of a student regarding the student’s violation of any Federal, State, or local law, or of any rule or policy of the school, governing the use or possession of alcohol or a controlled substance if Saint Vincent College determines the student committed a disciplinary violation and the student is under the age of 21. (§ 99.31(a)(15))

2. Saint Vincent College encourages students to learn what their rights are under FERPA and its implementing regulations. The following websites are helpful in this regard. However, these websites should not be construed as Saint Vincent College offering legal counsel, advice, or representation. Saint Vincent College encourages students to seek the assistance of private legal counsel where appropriate.

i. <http://www2.ed.gov/policy/gen/guid/fpco/ferpa/students.html>

ii. <http://www.ed.gov/policy/gen/guid/fpco/ferpa/index.html>

iii. <http://www2.ed.gov/policy/gen/guid/fpco/index.html>

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WHY CHOOSE SAINT VINCENT COLLEGE?

- **Challenging Academics** - Saint Vincent College offers challenging academics rooted in the liberal arts and sciences, in more than 50 undergraduate majors and 10 graduate programs.
- **Successful Graduates** - Graduates find success in their fields: 98 percent of the Class of 2016 graduates who responded to a survey reported working full-time in their fields or continuing their studies in graduate or professional school.
- **Quality and Value** - Saint Vincent College ranks highly among the most affordable, high-quality private liberal arts colleges in the nation, with Forbes magazine, *Washington Monthly* and *U.S. News & World Report* among those who praise our quality and value.
- **Community of Learners** – Students become part of a community of learners who value education and the development of skills that help them become leaders who serve their communities, and the world.
- **Inspiring Setting** – Members of the Saint Vincent community care for our beautiful campus through many green initiatives, enjoying easy access to both recreation and the arts, in a safe and friendly campus environment.
- **Growth in Character and Values** – Faculty, staff and students cherish the development of growth in character, with special emphasis on Catholic, Benedictine values such as community, love of neighbor, hospitality and stewardship, including the care of all creation.



SAINT VINCENT COLLEGE

Office of Undergraduate Admission
800-782-5549 • 724-805-2500
admission@stvincent.edu • www.stvincent.edu